RFE

REG FARRELL ENGINEERING LTD

RFE - PRICELIST 2020

TOP 10 REASONS TO CHOOSE NOark

1. RELIABILITY

2. FIVE YEAR WARRANTY

3. SIMPLE INSTALLATION

4. FUNCTIONAL DESIGN

5. QUALITY MANUFACTURING

6. UNBEATABLE SUPPORT

7. INDIVIDUAL APPROACH

8. WIDE DISTRIBUTION NETWORK

9. FLEXIBILITY

10. TRUSTED BY CUSTOMERS

NOARK

DEFINITION OF RELIABILITY

RFE are proud to partner with NOARK Electric Europe Ltd.
A global manufacturer of low-voltage electrical components.

Miniature Circuit Breakers (MCB's) AC/DC

Residual Current Devices (RCD, RCBO's)

Moulded Case Circuit Breakers (MCCB)

Contactors

EV Chargers

TOP TEN REASONS TO CHOOSE NOARK ELECTRIC

1. RELIABILITY
2. FIVE YEAR WARRANTY
3. SIMPLE INSTALLATION
4. FUNCTIONAL DESIGN
5. QUALITY MANUFACTURING

6. UNBEATABLE SUPPORT
7. INDIVIDUAL APPROACH
8. WIDE DISTRIBUTION NETWORK
9. FLEXIBILITY
10. TRUSTED BY CUSTOMERS

NOArK

DEFINITION OF RELIABILITY

Who we are

NOARK is a premier global manufacturing company with regional headquarters in Europe and North America. The company is part of a group with more than 25 thousand employees. NOARK Electric has invested millions of euro into in-house product development and works with the latest technologies, NOARK provides efficient and reliable solutions for energy and intelligent power distribution in industries such as utility, renewable energy, iron & steel manufacturing, building, HVAC, petrochemicals etc.

Where we're headed

We are committed to strengthening our market position to become a leader in cost effective components through the development of innovative products and continuous improvements. Our goal is to become a Fortune 500 company while demonstrating integrity, trust and honesty.

Quality Product

• Backed by a 5-year warranty*

Exceptional Value

• Reduce the cost of products
• Improve profitability
• Increase margins

Local Support and Local Inventory

• Superb customer service
• Knowledgeable technical support
• Dedicated sales force
• Well-stocked inventory
• European & North American headquarters

See Section 1 in our Catalogue for the complete range of New Products. Pages (9) to (36)

ABOUT US

RFE, with almost 40 years' experience in supplying the electrical industrial industry in Ireland have established ourselves as a leading distributor both for technical and innovating products while also providing reliable and efficient technical support. We are always excited to introduce a new company catalogue reinforcing our longstanding relationships with our key suppliers while also presenting some new innovative additions to our range.

Our commitment to our customers is what sets us apart ensuring the continuity of product supply while also providing value for money solutions. We understand the importance of a Quality Management System and are delighted to have been awarded in 2017 the ISO 9001 2015. We are also a level 3 supplier on Achilles Supply-Line.

Our philosophy is to develop deep relationships with our valued customers in both the electrical wholesale and panel manufacturing sectors. We see ourselves as an integral part of their supply chain and we work closely with our principles to ensure this. As members of EMDA we guarantee an adherence to quality products sourced only from efficient and reliable manufacturers.

Together with our traditional electrotechnical products we are constantly exploring new electrical safety products to address the requirements of modern production and industry.
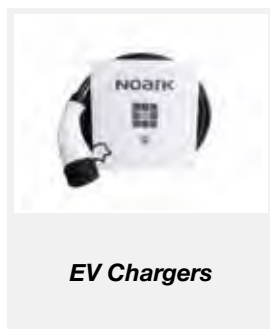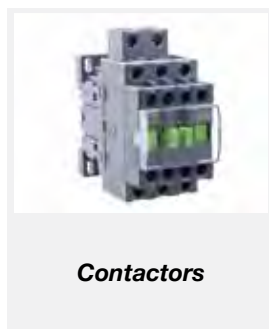
We are leading suppliers of lightning and surge protection devices. We offer risk assessment, design and commissioning services to our customers through our cooperation with leading lightning protection manufacturers nVent (ERICO), Propster GMBH , A. N. Wallis and Surge Protection Devices UK.

We also provide specialist training to our customers in Infrared Thermography, Airtightness training (Blower door) and installation courses on IR viewing ports for electrical inspection. All courses are to the appropriate international standards and can be held both in our inhouse training room or indeed on site for customer specific training.

We hope you find this new information price list interesting and if you need clarification or information on any of our product ranges **please contact our sales team at sales@rfe.ie**

RFE, "ISO 9001:2015" CERTIFIED COMPANY.

In this new edition of our latest catalogue for "2020" we are delighted to add the following range of low-voltage electrical components from NOARK Electric
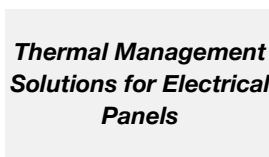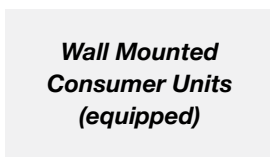
Miniature Circuit Breakers (MCB's) AC/DC	*Residual Current Devices (RCD, RCBO's)*	*Moulded Case Circuit Breakers (MCCB)*	*Contactors*	*EV Chargers*

Also Featuring

New Stainless Steel Electrical Enclosures	*Wall Mounted Consumer Units (equipped)*	*Thermal Management Solutions for Electrical Panels*	*Easy Click & Multiclick, Smart Meters*

Mr. Ian Checkley, Manager Director & Stephen Fox our Sales Development Manager were delighted to meet with business partner Steven Chow, CEO of EASTRON ELECTRONIC at the Hannover Messe 2019.
Eastron Europe is one of the leading high-tech companies of electrical measurement instruments.

EASTRON COMPANY MISSION

To Create Value and Build Relationships with Our Partners". We strive to help our customer gain commercial advantage by consistently providing competitively-priced, high-quality products together with the best possible technical support. We pride ourselves on focusing not only our customer's short-term requirements but also on the long-term needs of the marketplace. This drives us to give the best customer service within the industry and targets complete customer satisfaction. **3 year warranty offered on all products.**

With high quality products and advanced technologies of intelligent meters, Eastron has gained an impeccable reputation among clients and partners in more than 50 countries.

Eastron Europe launch a new website showcasing the full range of metering solutions - Available from RFE **www.eastroneurope.com**
"A professional Energy Metering Solution Provider"

**For information on Eastron multifunction meters
see pages (135-138) in section 7**

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A-Z INDEX

A-Z INDEX

NOALK
DEFINITION OF RELIABILITY

Moulded Case Circuit Breakers

1. 5 year warranty
2. Rated current from 16 A up to 1600 A
3. Breaking capacity up to 150 kA
4. 3 and 4-pole versions available

5. Six frame sizes M1 - M6
6. AC and DC MCCBs and Switch disconnectors
7. Wide range of accessories
8. Thermomagnetic release for size M1-M5 and electronic release for size M6

MOULDED CASE CIRCUIT BREAKERS (MCCB's) NOark

Electronic Moulded Case Circuit Breakers Ex9M6 are intended for applications mainly in power distribution. Advantages of the electronic release is in an accuracy and reliability of the tripping contrary to the thermomagnetic release. Testing according to IEC / EN 60947-2 standards ensures functions and reliability for a wide variety of applications including isolation.

These breakers are offered with breaking capacities from 50 kA up to 100 kA. Rated impulse withstand voltage Uimp 8 kV makes it possible to use them even in system with occurrences of transient over voltage waves of high intensity, e.g. in heavy industry.
Utilization category B circuit breakers.

• Electronic Moulded Case Circuit Breakers
• Frame Size 6
• Rated Current up to 1600 amp
• 3-4 Pole Versions
• Rated ultimate short circuit breaking capacity Icu up to 100 kA
• Rated voltage 415 / 690 V AC
• Electronic release

EX9	M	1	S	TM	AC	100	3P
↓	↓	↓	↓	↓	↓	↓	↓
Product family	Product	Frame size	Breaking capacity	Release technology	Current character	Rated current	Poles
Ex9	M:MCCB	1:125A 2:250A 3:400A 4:630A 5:800A	S:36kA N:50kA H:100kA P:150kA	TM: Thermo Magnetic	AC	16-125A 125-250A 250-400A 400-630A 630-800A	3P:3-pole 4P4T: 4-pole with protected neutral

MOULDED CASE CIRCUIT BREAKERS Ex9M TM

Moulded Case Circuit Breakers Ex9M TM are intended for applications in power distribution mainly. Testing according to IEC / EN 60947-2 standards ensures functions and reliability for a wide variety of applications including isolation. These breakers are offered with breaking capacities from 36 kA up to extreme 150 kA. Rated impulse withstand voltage Uimp 8 kV makes it possible to use them even in system with occurrences of transient overvoltage waves of high intensity, e.g. in heavy industry. Utilization category A circuit breakers.

MOULDED CASE CIRCUIT BREAKERS Ex9M1

• 3 and 4-pole Moulded Case Circuit Breakers
• I cs = I cu = 36 kA at 415 V AC
• I r can be set in steps (0.8-0.9-1.0) × I n
• I i fixed as 10 × I n
• Mounting screws, box terminals as well as phase barriers in the scope of delivery

VERSION Ex9M1S up to 125 A, I cu = 36 kA

Code	Rating	KA	Poles	T/M	Frame	Over current Release Ir	Instant Release Ii	Price
100886	16A	36	3	Selective	1	12.8-16A	160A	€155.05
100887	20A	36	3	Selective	1	16-20A	200A	€155.05
100888	25A	36	3	Selective	1	20-25A	250A	€155.05
100889	32A	36	3	Selective	1	25.6-32A	320A	€155.05
100890	40A	36	3	Selective	1	32-40A	400A	€125.63
100891	50A	36	3	Selective	1	40-50A	500A	€155.05
100892	63A	36	3	Selective	1	50.4-60A	630A	€131.97
100893	80A	36	3	Selective	1	64-80A	800A	€140.31
100894	100A	36	3	Selective	1	80-100A	1000A	€145.14
100895	125A	36	3	Selective	1	100-125A	1250A	€146.43

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MOULDED CASE CIRCUIT BREAKERS (MCCB's) **NOARK**

VERSION Ex9M2S up to 250 A, I cu = 36 kA

• 3 and 4-pole Moulded Case Circuit Breakers
• I cs = I cu = 36 kA at 415 V AC
• I r can be set in steps (0.8-0.9-1.0) × I n
• I i variable (5-6-7-8-9-10) × I n
• Mounting screws, box terminals as well as phase barriers in the scope of delivery

Code	Rating	KA	Poles	T/M	Frame	Over current Release Ir	Instant Release Ii	Price
101294	160A	36	3	Selective	2	128-160A	800-1600A	€388.20
101295	180A	36	3	Selective	2	144-180	900-1800A	€396.18
101296	200A	36	3	Selective	2	160-200A	1000-200A	€409.44
101293	125A	36	3	Selective	2	100-125A	625-1250A	€380.21
101297	225A	36	3	Selective	2	180-225A	1125-2250A	€422.69
101298	250A	36	3	Selective	2	200-250A	1250-2500A	€444.48

** Note 4 Pole option available 125A-250A*

VERSION Ex9M1n u to 125A, I cu=50kA

• 3 and 4-pole Moulded Case Circuit Breakers
• I cs = I cu = 50 kA at 415 V AC
• I r can be set in steps (0.8-0.9-1.0) × I n
• I i variable (5-6-7-8-9-10) × I n
• Mounting screws, box terminals as well as phase barriers in the scope of delivery
• I i variable (5-6-7-8-9-10) × I n
• Mounting screws, box terminals as well as phase barriers in the scope of delivery

Code	Rating	KA	Poles	T/M	Frame	Over current Release Ir	Instant Release Ii	Price
100896	16A	50	3	Selective	1	12.8-16A	160A	€252.22
100897	20A	50	3	Selective	1	16-20A	200A	€252.22
100898	25A	50	3	Selective	1	20-25A	250A	€252.22
100899	32A	50	3	Selective	1	25.6-32A	320A	€252.22
100900	40A	50	3	Selective	1	32-40A	400A	€252.22
100901	50A	50	3	Selective	1	40-50A	500A	€252.22
100902	63A	50	3	Selective	1	50.4-60A	630A	€252.22
100903	80A	50	3	Selective	1	64-80A	800A	€278.06
100904	100A	50	3	Selective	1	80-100A	1000A	€350.25
100905	125A	50	3	Selective	1	100-125A	1250A	€575.05

VERSION Ex9M2N up to 250 A, I cu = 50 kA

• 3 and 4-pole Moulded Case Circuit Breakers
• I cs = I cu = 50 kA at 415 V AC
• I r can be set in steps (0.8-0.9-1.0) × I n
• I i variable (5-6-7-8-9-10) × I n
• Mounting screws, box terminals as well as phase barriers in the scope of delivery
• I i variable (5-6-7-8-9-10) × I n
• Mounting screws, box terminals as well as phase barriers in the scope of delivery

Code	Rating	KA	Poles	T/M	Frame	Over current Release Ir	Instant Release Ii	Price
101299	125A	50	3	Selective	2	100-125A	625-1250A	€589.85
101300	160A	50	3	Selective	2	128-160A	800-1600A	€655.48
101301	180A	50	3	Selective	2	144-180A	900-1800A	€772.68
101302	200A	50	3	Selective	2	160-200A	1000-2000A	€808.58
101303	225A	50	3	Selective	2	180-225A	1125-2250A	€891.32
101304	250A	50	3	Selective	2	200-250A	1250-2500A	€923.23

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MOULDED CASE CIRCUIT BREAKERS (MCCB's)
Accessories For MCCB'S

noark

VERSION Ex9M4N up to 630 A, I cu = 50 kA

• 3 and 4-pole Moulded Case Circuit Breakers
• I cs = I cu = 50 kA at 415 V AC
• I r can be set in steps (0.8-0.9-1.0) × I n
• I i variable (5-6-7-8-9-10) × I n
• Mounting screws and phase barriers in the scope of delivery

Code	Rating	KA	Poles	T/M	Frame	Over current Release Ir	Instant Release Ii	Price
103376	400A	50	3	Selective	4	320-400A	2000-4400A	€1,008.40
103377	500A	50	3	Selective	4	400-500A	2500-5000A	€1,184.31
103378	630A	50	3	Selective	4	500-630A	3150-6300A	€1,299.45

VERSION Ex9M6N up to 1600 A, I cu = 50 kA

Electronic Version Available soon!

• 3 and 4-pole Electronic Moulded Case Circuit Breakers
• I cs = I cu = 50 kA at 415 V AC
• I r can be set in steps (0.4-0.5-0.6-0.7-0.8-0.9-0.95-1.0) × I n
• I i can be set in steps (2-3-4-6-8-10-12) × I n
• Mounting screws and phase barriers in the scope of delivery

Code	Rating	KA	Poles	T/M	Frame	Over current Release Ir	Instant Release Ii	Price
110340	800A	50	3	Selective	6	320-800A	1600-9600A	€1,857.78
110341	1000A	50	3	Selective	6	400-1000A	2000-12000A	€2,111.11
110342	1250A	50	3	Selective	6	500-1250A	2500-15000A	€2,483.66
110343	1600A	50	3	Selective	6	640-1600A	3200-19200A	€2,729.29

SHUNT TRIP RELEASES

Code	Description	Frame size	Price
101397	48V AC	M1	€110.65
101398	110V AC	M1	€110.65
101399	220-240V AC	M1	€42.22
101400	380-415V AC	M1	€66.71
101401	24V DC	M1	€110.65
101402	48V DC	M1	€110.65
101403	110-120V DC	M1	€110.65
101405	220V DC	M1	€110.65
101416	48V AC	M2 M3	€110.65
101417	110V AC	M2 M3	€110.65
101418	220-240V AC	M2 M3	€42.22
101419	380-415V AC	M2 M3	€66.71
101420	24V DC	M2 M3	€110.65
101421	48V DC	M2 M3	€110.65
101422	110-120V DC	M2 M3	€110.65
101424	220V DC	M2 M3	€110.65

AUXILIARY AND SIGNAL CONTACT UNITS

Code	Description	Frame size	Price
101395	Aux	All	€4.58
101396	Signal	All	€4.58

EARLY-MAKE AUXILIARY CONTACTS

Code	Description	Frame size	Price
106315	Early-make aux. 1 No	M1 M2	€39.08
106317	Early-make aux. 1 No	M3 M4 M5	€46.83

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MOULDED CASE CIRCUIT BREAKERS (MCCB's)
Accessories For MCCB'S

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UNDERVOLTAGE RELEASES

It is possible to use one unit of undervoltage release UVT2i or one unit of shunt trip release SHT2i

Code	Description	Frame size	Price
101406	220-240V AC	M1	€63.48
101407	380-415V AC	M1	€63.48

REMOTE OPERATORS

Motor Drives for electrical and remote control of MCCBs *(Available for all Frame Sizes)

Code	Description	Frame size	Price
101411	230 V AC	M1	€528.09
101412	110 V AC	M1	€528.09
101413	220 V DC	M1	€528.09
101414	110 V DC	M1	€528.09
101415	24 V DC	M1	€528.09

DIRECT ROTARY HANDLES

Rotary handle for direct mounting onto breaker (IP40)

Code	Description	Frame size	Price
101410	Grey	M1	€47.32

EXTENDED ROTARY HANDLES

*(Available for all Frame Sizes)

Code	Description	Frame size	Price
101409	300mm Grey	M1	€76.43

PHASE BARRIERS

To avoid short circuit due to ionised gas during tripping off of the breaker when unisolated busbars are used for its connection. *Note 4 Pole also available*

Code	Description	Frame size	Price
101441	3Pole	M1	€14.18
101444	3Pole	M2	€16.37
101491	3Pole	M3	€24.37
103751	3Pole	M4 M5	€18.34

CONNECTION TERMINALS - BOX TERMINALS

Code	Description	Frame size	Price
103705	4-95mm2	M1	€4.58
103709	10-120mm2	M2	€4.58
103715	120-240mm2	M3	€20.86
103717	120-240mm2 UL	M3	€33.72

- Connection terminals for MCCBs of all frame sizes
- Box and tunnel terminal versions
- For connecting with Al or Cu wires (box terminals only for Cu wires)
- Packed separately (for 3P connection, it is necessary to order 3pcs of terminal)
- Box Terminals (AC Devices, M1, M2)

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MOULDED CASE CIRCUIT BREAKERS (MCCB's)
Accessories For MCCB'S

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CONNECTION TERMINALS - TUNNEL TERMINALS

Code	Terminals	Capacity	Frame size	Price
103707	1	16-95mm²	M1	€13.08
103869	1	35-240mm²	M2	€13.08
103711	2	35-120mm²	M2	€24.03
103713	6	10-35mm²	M2	€28.15
103719	2	16-95mm²	M3	€34.58
103871	2	35-240mm²	M3	€62.00
103721	4	35-120mm²	M3	€41.14
106314	2	10-35mm²	M4 M5	€35.78

CONNECTION TERMINALS - SCREW TERMINALS

Code	Terminals	Capacity	Frame size	Price
107873	1 M6	3 Pole	M1	€4.58
107874	1 M8	3 Pole	M2	€4.58

TERMINAL COVERS, SHORT

Code	Description	Frame size	Price
101439	3 Pole	M1	€11.29
101442	3 Pole	M2	€13.35
101489	3 Pole	M3	€25.48
103748	3 Pole	M4 M5	€28.40

TERMINAL COVERS, LONG

Code	Description	Frame size	Price
101440	3 Pole	M1	€13.97
101443	3 Pole	M2	€16.52
101490	3 Pole	M3	€30.80
103749	3 Pole	M4 M5	€33.60

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NOARK
DEFINITION OF RELIABILITY

AC Miniature Circuit Breakers
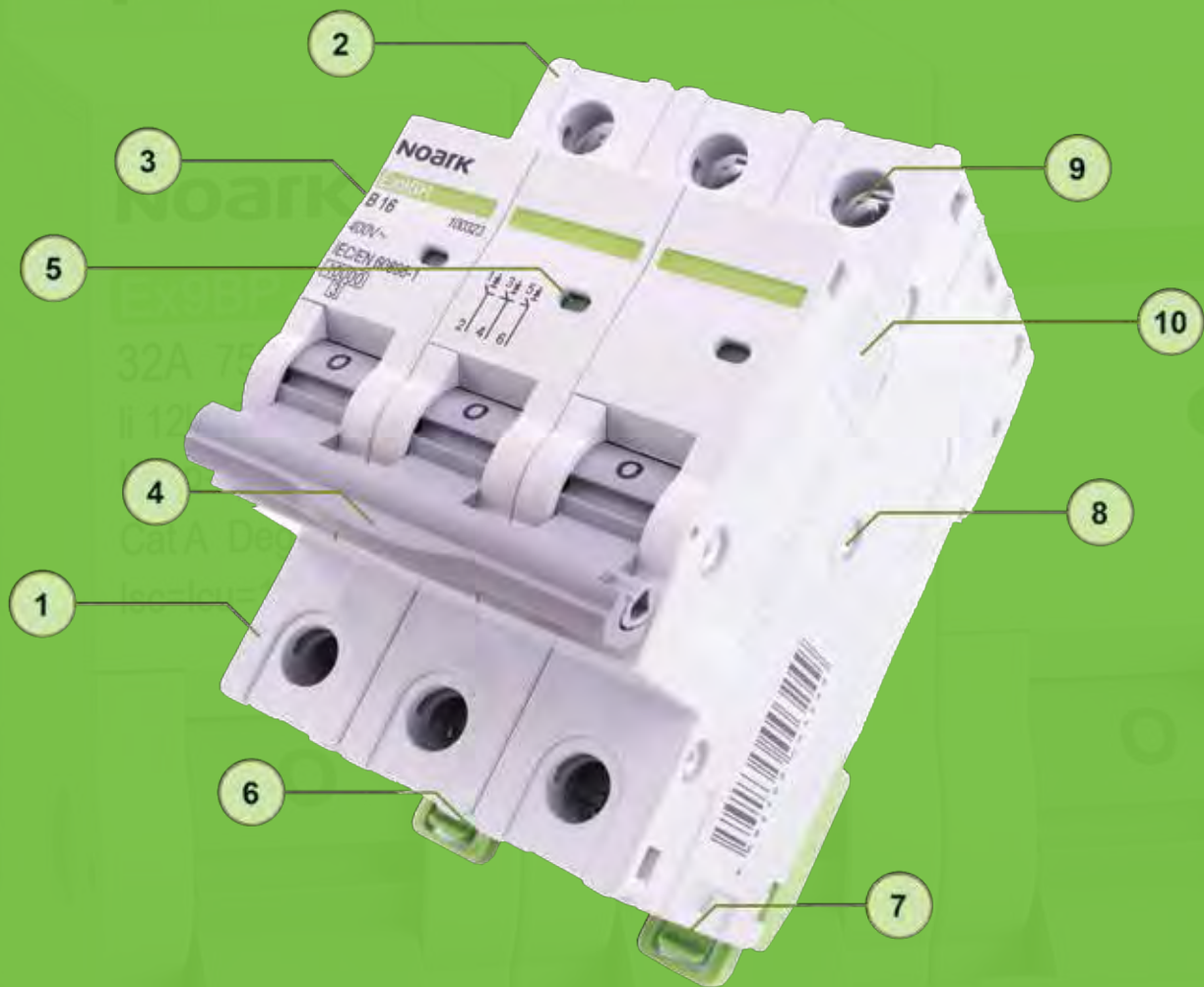
1. **1.** 5 year warranty
2. **2.** Rated current from 1 A up to 100 A
3. **3.** Tripping characteristics B, C, D
4. **4.** Colored toggle in Ex9BH and Ex9B125 line
5. **5.** Contacts state indication window
6. **6.** Suitable for busbar connections
7. **7.** Easy mounting on DIN rail
8. **8.** Undermountable and robust construction
9. **9.** Reversible line and load connection
10. **10.** Wide range of accessories

MODULAR DEVICES - AC MINIATURE CIRCUIT BREAKERS
MCB'S B, C & D CURVE 4.5kA, 6kA

Noark

Ex9BN 4.5kA B Curve 1 Pole 4.5kA

Code	AMP	Price
102030	6A	€4.77
102031	10A	€4.77
102032	16A	€4.77
102035	20A	€4.77
102036	25A	€4.77
102037	32A	€4.77
102038	40A	€5.14

Ex9BN, 6 kA B Curve MCB 1 Pole 6kA

Code	AMP	Price
100000	1A	€6.04
100001	2A	€6.04
100002	3A	€6.04
100003	4A	€6.04
100004	6A	€5.58
100005	8A	€5.58
100006	10A	€5.58
100007	13A	€5.58
100008	16A	€5.58
100009	20A	€5.58
100010	25A	€5.58
100011	32A	€5.58
100012	40A	€5.58
100013	50A	€7.76
100014	63A	€7.76

Ex9BN, 6 kA C Curve MCB 1 Pole 6kA

Code	AMP	Price
100090	1A	€6.04
100091	2A	€6.04
100092	3A	€6.04
100093	4A	€6.04
100094	6A	€5.58
100095	8A	€5.58
100096	10A	€5.58
100097	13A	€5.58
100098	16A	€5.58
100099	20A	€5.58
100100	25A	€5.58
100101	32A	€5.58
100102	40A	€5.58
100103	50A	€7.76
100104	63A	€7.76

Ex9BN, 6 kA C Curve MCB 2 Pole 6kA

Code	AMP	Price
100120	1A	€16.58
100121	2A	€16.58
100122	3A	€16.58
100123	4A	€16.58
100124	6A	€13.42
100125	8A	€13.42
100126	10A	€13.42
100127	13A	€13.42
100128	16A	€13.42
100129	20A	€13.42
100130	25A	€13.42
100131	32A	€13.42
100132	40A	€16.94
100133	50A	€20.32
100134	63A	€20.32

Ex9BN, 6 kA C Curve MCB 3 Pole 6kA

Code	AMP	Price
100135	1A	€22.26
100136	2A	€22.26
100137	3A	€22.26
100138	4A	€22.26
100139	6A	€23.57
100140	8A	€23.57
100141	10A	€23.57
100142	13A	€23.57
100143	16A	€23.57
100144	20A	€23.57
100145	25A	€23.57
100146	32A	€23.57
100147	40A	€24.40
100148	50A	€24.40
100149	63A	€24.40

4 pole available

Ex9BN, 6 kA D Curve MCB 1 Pole 6kA

Code	AMP	Price
100180	1A	€13.97
100181	2A	€10.77
100182	3A	€10.77
100183	4A	€10.77
100184	6A	€7.74
100185	8A	€7.74
100186	10A	€7.74
100187	13A	€7.74
100188	16A	€7.74
100189	20A	€7.74
100190	25A	€7.74
100191	32A	€8.10
100192	40A	€8.10
100193	50A	€13.94
100194	63A	€15.47

Ex9BN, 6 kA D Curve MCB 2 Pole 6kA

Code	AMP	Price
100210	1A	€28.62
100211	2A	€26.98
100212	3A	€26.98
100213	4A	€26.98
100214	6A	€18.51
100215	8A	€18.51
100216	10A	€17.31
100217	13A	€17.31
100218	16A	€17.31
100219	20A	€18.88
100220	25A	€18.88
100221	32A	€21.18
100222	40A	€22.41
100223	50A	€32.42
100224	63A	€34.00

Ex9BN, 6 kA D Curve MCB 3 Pole 6kA

Code	AMP	Price
100225	1A	€47.94
100226	2A	€36.28
100227	3A	€36.28
100228	4A	€36.28
100229	6A	€26.24
100230	8A	€26.24
100231	10A	€23.11
100232	13A	€23.11
100233	16A	€23.11
100234	20A	€23.94
100235	25A	€23.94
100236	32A	€26.25
100237	40A	€27.81
100238	50A	€43.93
100239	63A	€47.94

4 pole available

MODULAR DEVICES - AC MINIATURE CIRCUIT BREAKERS
MCB'S B, C & D CURVE 20kA, 25kA

Noark

Ex9B125* C Curve MCB 1 Pole 20/25kA

Code	AMP	Price
102694	16A	€55.85
102695	20A	€55.85
102696	25A	€55.85
102697	32A	€55.85
102698	40A	€55.85
102699	50A	€55.85
102700	63A	€47.21
*102701	80A	€47.21
*102702	100A	€50.57

Ex9B125* C Curve MCB 2 Pole 20/25kA

Code	AMP	Price
102754	16A	€96.71
102755	20A	€96.71
102756	25A	€96.71
102757	32A	€96.71
102758	40A	€96.71
102759	50A	€96.71
102760	63A	€81.45
*102761	80A	€81.45
*102762	100A	€90.68

Ex9B125* C Curve MCB 3 Pole 20/25kA

Code	AMP	Price
102784	16A	€125.29
102785	20A	€125.29
102786	25A	€125.29
102787	32A	€125.29
102788	40A	€125.29
102789	50A	€125.29
102790	63A	€117.69
*102791	80A	€117.69
*102792	100A	€127.08

*Rated ultimate short-circuit breaking capacity Icu (EN 60947-2) for In 16 - 63 A = 25 kA for In 80, 100 A = 20 k
B & D Curve + 4 pole also available

ACCESSORIES FOR EX9B AND EX9PN

SHUNT TRIP FOR Ex9B MCB's

Code	Voltage	Price
100547	110-415AC 110-130DC	€15.47

AUXILIARY AND SIGNAL CONTACT UNITS

Code	Function	Contacts	Price
100540	Auxiliary	1 CO	€16.37
100542	Auxiliary	2 CO	€18.71
100541	Signal	1 CO	€16.37
100543	Auxiliary + Signal	1 CO +1 CO	€14.43

LOCKING DEVICES

Code	Description	Price
110193	MCB Pad-locking	€4.38

UNDERVOLTAGE RELEASES

Code	Aux. Cont.	AC Op. Volt	DC Op. Volt.	Type	Price
100550	-	220-240	-	UVT31 220-240V AC	€42.62
100551	-	48	48	UVT31 48V AC/DC	POA
100552	1 NC	220-240	-	UVT3101 220-240V AC	€42.62
100553	1 NC	48	48	UVT3101 48V AC/DC	POA
100554	1 NO	220-240	-	UVT3110 220-240V AC	€42.62
100555	1 NO	48	48	UVT3110 48V AC/DC	POA

OVERVOLTAGE RELEASES

Overvoltage release is not a protection against transient overvoltage and does not supersede surge protection devices

Code	Aux. Cont.	AC Op. Volt	DC Op. Volt.	Type	Price
100556	-	280V AC±5%	-	OVT31 280V AC±5%	46.60

RFE (REG FARRELL ENGINEERING LIMITED)
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REG FARRELL ENGINEERING LTD

NOARK
DEFINITION OF RELIABILITY

DC Miniature Circuit Breakers
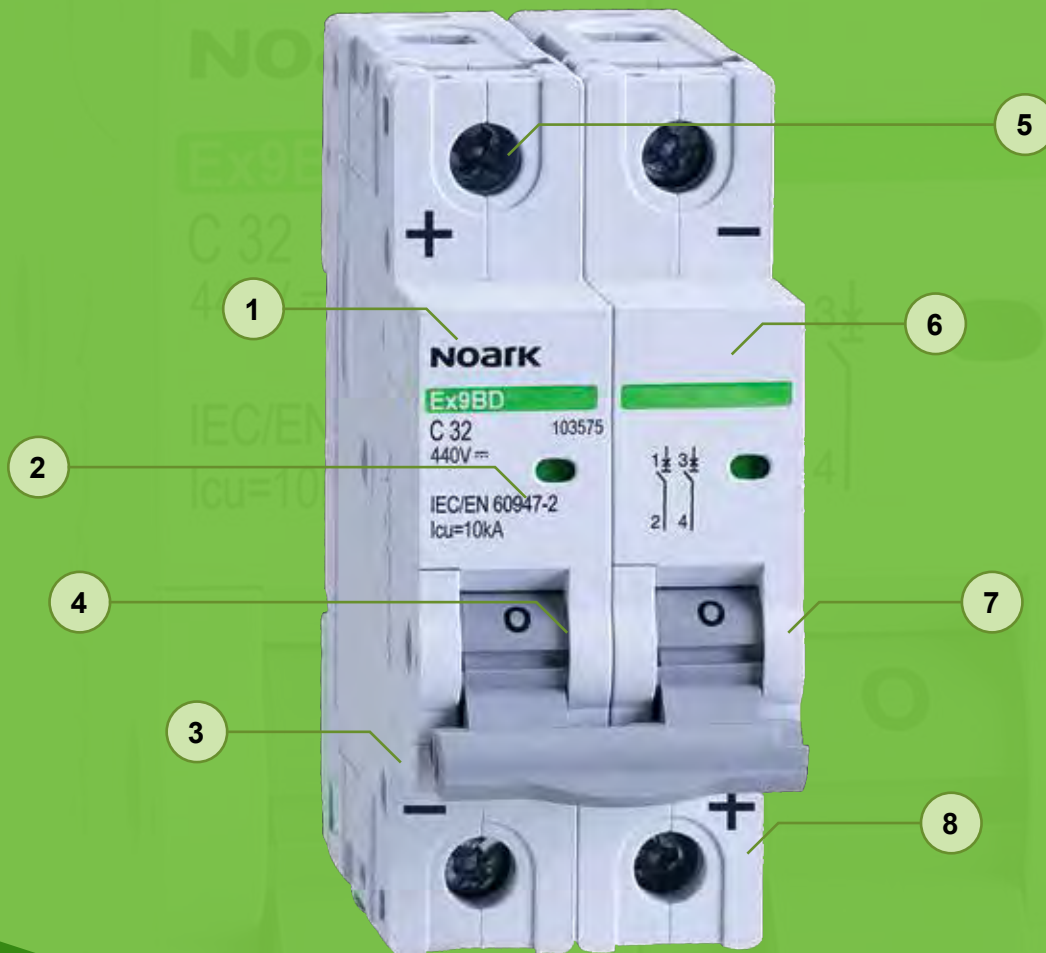
1. General purpose Direct Current (DC) Miniature Circuit Breakers

2. Tested according to EN 60947-2

3. Rated operating voltage 250 V DC per pole

4. Rated current up to 63 A

5. Rated short circuit breaking capacity 10 kA

6. 1 to 4 pole versions

7. Tripping characteristics C, K

8. Wide range of accessories

MODULAR DEVICES - DC MINIATURE CIRCUIT BREAKERS

NOARK

EX9BP-JX -10KA

C-CHARACTERISTIC, 1-POLE, 250 V DC

Code	Rated current	Width	Char.	Price
110067	1A	1MU	C	€23.88
110068	2A	1MU	C	€25.38
110069	3A	1MU	C	€22.95
110070	4A	1MU	C	€29.35
110071	6A	1MU	C	€15.54
110072	10A	1MU	C	€18.28
110073	16A	1MU	C	€17.82
110074	20A	1MU	C	€18.28
110075	25A	1MU	C	€17.82
110076	32A	1MU	C	€18.06
110077	40A	1MU	C	€17.94
110078	50A	1MU	C	€34.03
110079	63A	1MU	C	€38.28

C-CHARACTERISTIC, 2-POLE, 500 V DC

Code	Rated current	Width	Char.	Price
110080	1A	2MU	C	€53.60
110081	2A	2MU	C	€67.17
110082	3A	2MU	C	€51.08
110083	4A	2MU	C	€65.35
110084	6A	2MU	C	€41.14
110085	10A	2MU	C	€40.34
110086	16A	2MU	C	€32.80
110087	20A	2MU	C	€33.60
110088	25A	2MU	C	€32.80
110089	32A	2MU	C	€33.02
110090	40A	2MU	C	€46.28
110091	50A	2MU	C	€79.51
110092	63A	2MU	C	€86.77

C-CHARACTERISTIC, 3-POLE, 750 V DC

Code	Rated current	Width	Char.	Price
110093	1A	3MU	C	€63.05
110094	2A	3MU	C	€79.05
110095	3A	3MU	C	€60.09
110096	4A	3MU	C	€76.89
110097	6A	3MU	C	€69.11
110098	10A	3MU	C	€67.78
110099	16A	3MU	C	€55.11
110100	20A	3MU	C	€56.46
110101	25A	3MU	C	€55.11
110102	32A	3MU	C	€55.51
110103	40A	3MU	C	€77.78
110104	50A	3MU	C	€93.54
110105	63A	3MU	C	€102.15

C-CHARACTERISTIC, 4-POLE, 1000 V DC

Code	Rated current	Width	Char.	Price
110106	1A	4MU	C	€70.03
110107	2A	4MU	C	€87.82
110108	3A	4MU	C	€66.77
110109	4A	4MU	C	€85.45
110110	6A	4MU	C	€80.83
110111	10A	4MU	C	€79.26
110112	16A	4MU	C	€64.46
110113	20A	4MU	C	€66.03
110114	25A	4MU	C	€64.46
110115	32A	4MU	C	€64.89
110116	40A	4MU	C	€90.95
110117	50A	4MU	C	€103.94
110118	63A	4MU	C	€113.51

K-CHARACTERISTIC, 1-POLE, 250 V DC

Code	Rated current	Width	Char.	Price
110119	1A	1MU	K	€26.52
110120	2A	1MU	K	€28.18
110121	3A	1MU	K	€25.51
110122	4A	1MU	K	€32.62
110123	6A	1MU	K	€17.26
110124	10A	1MU	K	€20.31
110125	16A	1MU	K	€19.82
110126	20A	1MU	K	€20.31
110127	25A	1MU	K	€19.82
110128	32A	1MU	K	€20.06
110129	40A	1MU	K	€19.94
110130	50A	1MU	K	€37.82
110131	63A	1MU	K	€42.55

K-CHARACTERISTIC, 2-POLE, 500 V DC

Code	Rated current	Width	Char.	Price
110132	1A	2MU	K	€59.54
110133	2A	2MU	K	€74.65
110134	3A	2MU	K	€56.74
110135	4A	2MU	K	€72.62
110136	6A	2MU	K	€45.69
110137	10A	2MU	K	€44.80
110138	16A	2MU	K	€36.43
110139	20A	2MU	K	€37.32
110140	25A	2MU	K	€36.43
110141	32A	2MU	K	€36.68
110142	40A	2MU	K	€51.42
110143	50A	2MU	K	€88.34
110144	63A	2MU	K	€96.49

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EX9BP-JX - 3 Pole, 750 V DC

Code	Rated current	Width	Char.	Price
110145	1A	3MU	K	€67.35
110146	2A	3MU	K	€84.43
110147	3A	3MU	K	€64.18
110148	4A	3MU	K	€82.15
110149	6A	3MU	K	€73.85
110150	10A	3MU	K	€72.40
110151	16A	3MU	K	€58.89
110152	20A	3MU	K	€60.31
110153	25A	3MU	K	€58.89
110154	32A	3MU	K	€59.29
110155	40A	3MU	K	€83.38
110156	50A	3MU	K	€99.94
110157	63A	2MU	K	€109.14

EX9BP-JX - 4 Pole, 1000V DC

Code	Rated current	Width	Char.	Price
110158	1A	4MU	K	€74.83
110159	2A	4MU	K	€93.82
110160	3A	4MU	K	€71.32
110161	4A	4MU	K	€91.26
110162	6A	4MU	K	€86.37
110163	10A	4MU	K	€84.68
110164	16A	4MU	K	€68.86
110165	20A	4MU	K	€70.55
110166	25A	4MU	K	€68.86
110167	32A	4MU	K	€69.35
110168	40A	4MU	K	€97.20
110169	50A	4MU	K	€111.05
110170	63A	4MU	K	€121.26

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Noark
DEFINITION OF RELIABILITY

RCD's & RCBO's Residual Current Device & Breakers

1. 5 year warranty

2. Variants from 10 to 500 mA $I_{\Delta n}$ available

3. Contacts state indication

4. Suitable for busbar connection

5. Prepared openings for toggle sealing

6. Tripping chars B, C of MCB in Ex9BL

7. Split RCCB / MCB toggles in Ex9BL

8. Wide range of accessories for Ex9BL

9. Robust construction

10. Easy mounting on DIN rail

AC TYPE CHARACTERISTIC A, B, C (2 Pole) ** 4 POLE ALSO AVAILABLE

- AC type of residual current circuit breaker sensitive on residual AC current
- Without time delay
- Surge current-proof 3000 A
- Suitable for protection of people in case of direct and indirect contact with live parts and exposed conductive parts during a fault, respectively
- Selective with upstream installed S or S+A type RCCB

EX9L-N, 6KA
RCD CHARACTERISTIC A ** 4 POLE ALSO AVAILABLE. For Information & pricing contact a member of our sales team

Code	AMP	Type	mA	Price
108346	16	2P	10	€44.89
108347	25	2P	10	€46.58
108348	16	2P	30	€35.32
108349	25	2P	30	€45.97
108350	40	2P	30	€38.58
108351	63	2P	30	€35.32
108352	16	2P	100	€56.37
108353	25	2P	100	€58.36
108354	40	2P	100	€54.03
108355	63	2P	100	€64.35
108356	16	2P	300	€43.85
108357	25	2P	300	€43.85
108358	40	2P	300	€43.85
108359	63	2P	300	€65.82

RCBO TYPE A CHARACTERISTIC B

Code	AMP	Type	mA	Price
107635	6	2P	30	€28.15
107636	10	2P	30	€28.15
107637	13	2P	30	€28.15
107638	16	2P	30	€28.15
107639	20	2P	30	€28.15
107640	25	2P	30	€28.15
107641	32	2P	30	€28.15
107642	40	2P	30	€28.15
107667	6	2P	100	€29.69
107668	10	2P	100	€29.69
107669	13	2P	100	€29.69
107670	16	2P	100	€29.69
107671	20	2P	100	€29.69
107672	25	2P	100	€29.69
107673	32	2P	100	€37.17
107674	40	2P	100	€37.17
107699	6	2P	300	€31.20
107700	10	2P	300	€31.20
107731	13	2P	300	€31.20
107702	16	2P	300	€31.20
107703	20	2P	300	€31.20
107704	25	2P	300	€31.20
107705	32	2P	300	€39.02
107706	40	2P	300	€39.02

RCBO TYPE A CHARACTERISTIC C

Code	AMP	Type	mA	Price
107643	6	2P	30	€28.15
107644	10	2P	30	€28.15
107645	13	2P	30	€28.15
107646	16	2P	30	€28.15
107647	20	2P	30	€28.15
107648	25	2P	30	€28.15
107649	32	2P	30	€28.15
107650	40	2P	30	€28.15
107675	6	2P	100	€29.69
107676	10	2P	100	€29.69
107677	13	2P	100	€29.69
107678	16	2P	100	€29.69
107679	20	2P	100	€29.69
107680	25	2P	100	€29.69
107681	32	2P	100	€37.17
107682	40	2P	100	€37.17
107707	6	2P	300	€31.20
107708	10	2P	300	€31.20
107709	13	2P	300	€31.20
107710	16	2P	300	€31.20
107711	20	2P	300	€31.20
107712	25	2P	300	€31.20
107713	32	2P	300	€39.02
107714	40	2P	300	€39.02

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DEFINITION OF RELIABILITY

Contactors and Accessories
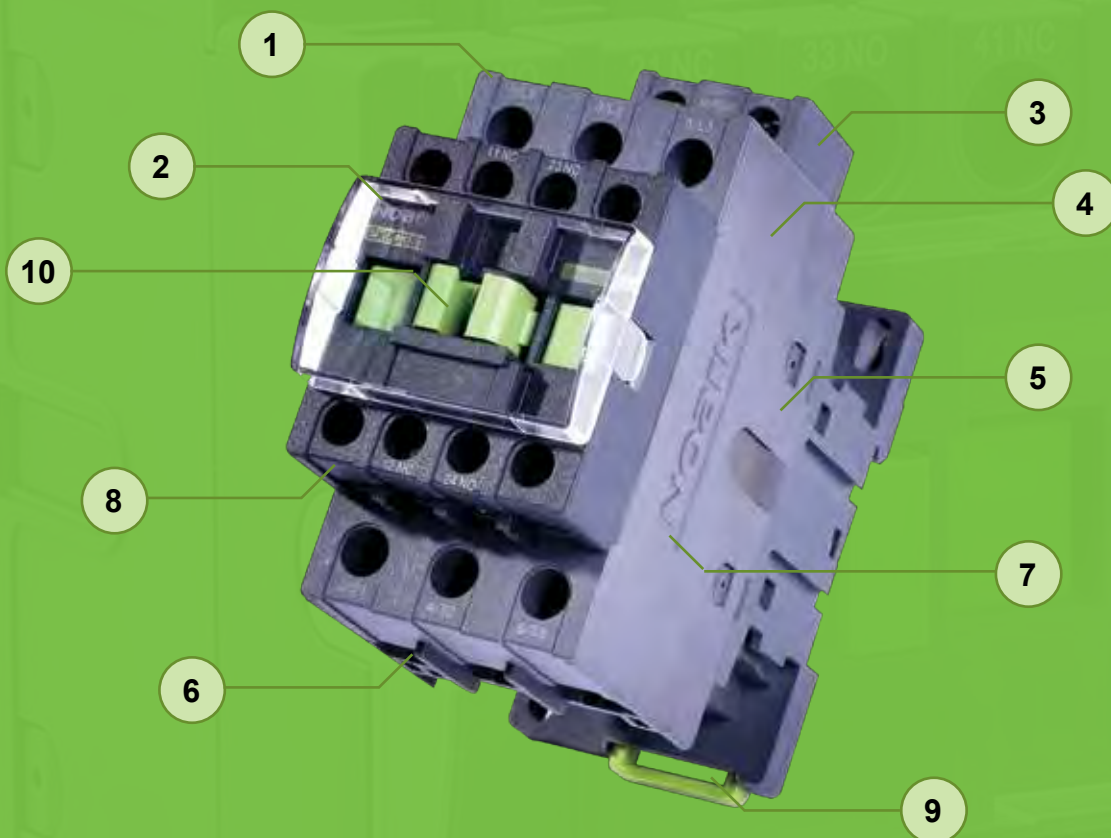
1. 5 year warranty

2. Miniature to large sizes

3. Various operational voltage from 24 V

4. AC and DC variants available

5. Rated current up to 500 A

6. Low power consumption

7. Special contactors for capacitance load

8. Different combination of contacts

9. Mounting on DIN rail or panel

10. Wide range of accessories

CONTACTORS

NOARK

Ex9CS CONTACTORS

Bringing excellent electric parameters in the form of a very compact device. These contactors can be used for both industrial as well as domestic applications. Thermal current and AC-1 load 20 A at 690 V AC allows switching of resistive loads with maximum currents for domestic applications. Thanks to compact dimensions, Ex9CS contactors are the ideal solution for space limited installations. Contactors are offered as 3 and 4-pole versions and as a 4-pole version with main contacts configuration 2 normally open and 2 normally closed (4P/22).

- Standard version of contactor
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R38

EX9C Frame Size, 18,38,65

Code	Rating	Voltage	Frame	Poles	Aux Contact	Price
101105	9 A	220V AC	18	3	1 NO + 1NC	€25.38
101107	9 A	110V AC	18	3	1 NO + 1NC	€27.05
101111	9 A	24V AC	18	3	1 NO + 1NC	€27.05
101129	12 A	220V AC	18	3	1 NO + 1NC	€31.29
101131	12 A	110V AC	18	3	1 NO + 1NC	€31.29
101135	12 A	24V AC	18	3	1 NO + 1NC	€31.29
101153	18 A	220V AC	18	3	1 NO + 1NC	€40.15
101155	18 A	110V AC	18	3	1 NO + 1NC	€58.37
101159	18 A	24V AC	18	3	1 NO + 1NC	€50.49
101177	25 A	220V AC	38	3	1 NO + 1NC	€64.77
101179	25 A	110V AC	38	3	1 NO + 1NC	€69.88
101183	25 A	24V AC	38	3	1 NO + 1NC	€69.88
101201	32 A	220V AC	38	3	1 NO + 1NC	€93.29
101203	32 A	110V AC	38	3	1 NO + 1NC	€99.35
101207	32 A	24V AC	38	3	1 NO + 1NC	€99.35
101249	40 A	220V AC	65	3	1 NO + 1NC	€104.95
101251	40 A	110V AC	65	3	1 NO + 1NC	€106.52
101255	40A	24V AC	65	3	1 NO + 1NC	€106.52

CONTACTORS Ex9C, Frame Size 185/300

- Mounting onto panel with screws
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX44.. can be used
- AC and DC control voltage
- Minimized power consumption of coil
- DC coil technology - no humming noise
- Can be combined with overload relays Ex9R185

Code	Rating	Voltage	Frame	Poles	Aux Contact	Price
106220	115 A	220V AC/DC	185	3 Pole	2NO+2NC	€391.05
106222	115 A	110V AC/DC	185	3 Pole	2NO+2NC	€391.05
106217	115 A	24V AC/DC	185	3 Pole	2NO+2NC	€391.05
106232	150 A	220V AC/DC	185	3 Pole	2NO+2NC	€479.11
106234	150 A	110V AC/DC	185	3 Pole	2NO+2NC	€479.11
106229	150 A	24V AC/DC	185	3 Pole	2NO+2NC	€479.11
106244	185 A	220V AC/DC	185	3 Pole	2NO+2NC	€559.66
106246	185A	110V AC/DC	185	3 Pole	2NO+2NC	€559.66
106241	185 A	24V AC/DC	185	3 Pole	2NO+2NC	€559.66
106256	225 A	220V AC/DC	300	3 Pole	2NO+2NC	€642.40
106258	225 A	110V AC/DC	300	3 Pole	2NO+2NC	€642.40
106253	225 A	24V AC/DC	300	3 Pole	2NO+2NC	€642.40

ACCESSORIES FOR CONTACTORS

Noark

AUXILIARY CONTACTS FOR MINIATURE CONTACTORS, FRONT-MOUNTED

- Auxiliary contacts for contactors line Ex9C, Ex9CR up to 500 A
- For subsequent mounting
- Front-mounted version
- 1 unit or TDD4 unit can be used with a contactor
- Do not limit the possibility of installing overload thermal relays Ex9R

Code	Suitable for	Contacts	Type	Price
101284	Ex9C, Ex9CR	2 NC	AX4202	€8.90
101285	Ex9C, Ex9CR	1 NO + 1 NC	AX4211	€8.90
101286	Ex9C, Ex9CR	2 NO	AX4220	€8.90
101287	Ex9C, Ex9CR	4 NC	AX4204	€13.70
101288	Ex9C, Ex9CR	1 NO + 3 NC	AX4213	€13.70
101289	Ex9C, Ex9CR	2 NO + 2 NC	AX4222	€13.70
101290	Ex9C, Ex9CR	3 NO + 1 NC	AX4231	€13.70
101291	Ex9C, Ex9CR	4 NO	AX4240	€13.70

SIDE MOUNTED AUXILIARY CONTACTS

- Auxiliary contacts for contactors line Ex9C, Ex9Ci, Ex9CR and Ex9CRi
- For subsequent mounting
- Side-mounted version
- 1 unit can be used with a contactor at the left, another unit at the right
- Do not limit a possibility to install overload relays Ex9R38, Ex9R100

Code	Suitable for	Contacts	Price
101292	Ex9CS, Ex9Ci Ex9CR, Ex9CRi	1 NO + 1 NC	€10.92

OVERLOAD THERMAL RELAYS Ex9R FRAME SIZE 38

- Overload thermal relays
- For direct mounting onto Contactors Ex9C18(i) and Ex9C38(i) (with included spacer)
- Stand-alone device for mounting onto device (DIN) rail 35 mm by means of combination with adaptor AD52
- Automatic and manual reset function
- Tripping class 10A

Code	Current range	Frame size	Poles	Aux Contacts	Price
101371	2.5 - 4 A	18 (09, 12, 18), 38 (25, 32, 38)	3	1 NO + 1 NC	POA
101372	4 - 6 A	18 (09, 12, 18), 38 (25, 32, 38)	3	1 NO + 1 NC	POA
101373	5.5 - 8 A	18 (09, 12, 18), 38 (25, 32, 38)	3	1 NO + 1 NC	POA
101374	7 - 10 A	18 (09, 12, 18), 38 (25, 32, 38)	3	1 NO + 1 NC	POA
101375	9 - 13 A	18 (09, 12, 18), 38 (25, 32, 38)	3	1 NO + 1 NC	POA
101376	12 - 18 A	18 (09, 12, 18), 38 (25, 32, 38)	3	1 NO + 1 NC	POA
101377	16 - 24 A	18 (09, 12, 18), 38 (25, 32, 38)	3	1 NO + 1 NC	POA
101378	23 - 32 A	18 (09, 12, 18), 38 (25, 32, 38)	3	1 NO + 1 NC	POA
101379	30 - 38 A	18 (09, 12, 18), 38 (25, 32, 38)	3	1 NO + 1 NC	POA

ACCESSORIES FOR CONTACTORS

noark

OVERLOAD RELAYS EX9R FRAME SIZE 100

• Overload thermal relays
• For direct mounting onto Contactors Ex9C65 to Ex9C100 (with included spacer)
• Stand-alone device for mounting onto device (DIN) rail 35 mm by means of combination with adaptor AD53
• Automatic and manual reset function
• Tripping class 10A

Code	Contactor Settings	Frame	Poles	Aux Contacts	Price
101380	23-32A	65(40,50,65) 100(80,100)	3	1 NO + 1NC	€83.85
101381	30-40A	65(40,50,65) 100(80,100)	3	1 NO + 1NC	€84.43
101382	37-50A	65(40,50,65) 100(80,100)	3	1 NO + 1NC	€103.42
101383	48-65A	65(40,50,65) 100(80,100)	3	1 NO + 1NC	€106.00
101384	55-70A	65(40,50,65) 100(80,100)	3	1 NO + 1NC	€117.88
101385	63-80A	65(40,50,65) 100(80,100)	3	1 NO + 1NC	€130.15
101386	80-100A	65(40,50,65) 100(80,100)	3	1 NO + 1NC	€161.45

FRAME SIZE 185

• Overload thermal relays
• For direct mounting onto Ex9C115-185 contactors
• Stand-alone device for mounting onto panel by means of combination with adaptor AD54
• Automatic and manual reset function
• Tripping class 10A

Code	Current range	Frame size	Poles	Aux Contacts	Price
106326	80 - 115 A	185 (115, 165, 185)	3P	1 NO + 1 NC	€200.50
106327	110 - 150 A	185 (115, 165, 185)	3P	1 NO + 1 NC	€206.10
106328	140 - 185 A	185 (115, 165, 185)	3P	1 NO + 1 NC	€210.45

FRAME SIZE 500

• Overload thermal relays
• For direct mounting onto Ex9C225-500 contactors
• Stand-alone device for mounting onto panel by means of combination with adaptor AD55
• Automatic and manual reset function
• Tripping class 10A

Code	Current range	Frame size	Poles	Aux Contacts	Price
106329	160 - 225 A	300 (225, 265, 300) 500 (400, 500)	3P	1 NO + 1 NC	€226.30
106330	210 - 300 A	300 (225, 265, 300) 500 (400, 500)	3P	1 NO + 1 NC	€241.90
106331	280 - 400 A	300 (225, 265, 300) 500 (400, 500)	3P	1 NO + 1 NC	€350.30
106332	380 - 500 A	300 (225, 265, 300) 500 (400, 500)	3P	1 NO + 1 NC	€354.70

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Noark
DEFINITION OF RELIABILITY

Isolators Lockable
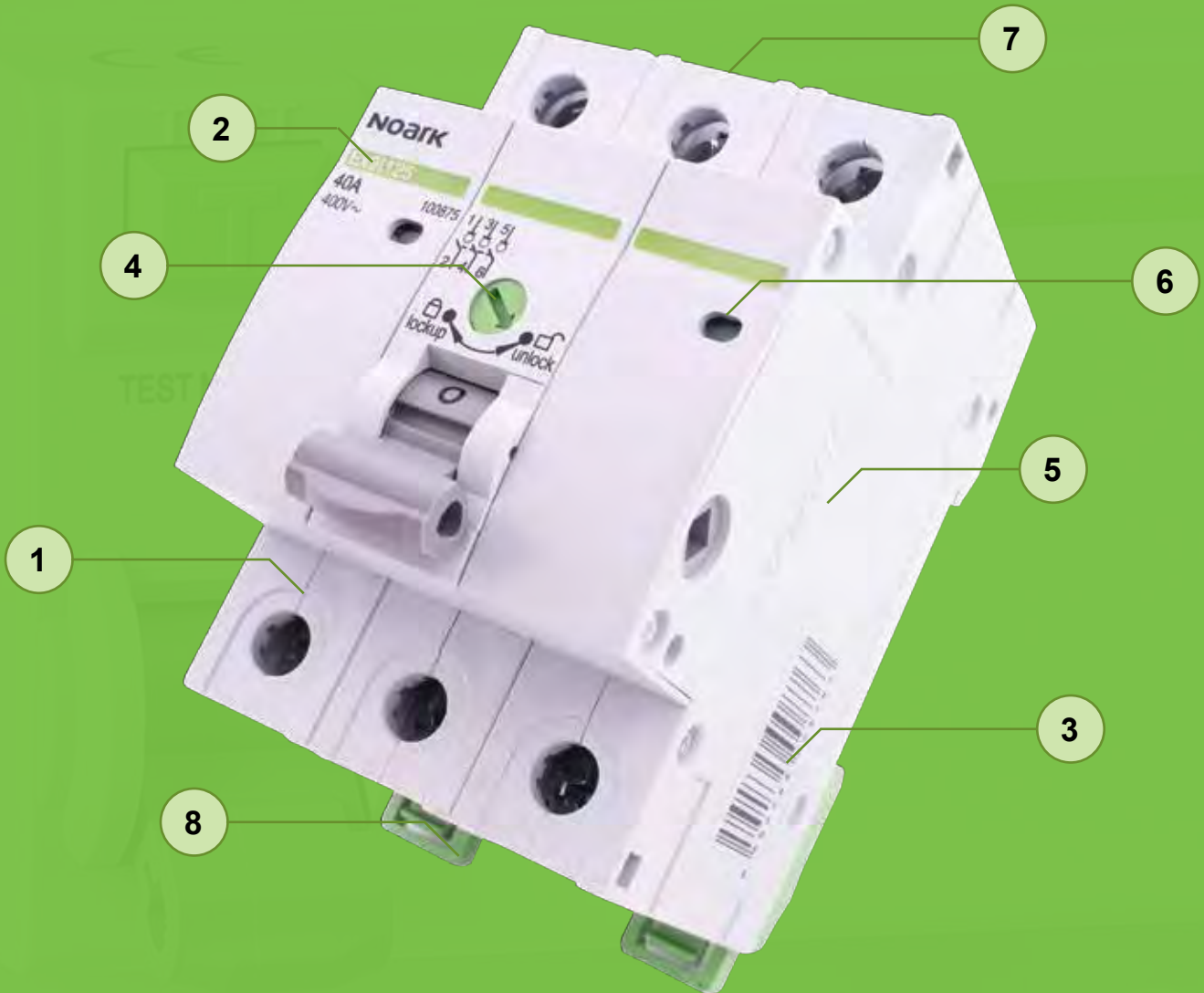
1. 5 year warranty
2. Rated current up to 125 A
3. Compact 4-pole variant Ex9I40 in 1MU
4. Toggle OFF position lock

5. Ex9BI line compatible with accessories
6. Contact state indication
7. Suitable for busbar connections
8. Easy mounting on DIN rail

ISOLATORS

NOARK

1 POLE

Code	Rated Current	Poles	Price
102304	16 A	1	€5.45
102305	25 A	1	€5.95
100862	32 A	1	€7.20
100863	40 A	1	€9.30
100864	63 A	1	€14.02
100865	80 A	1	€14.79
100866	100 A	1	€14.79
100867	125 A	1	€14.79

2 POLE

Code	Rated Current	Poles	Price
102306	16 A	2	€9.05
102307	25 A	2	€10.20
100868	32 A	2	€14.45
100869	40 A	2	€16.95
100870	63 A	2	€18.60
100871	80 A	2	€21.65
100872	100 A	2	€25.90
100873	125 A	2	€29.30

3 POLE

Code	Rated Current	Poles	Price
102308	16 A	3	€13.60
102309	25 A	3	€14.30
100874	32 A	3	€14.95
100875	40 A	3	€15.20
100876	63 A	3	€29.93
100877	80 A	3	€27.45
100878	100 A	3	€33.62
100879	125 A	3	€47.50

4 POLE

Code	Rated Current	Poles	Price
102310	16 A	4	€21.20
102311	25 A	4	€23.45
100880	32 A	4	€30.25
100881	40 A	4	€31.75
100882	63 A	4	€36.45
100883	80 A	4	€44.10
100884	100 A	4	€51.00
100885	125 A	4	€57.95

1 POLE   **2 POLE**   **3 POLE**   **4 POLE**

NOArk
DEFINITION OF RELIABILITY

Consumer Units

CONSUMER UNITS PNS

Consumer units PNS are intended mainly for domestic applications. Their design is suitable for surface mounting. Scope of delivery consists of enclosure, door, device DIN rails, N + PE terminals, front cover with device cutout, cover for empty place and mounting material.

- Surface-mounted consumer units PNS
- Degree of protection IP40
- 8 up to 54 modules
- 1 up to 4 rows
- Transparent or white door

Code	Description	Price
101497	8 MOD 1 ROW PNS CONSUMER UNIT WITH TRANSPARENT DOOR IP40 H236mm x W215 x D102	€17.10
101498	12 MOD 1 ROW PNS CONSUMER UNIT WITH TRANSPARENT DOOR IP40 H236mm x W287 x D112	€19.83
101499	18 MOD 1 ROW PNS CONSUMER UNIT WITH TRANSPARENT DOOR IP40 H236mm x W396 x D112	€29.93
101500	24 MOD 2 ROW PNS CONSUMER UNIT WITH TRANSPARENT DOOR IP40 H361mm x W287 x D112	€32.61
101501	36 MOD 2 ROW PNS CONSUMER UNIT WITH TRANSPARENT DOOR IP40 H361 mm x 396W x D112	€42.21
101502	36 MOD 3* ROW PNS CONSUMER UNIT WITH TRANSPARENT DOOR IP40 H526 mm x 287W x D112	€40.48

TYPE KEY

P	N	S	8	T
↓	↓	↓	↓	↓
Product family	**Degree of protection**	**Version**	**Number of modules**	**Door**
P: Plastic enclosure	N: IP40	S: Surface mounted	8 - 54	T: Transparent W: White

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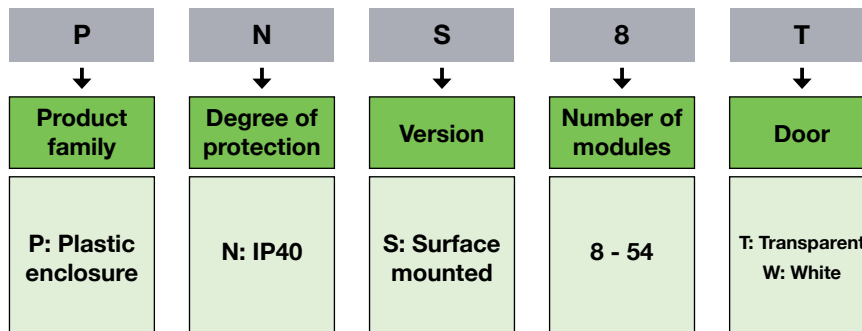
NOARK
DEFINITION OF RELIABILITY

Panel Mounted Control Devices

PANEL MOUNTED CONTROL DEVICES

Noark

HEAD TYPES OVERVIEW

Flat buttons
Ex9P1 F

Raised buttons
Ex9P1 R

Dual colour buttons
Ex9P1 D

Mushroom buttons
Ex9P1 M

Emergency stop
Ex9P1 H

Selector switches
Ex9P1 S

Switches with key
Ex9P1 SK

Signal lamps
Ex9P1 P

MOUNTING PRINCIPLE

EMERGENCY STOP STICKERS

EMERGENCY
STOP

107871

106807

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PANEL MOUNTED CONTROL DEVICES

NOARK
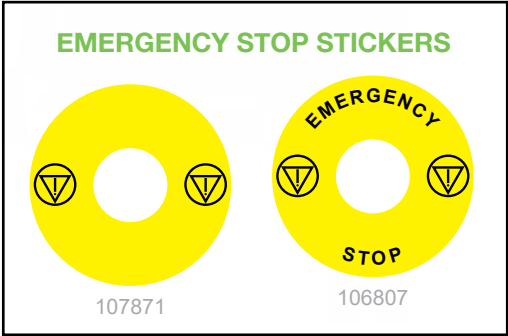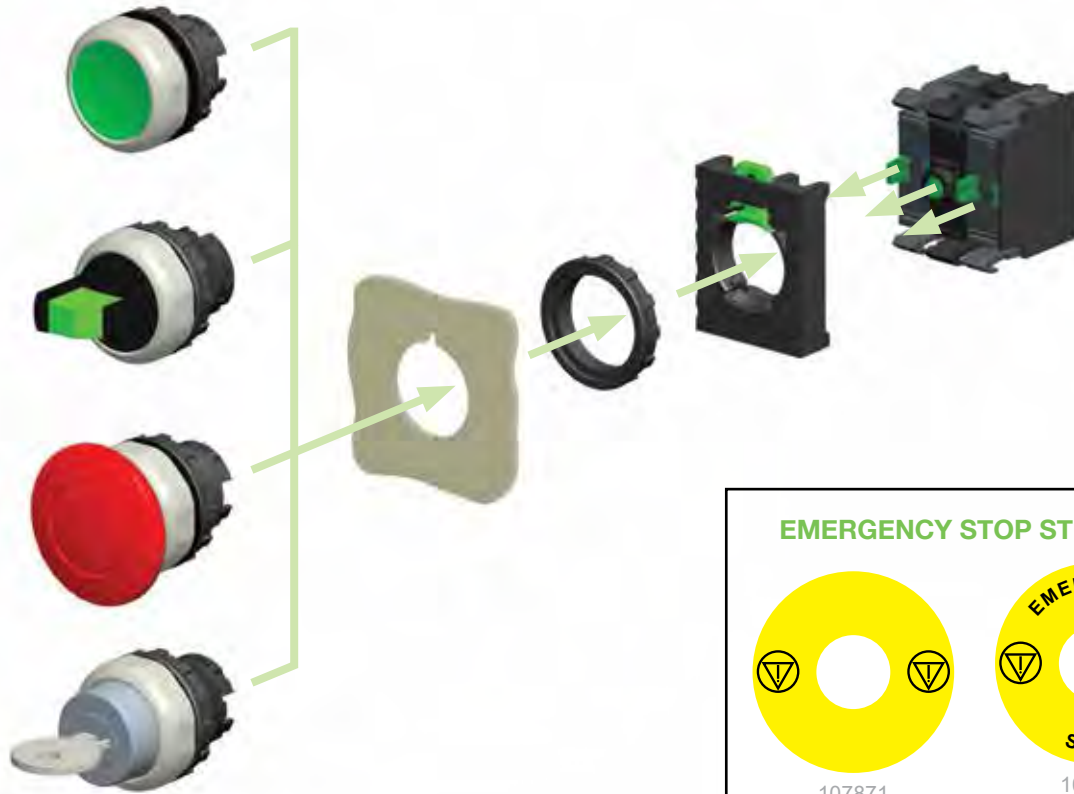
FLAT BUTTONS
• Momentary function
• Without printing on the head
• Function elements and basement to be ordered separately
• Scope of delivery: flat button head with aluminium cover ring

Code	Illumination	Colour	Price
105612	No	White	€2.52
105613	No	Black	€2.52
105614	No	Green	€2.52
105615	No	Red	€2.52
105616	No	Yellow	€2.52
105617	No	Blue	€2.52
105618	Yes	Clear	€3.75
105619	Yes	Green	€3.75
105620	Yes	Red	€3.75
105621	Yes	Yellow	€3.75
105622	Yes	Blue	€3.75

MUSHROOM TYPE BUTTONS FOR EMERGENCY STOP

Code	Illumination	Colour	Price
105656	No	Red 40mm	€10.37
105657	No	Red 60mm	€11.42

SIGNAL LAMPS
• Various colour diffusion light lens
• Without printing on the head
• Function elements and basement to be ordered separately
• Scope of delivery: signal lamp head with aluminium cover ring

Code	Illumination	Price
105660	White	€2.37
105661	Green	€2.37
105662	Red	€2.37
105663	Yellow	€2.37
105664	Blue	€2.37

BASEMENT
• Compatible with all control head types, contact and LED units
• Flush mounting
• Up to 3 contact units (or 2 contact + 1 LED units)
• Allows to combine device heads with function elements

Code	Description	Price
105611	Basement for 3 Units	€0.83

PART FOR MIDDLE CONTACT UNIT CONTROL
• Inserted into the head for control of the middle contact unit (instead of LED unit)
• Suitable for Ex9P1 F*, R*, M* control head types with illumination possibility

Code	Description	Price
105580	Part for middle control unit	€0.62

CONTACT UNITS
• Single contact units
• Normally open (NO) or normally close (NC) internal contact version
• Control moving part colour according to internal contact type
• For flush mounting type basement

Code	Contact	Colour	Price
105578	1 NO	Green	€1.75
105579	1 NC	Red	€1.75

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RFE
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ENGINEERING LTD*

Wall Mounted
EV Chargers
C/W Integrated B Type RCCB
EX9EVC

Ex9EVC

Plug and go
All you need is a grip plug

Manufactured in EU
The European quality standards

Reliable protection
B type RCCB integrated**

5 Year Warranty
We stand behind our products

- 1 Phase or 3 Phase Version
- Plug Type 1 of Type 2
- Charging current up to 32A
- Integrated RCCB Type B

Type 1   Type 2

WALL MOUNTED EV CHARGERS

NOARK
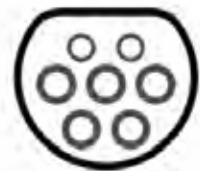
WALL MOUNTED EV CHARGES

• 1 Phase or 3 Phase Version
• Plug Type 1 or Type 2
• Charging Current up to 32A
• Integrated RCCB Type B

Code	Type	Description	Price
110256	Ex9EV1 T1 10A	Wall - Mounted EV chargers, Type1, 1 Phase, 10Amp	€825.37
110494	Ex9EV1 T1 16A	Wall - Mounted EV chargers, Type1, 1 Phase, 16Amp	€825.37
110495	Ex9EV1 T1 20A	Wall - Mounted EV chargers, Type1, 1 Phase, 20Amp	€825.37
110496	Ex9EV1 T1 25A	Wall - Mounted EV chargers, Type1, 1 Phase, 25Amp	€825.37
110497	Ex9EV1 T1 32A	Wall - Mounted EV chargers, Type1, 1 Phase, 32Amp	€825.37
110257	Ex9EV1 T2 10A	Wall - Mounted EV chargers, Type2, 1 Phase, 10Amp	€940.00
110498	Ex9EV1 T2 16A	Wall - Mounted EV chargers, Type2, 1 Phase, 16Amp	€940.00
110499	Ex9EV1 T2 20A	Wall - Mounted EV chargers, Type2, 1 Phase, 20Amp	€940.00
110500	Ex9EV1 T2 25A	Wall - Mounted EV chargers, Type2, 1 Phase, 25Amp	€940.00
110501	Ex9EV1 T2 32A	Wall - Mounted EV chargers, Type2, 1 Phase, 32Amp	€940.00
110258	Ex9EV3 T2 10A	Wall - Mounted EV chargers, Type2, 3 Phase, 10Amp	€1,140.00
110502	Ex9EV3 T2 16A	Wall - Mounted EV chargers, Type2, 3 Phase, 16Amp	€1,140.00
110503	Ex9EV3 T2 20A	Wall - Mounted EV chargers, Type2, 3 Phase, 20Amp	€1,140.00
110504	Ex9EV3 T2 25A	Wall - Mounted EV chargers, Type2, 3 Phase, 25Amp	€1,140.00
110505	Ex9EV3 T2 32A	Wall - Mounted EV chargers, Type2, 3 Phase, 32Amp	€1,140.00

Residual current circuit breakers B type Ex9LB63 are suitable for domestic as well as industrial applications, where are used frequency inverters, PV plant, EV chargers and similar elements. B type provides sensitivity to residual AC, pulsating and smooth DC current, together with high frequencies up to 1 kHz.

Type 1

Type 2

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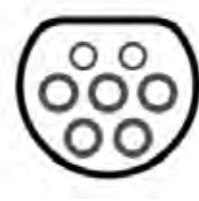
SWITCHGEAR - Loadbreak Switches
• Isolators • Switchfuses

ABB **GE**

LOADBREAK SWITCHES

The generation of loadbreak disconnectors DILOS, the fused execution FULOS and the changeover switches meet today's industrial market needs. The concept integrates the requirements of installers and panel builders, fast and easy installation, reliable and durable connections.

Features

• Comprehensive choice of current ratings
• In Dilos from 16A up to 4000A (Loadbreak)
• In Fulos from 125A up to 1000A/1250A (Switchfuse)
• Compact moulded body with transparent cover (visible contacts)
• Universal mechanism
• Clear "ON/OFF" indication
• Double break contacts with separate arcing contacts
• Padlocking in "OFF" – position up to three padlocks
• Very high short-circuit resistance
• Extension shaft with defeat mechanism and positive contact indication

ISOLATORS

Code	AMP	Pole	Description	Price
730984	16A	3P	Dilos 00 3P	€27.05
730986	25A	3P	Dilos 00 3P	€21.66
730988	32A	3P	Dilos 00 3P	€21.59
730990	40A	3P	Dilos 00 3P	€24.74
730185	40A	3P+N	Dilos 1 3P+N Fixed	€65.53
730189	63A	3P+N	Dilos 1 3P+N Fixed	€61.08
730193	80A	3P+N	Dilos 1 3P+N Fixed	€76.19
730197	100A	3P+N	Dilos 1 3P+N Fixed	€92.53
730201	125A	3P+N	Dilos 1 3P+N Fixed	€100.59
730215	160A	3P+N	Dilos 2 3P+N Fixed	€104.17
730223	200A	3P+N	Dilos 2 3P+N Fixed	€145.23
730519	160A	3P+N	Dilos 3 3P+N Fixed	€134.77
730522	200A	3P+N	Dilos 3 3P+N Fixed	€176.31
730525	250A	3P+N	Dilos 3 3P+N Fixed	€234.57
730528	315A	3P+N	Dilos 3 3P+N Fixed	€266.74
730530	400A	3P+N	Dilos 4 3P+N Fixed	€292.09
730534	630A	3P+N	Dilos 4 3P+N Fixed	€490.67
731733	800A	3P+NF	Dilos 6S 3P+NF Fixed	POA
731584	1000A	3P	Dilos 6S 3P Only	POA

SWITCHFUSES

Code	AMP	Pole	Description	Price
730842	63A	3P+N	Fulos 000 3P+N Fixed	€143.53
730592	100A	3P+N	Fulos 000 3P+N Fixed	€184.58
730595	160A	3P+N	Fulos 00 3P+N Fixed	€204.31
730601	250A	3P+N	Fulos 1 3P+N Fixed	€435.75
730604	400A	3P+N	Fulos 2 3P+N Fixed	€504.41
731845	630A	3P+N	Fulos 3S 3P+N Fixed	€986.25

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REG FARRELL ENGINEERING LTD

SWITCHGEAR - Loadbreak Switches
• Accessories for Dilos/Fulos Range

ABB **GE**

ACCESSORIES FOR DILOS/FULOS RANGE

Code	Item	Description	Price
730996	Dilos 00	Standard Set Black Handle	€14.80
731000	Dilos 00	Auxiliary Contact NO/NC DIN-RM	€10.52
731007	Dilos 00	Fixed N Mod 16A-40A DIN-RM	€11.94
731008	Dilos 00	Earth Module 40A	€12.78
730255	Dilos 1 & 2	Black Handle With Shaft 200MM	€19.68
730256	Dilos 1 & 2	Black Handle With Shaft 400MM	€22.99
730252	Dilos 1 & 2	Auxiliary Contact 1P	€26.38
730253	Dilos 1 & 2	Auxiliary Contact 2P	€41.16
731024	Dilos 1	Transparent Sealable Cover (2) D1	€19.01
730263	Dilos 1	Terminal Cover D2	€6.18
730260	Dilos 1	Conversion Set Bar 15MM	€28.91
730649	Dilos 1H & D3	Direct Handle D3	€27.39
730661	Dilos 1H & D3 + (F000)	Rotating Handle & Shaft	€37.47
730655	Dilos 1H & D3	Change Over System F000, D1H	€142.42
730656	Dilos 1H & D3	6/8 BPS haft/Handle D1H	€83.70
730665	Dilos 1H & D3	Change Over System D3, F00/0	€124.75
730615	Dilos 1H & D3	Terminal Cover Short D3 Sealable	€32.41
730616	Dilos 1H & D3	Connection Cover D3	€17.69
730630	Dilos 1H & D3	Set of Rear Terminal Covers D3	€41.66
730000	Dilos 1H & D3	Allen Key Insulated	€5.72
730667	Dilos 4 & Fulos 12	D4 Rotating Handle & Shaft Fulos 12	€74.58
731540	Dilos 4	Direct Handle Grey D4	€23.39
730618	Dilos 4	Terminal Cover Long D4 (set of 2)	€32.41
730619	Dilos 4	Terminal Cover Short D4	€11.70
731882	Dilos 6 & Fulos 3	Handle With ext Shaft (D6 + F3)	€77.47
731786	Dilos 6	Dilos 6S Direct Handle	€63.54
731895	Cover	Upper Terminal Cover	€37.71
731896	Cover	Low Terminal Cover	€50.87
731795	Auxiliary Contact	Auxiliary Contact 2 NO/NC	€22.55
731436	Fulos 000/00	Direct Handle F000/00	€20.05
730614	Fulos 000	Fuse Protection Cover	€29.84
730617	Fulos 00/0	Fuse Protection Cover F00/0	€26.02
731420	Fulos 1/2	Direct handle F1/F2	€30.08
731903	Fulos 3	Direct Single Handle + Fuse Cover	€151.20
730618	Fulos 1/2	Terminal Cover Long D4 (SET OF 2)	€32.41
730620	Fulos 1/2	Fuse Cover Fulos 1/2	€37.10
731897	Fulos 3	Fuse Cover Fulos F3	€74.57

Dilos

Rated current (A)	16	25	32	40	63	80	100	125	160	200	250	315	400	630	800	1000	1250	1600	2000	2500	3150	4000
DIN-rail and Wall mounted			Dilos 00																			
				Dilos 0																		
						Dilos 1			Dilos 2													
Wall mounted					Dilos 1H					Dilos 3			Dilos 4			Dilos 6s		Dilos 7S		Dilos 8S		Dilos 9S

Fulos

Rated current (A)	16	25	32	40	63	80	100	125	160	200	250	315	400	630	800	1000	1250	1600	2000	2500	3150	400
Wall mounted			Fulos 000 / NH-000																			
					Fulos 00																	
				Fulos 1 / NH-1																		
						Fulos 2 / NH-2																
							Fulos 3S / NH-3															
								Fulos 4 / NH-4														

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SWITCHGEAR - In Metal Enclosures
• Isolators • Switchfuses • Changeover Switches in Enclosures IP55

DKC

ISOLATORS IN METAL ENCLOSURES

Code	AMP	Pole	Size	Price
CE0391/063A	63A	3P+N Fixed	300x250x150	€200.06
CE0391/100A	100A	3P+N Fixed	300x250x150	€210.85
CE0391/125A	125A	3P+N Fixed	300x250x150	€219.81
CE0431/160A	160A	3P+N Fixed	400x300x150	€257.45
CE0431/200A	200A	3P+N Fixed	400x300x150	€284.65
CE0542/250A	250A	3P+N Fixed	500x400x200	€457.87
CE0542/315A	315A	3P+N Fixed	500x400x200	€561.20
CE0759/402A	400A	3P+N Fixed	700x500x200	€637.12
CE0759/500A	500A	3P+N Fixed	700x500x250	€568.16
CE0869/630A	630A	3P+N Fixed	800x600x250	€910.69

SWITCHFUSES IN METAL ENCLOSURES

Code	AMP	Pole	Fuse	Size	Price
CE0432/063A SF	63A	3P+N Fixed	NH000	400x300x200	€316.40
CE0432/125A SF	125	3P+N Fixed	NH000	400x300x200	€375.27
CE0542/160A SF	160A	3P+N Fixed	NH00	500x400x200	€410.58
CE0759/250A SF	250A	3P+N Fixed	NH1	700x500x250	€811.77
CE0869/400A SF	400A	3P+N Fixed	NH2	800x600x250	€927.39
CE0869/630A SF	630A	3P+N Fixed	NH2	800x600x250	€1,650.24
CE1083/630A SF	630A	3P+N Fixed	NH3	1000x800x300	€1,659.89

CHANGEOVER SWITCHES IN METAL ENCLOSURES

ⓘ *Changeover Switches & Isolators are also available up to 1250 Amp Prices are available upon request.*

Code	AMP	Pole	Size	Price
CE0549/125 C/O	125A	4P	500x400x200	€549.84
CE0549/160 C/O	160A	4P	500x400x200	€566.84
CE0649/250 C/O	250A	4P	600x400x250	€739.13
CE0869/401 C/O	400A	4P	800x600x250	€994.76

2 POLE CHANGEOVER SWITCHES IN APO

Code	Description	Price
063/CO/2P	63amp in APO Enclosure (185x150x130) With Transparent Cover	€146.47
100/CO/2P	100amp in APO31 Enclosure (300x185x175)	€215.65

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REG FARRELL
ENGINEERING LTD

SWITCHGEAR - In VMS Enclosures
• Switchfuses • Isolators • Changeover Switches in VMS Enclosures IP65

ABB **GE**

SWITCHFUSES IN VMS ENCLOSURES
⚠ *Flanges not included in price.*

Code	Box Size	AMP	Pole	Fuse	Price
25331/063 SF	VMS 33	63A	3P+N Fixed	NH000	€325.47
25331/125 SF	VMS 33	125A	3P+N Fixed	NH000	€384.33
25331/160 SF	VMS 33	160A	3P+N Fixed	NH00	€399.36
25431/160 SF	VMS 43	160A	3P+N Fixed	NH00	€436.80
25631/250 SF	VMS 63	250A	3P+N Fixed	NH1	€874.61
25631/400 SF	VMS 63	400A	3P+N Fixed	NH2	€958.08

CHANGEOVER SWITCHES IN VMS ENCLOSURES
⚠ *Flanges not included in price.*

Code	Box Size	AMP	Pole	Price
25424/125 C/O	VMS 43	125A	4P+N	€525.57
25474/160 C/O	VMS 43	160A	4P+N	€573.93
25434/250 C/O	VMS 64	250A	4P+N	€818.95
25444/400 C/O	VMS 64	400A	4P+N	€942.13

ISOLATORS IN VMS ENCLOSURES
⚠ *Flanges not included in price.*

Code	Box Size	AMP	Pole	Price
25320/063A	VMS 32	63A	3P+N Fixed	€186.43
25320/125A	VMS 32	125A	3P+N Fixed	€228.03
25330/160A	VMS 33	60A	3P+N Fixed	€251.12
25330/200A	VMS 33	200A	3P+N Fixed	€299.09
25430/250A	VMS 43	250A	3P+N Fixed	€455.90
25630/315A	VMS 43	315 A	3P+N Fixed	€495.01
25630/400A	VMS 63	400A	3P+N Fixed	€699.96
25630/500A	VMS 63	500A	3P+N Fixed	€1,109.54
25630/630A	VMS 63	630A	3P+N Fixed	€941.38

NUMBER OF FLANGES FOR USE WITH ENCLOSURES ABOVE

Code	Price/Each	VMS 32	VMS 33	VMS 43	VMS 63	VMS 64
25102/000	€7.38	2		2		
25103/000	€8.57	2	4	2	6	4
25104/000	€11.27					2

LOOSE CHANGEOVER SWITCHES 4P

Code	AMP	Price
CKS125A4P	125A	€320.32
CKS160A4P	160A	€364.00
CKS250A4P	250 A	€407.68
CKS400A4P	400A	€518.19
CKS630A4P	630A	€666.67
CKS800A4P	800A	€912.41
Ext 100180	Extension Shaft	€13.59

BUSBAR SYSTEM 125A-1250A
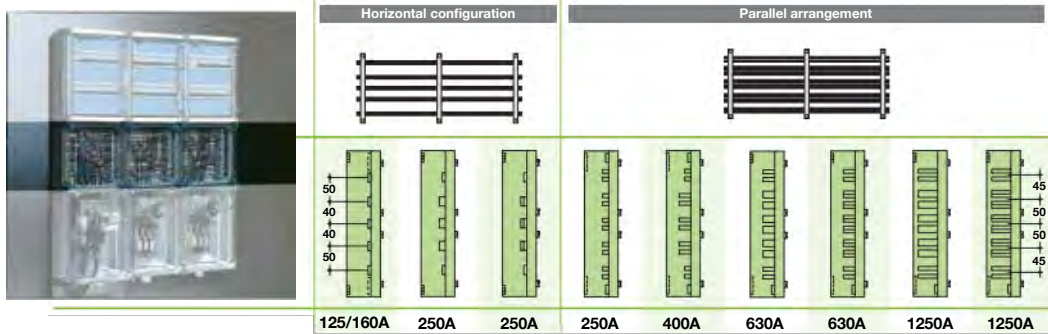
BUSBAR CHAMBERS

AMP	1 section 320mm	2 section 610mm	3 section 960mm	4 section 1280mm	5 section 1600mm
160 (HOR)	POA	POA	POA	POA	POA
250 (PAR)	POA	POA	POA	POA	POA
400 (PAR)	POA	POA	POA	POA	POA
630 (PAR)	POA	POA	POA	POA	POA
1250 (PAR)	POA	POA	POA	POA	POA

COPPER BUSBAR 3 MTR LENGTHS

Code	Dimensions	AMP	Price
42150/101	12 x 5	160A	€34.74
42150/102	12 x 10	250A	€197.41
42150/103	20 x 5	210A	€66.94
42150/104	20 x 10	427A	€149.74
42150/105	30 x 5	280A	€100.10
42150/106	30 x 10	575A	€201.09

BUSBAR CONFIGURATION

Code	AMP	Configuration	Phases	Neutrals	Price
42101/201	160A	Horizontal	1 x 12 x 5	1 x 12 x 5	€16.27
42101/201	250A	Horizontal	1 x 12 x 10	1 x 12 x 5	€16.27
42101/201	250A	Parallel	2 x 12 x 5	2 x 12 x 25	€16.27
42101/202	400A	Parallel	2 x 20 x 5	2 x 12 x 5	€16.27
42101/203	630A	Parallel	2 x 20 x 10	2 x 20 x 5	€16.27
42101/203	1250A	Parallel	2 x 30 x 10	2 x 30 x 5	€16.27

BUSBAR SUPPORTS

Code	Description	Price
42101/201	250A Supports	€16.27
42101/202	400A Supports	€16.27
42101/203	1250A Supports	€16.27
42103/150	Brass Connecting Blocks for Bolts	€4.46
42103/151	Bolts	€3.21
42103/152	Bar on Bar Clamp	€3.21
42103/161	Winged Brass Block	€6.33
42103/169	M10x60 for 5mm Bars Bolts for use with Connecting Blocks	€3.44
42103/170	M10x50 for 5mm Bars Bolts for use with Connecting Blocks	€4.10
42103/171	M10x80 for 5mm Bars Bolts for use with Connecting Blocks	€4.43
42103/172	M10/80 for 10mm Bars Bolts for use with Connecting Blocks	€4.89
42103/174	M10x60 for 10mm Bars Bolts for use with Connecting Blocks	€4.43

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NEW RANGE OF SWITCH DISCONNECTORS
ISOLATION AND PROTECTION

NEW RANGE OF SWITCH DISCONNECTORS

For over 90 years, LOVATO Electric has been designing and manufacturing low voltage electrical devices for industrial applications. Founded in 1922 in Bergamo, Italy, LOVATO Electric is a privately owned company, and has been managed by the same family of entrepreneurs for 4 generations.

LOVATO Electric has a range of over 18,000 products that comply with the strictest requirements of international standards. Motor protection circuit breakers, contactors, pushbuttons, switch disconnectors, limit switches, digital multimeters, energy meters, soft starters, AC motor drives, automatic power factor controllers and engine and generator controllers are just some of the products designed and built by LOVATO Electric.

To find out more call a member of our sales team today at 4659010

STOCKING SOON

GA SERIES
16A TO 160A (AC21A)
- UL60947-4-1 and UL98 certified three-pole switch disconnectors; add-on fourth pole available
- Switch disconnectors with direct operating handle and door coupling version
- Switch disconnectors door mount version
- Switch disconnectors in plastic, metal and AISI 304 stainless-steel enclosure
- Changeover switches in plastic and metal enclosure.

GL SERIES
160A TO 315A (AC21A)
- IEC and UL98 certified three-pole switch disconnectors; add-on fourth pole available
- IEC and UL1008 certified changeover switches
- Switch disconnectors with direct operating handle and door coupling version
- Switch disconnectors in metal enclosure
- Changeover switches in metal enclosure.

GE SERIES
50A TO 1600A (AC21A)
- IEC version three and four-pole switch disconnectors
- IEC version three and four-pole switch disconnectors with NFC, NH and BS type fuse holders
- Switch disconnectors with direct operating handle and door coupling version
- Three and four-pole changeover switches; add-on motorised control unit available.

GM SERIES
30A TO 800A (AC21A)
- UL98 certified three-pole switch disconnectors with CC, J and L type fuse holders
- Direct operating and door coupling versions.

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IP 56 ISOLATORS WALL MOUNTED

Code	AMP	Price
041137	20 AMP	€21.49
041144	35 AMP	€26.53
041151	63 AMP	€34.83

FIREMANS SWITCH (Normally open in off Position)

Code	Description	Price
KSF325TPN	Enclosed Switch Disconnector	€98.05

Farm Meter Box (See Section 3 Enclosures)
As displayed at the National Ploughing Championship

SWITCHGEAR - Fuses
• General Purpose "GL" NH FUSES & BASES

ETI

GENERAL PURPOSE "GL"

Type	AMP	Price
NH00	2 up to 20 AMP Fuse NH00	€3.40
NH00	25 up to 63 AMP Fuse NH00	€2.67
NH00	80 up to 100 AMP Fuse NH00	€3.38
NH00	125 up to 160 AMP Fuse NH00	€3.89
NH0	10 up to 160 AMP Fuse NH0	€4.77
NH1	6 up to 100 AMP Fuse NH1	€5.95
NH1	125 up to 250 AMP Fuse	€6.86
NH2	63 up to 250 AMP Fuse	€7.76
NH2	300 up to 400 AMP NH2 Fuse	€10.32
NH3	315 up to 355 AMP Fuse NH3	€16.24
NH3	400 AMP Fuse NH3	€16.28
NH3	500 up to 630 AMP Fuse NH3	€19.04
NH4	800 AMP Fuse NH4	€59.25
NH4	1000 AMP Fuse NH4	€59.27
NH4	1250 AMP Fuse NH4	€60.32

MOTOR PROTECTION "AM"

Type	AMP	Price
NH00/A	2 up to 10 AMP (AM) Motor Rated Fuse	€4.49
NH00/A	16 up to 63 AMP (AM) Motor Rated Fuse	€4.49
NH00/A	80 AMP (AM) Motor Rated Fuse	€4.49
NH00/A	125 AMP (AM) Motor Rated Fuse NH00	€6.18
NH00/A	160 AMP (AM) Motor Rated Fuse NH00	€6.49
NH1/A	35 up to 250 AMP (AM) Motor Rated Fuse NH1	€9.11
NH2/A	250 up to 400 AMP (AM) Motor Rated Fuse NH2	€13.71
NH3/A	400 AMP (AM) Motor Rated Fuse NH3	€25.53
NH3/A	500 AMP (AM) Motor Rated Fuse NH3	€25.53
NH3/A	630 AMP (AM) Motor Rated Fuse NH3	€25.53

SUPERFLINK SEMI CONDUCTOR PROTECTION

Type	AMP	Price
NH00/R	16 up to 100 AMP Recticure Fuse NH00	€18.36
NH00/R	125 up to 160 AMP Recticure Fuse NH00	€26.50
NH1/R	100 up to 125 AMP Fuse NH1	€29.46
NH1/R	160 up to 250 AMP Recticure Fuse NH1	€70.12
NH2/R	250 up to 315 AMP Recticure Fuse NH2	€80.60
NH2/R	400 AMP Recticure Fuse NH2	€96.51
NH3/R	400 up to 500 AMP Recticure Fuse NH3	€101.92
NH3/R	630 AMP Recticure Fuse NH3	€135.30

FUSE BASES

Code	Type	Price
NH00/1P/FB	1 Pole Fuse Base NH00	€5.03
NH00/1PFB	1 Pole Fuse Base NH00	€5.44
NH1/1P/FB	1 Pole Fuse Base NH1	€13.50
NH2/1P/FB	1 Pole Fuse Base NH2	€21.47
NH3/1P/FB	1 Pole Fuse Base NH3	€32.07
NH4/1P/FB	1 Pole Fuse Base NH4	€124.63
NH00/3P/FB	3 Pole Fuse Base NH00	€17.23
NH00/3PFBC	3 P F/ Base Clamp NH00	€21.26
NH1/3P/FB	3 Pole Fuse Base NH1	€40.70
NH2/3P/FB	3 Pole Fuse Base NH2	€65.63
NH/FUSE/EX	Fuse Extractor NH	€13.08

Fuse Extractor

SOLID LINK FUSE BLADES

Code	Description	Price
389001	Solid Link NH00	€6.68
389003	Solid Link NH1	€7.13
389004	Solid Link NH2	€8.50
389005	Solid Link NH3	€10.19
389015	Solid Link NH4	€29.49

NEOZED SWITCHFUSES

Code	Pole	Price
STV D02-1	1 Pole 63A	€11.89
STV D02-2	2 Pole 63A	€31.60
STV D02-3	3 Pole 63A	€47.29
2243020	Adaptor for D01/D02 up to 16A	€0.45

NEOZED SWITCHFUSES TECHNICAL DATA

Standards:	VDE 0638/09.81, EN 60947/12.92, DIN VDE 0113, DIN VDE 0110
Number of poles	1P, 1P+N, 2P, 3P, 3P+N
Rate Voltage	230/400V a.c. 110V(2P)d.c.
Rated Breaking Capacity	50kA
Rated Insulation Voltage	400 V
Rated Impulse Resistance Voltage	8000 V
Category of use to DIN VDE 0638	
Category of use to DIN E 60 947-3	AC 22(63A), AC23(35), DC 22(63A)
Temperature of environment	-5C to/bis + 40C
Air Humidity	90%
Degree of Protection	IP 00 according to DIN 40 050
	IP 20 when mounted in distribution board
Connection Clamps	Up to 35mm² (multiwire conductor) with screw + -
Possibility of sealing	In ON or OFF

FUSES 380V - 250V

Code	Type	AMP	Colour	Price
0810	D01	2A	Pink	€0.52
0811	D01	4A	Brown	€0.52
0812	D01	6A	Green	€0.52
0813	D01	10A	Red	€0.52
0814	D01	16A	Grey	€0.52
0815	D02	20A	Blue	€0.52
0816	D02	25A	Yellow	€0.52
0817	D02	35A	Black	€0.52
0818	D02	50A	White	€0.77
0819	D02	63A	Copper	€0.77
0820	D03	80A	Silver	€3.53
0821	D03	100A	Red	€3.53

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RFE
REG FARRELL
ENGINEERING LTD

SWITCHGEAR - Fuses
• Fuses • Cylindrical Fuse Link "gl" / "gc"

SIZE 0. 10 x 38 500V~
⚠ * Nominal Current Size 0: Ø=10.3mm L=38mm.

Code	(A)*	Price
780101	1	€0.66
780102	2	€0.66
780104	4	€0.66
780106	6	€0.66
780108	8	€0.66
780110	10	€0.66
780112	12	€0.66
780116	16	€0.66
780120	20	€0.66
780125	25	€0.66
780132	32	€0.66

SIZE 1. 14 x 51 400/600V~
⚠ * Nominal Current Size 1: Ø=14.3mm L=51mm

Code	(A)*	Price
781102	2	€0.99
781104	4	€0.99
781106	6	€1.08
781110	10	€1.08
781110A Motor Rated	10	€1.08
781116	16	€1.08
781120	20	€1.08
781120A Motor Rated	20	€1.08
781125	25	€1.08
781125A Motor Rated	25	€1.08
781132	32	€1.08
781140	40	€1.12
781150	50	€1.12

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SWITCHGEAR - Fuses
• Fuses • Cylindrical Fuse Link "gl" / "gc"

SIZE 2. 22 x 58 400/660V~
⚠ * Nominal Current Size 2: Ø=22.2mm L=58mm

Code	(A)*	P	Price
782110	10	10	€6.56
782116	16	10	€2.00
782120	20	10	€2.00
782125	25	10	€2.00
782132	32	10	€2.00
782140	40	10	€2.00
782150	50	10	€2.00
782163	63	10	€2.00
782180	80	10	€2.28
782190	100	10	€2.28

VLC FUSE BASE FOR CYLINDRICAL FUSE LINKS 10.3X38MM

Code	Modules	Design	Price
VLC 101p	1	Single Pole	€2.60
VLC 102p	2	Double Pole	€5.16
VLC 103p	3	Triple Pole	€7.72

VLC FUSE BASE FOR CYLINDRICAL FUSE LINKS 14.3X51MM

Code	Modules	Design	Price
VLC 141p	1.5	Single Pole	€5.13
VLC 142p	3	Double Pole	€10.82
VLC 143p	4.5	Triple Pole	€15.43

VLC FUSE BASE FOR CYLINDRICAL FUSE LINKS 22X58MM *
⚠ * When using VLC 22 Series for ESB fusing purpose no special insert is required.
⚠ * VLS221p-223p only rated up to 100 Amp.

Code	Modules	Design	Price
VLC 221p	1.5	Single Pole	€10.87
VLC 222p	3	Double Pole	€23.88
VLC 223p	4.5	Triple Pole	€33.25

APO ENCLOSURES
• GRP (Glassfibre Reinforced Polyester) • IP67

ABB | **GE**

APO - MODULAR POLYESTER BOXES

Range of nine medium sized, modular, multipurpose boxes for indoor and outdoor applications.

Features
• Automation and control applications in oil and steel industry, petrochemical plants, breweries.
• Applications in utilities such as public lighting, traffic control, signalisation.
• For installation in aggressive environments such as shipyards, offshore oil production platforms, mining sites.

All boxes are made of hot moulded, glassfibre reinforced polyester, offering a high protection degree of IP67 with a mechanical impact strength of IK10.
APO-boxes can be readily worked with conventional tools such as drills, cutting mills, saws, punches, etc.

APO 1

Code	Description	Dimensions (HxWxD)	Price
10005/100	Enclosure	185 x 150 x 130	€41.10
10005/099	Base	185 x 150 x 85	€18.03
10001/105	Opaque cover	185 x 150 x 45	€18.03
40780/077	Clear cover	185 x 150 x 45	€12.06
40680/070	Mounting plate	140 x 105	€5.63
10001/016	Depth ext. frame	185 x 150 x 35	€19.03

APO 11

Code	Description	Dimensions (HxWxD)	Price
10115/100	Enclosure	600 x 370 x 175	€134.69
10115/099	Base	600 x 370 x 130	€98.59
10111/105	Opaque Cover	600 x 370 x 45	€54.27
48520/084	Clear Cover	600 x 370 x 80	€59.00
10111/035	Clear Hinged Cover	600 x 370 x 115	€155.53
48520/070	Mounting Plate	528 x 324	€27.39
10111/016	Depth ext. Frame	600 x 370 x 60	€75.31

APO 12

Code	Description	Dimensions (HxWxD)	Price
10125/100	Enclosure	600 x 600 x 175	€156.43
10125/099	Base	600 x 600 x 130	€123.14
10121/105	Opaque Cover	600 x 600 x 45	€74.50
46600/084	Clear Cover	600 x 600 x 80	€95.08
10121/070	Mounting Plate	555 x 555	€42.05
10121/016	Depth ext. Frame	600 x 600 x 60	€84.06

APO 31

Code	Description	Dimensions (HxWxD)	Price
10035/100	Enclosure	300 x 185 x 175	€40.80
10035/099	Base	300 x 185 x 130	€30.07
10031/105	Opaque Cover	300 x 185 x 45	€18.69
40540/086	Clear Cover	300 x 185 x 45	€21.50
10031/035	Clear Hinged Cover	300 x 185 x 45	€36.83
40650/070	Mounting Plate	228 x 139	€8.22
10031/016	Depth ext. Frame	300 x 185 x 35	€30.64

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APO ENCLOSURES
• GRP (Glassfibre Reinforced Polyester) • IP67

APO 41

Code	Description	Dimensions (HxWxD)	Price
10045/100	Enclosure	300 x 300 x 175	€48.67
10045/099	Base	300 x 300 x 130	€42.75
10041/105	Opaque cover	300 x 300 x 45	€29.93
47000/093	Clear cover	300 x 300 x 45	€23.31
10041/035	Clear Hinged Cover	300 x 300 x 45	€48.62
47010/070	Mounting plate	254 x 228	€12.68
10041/016	Depth ext. frame	300 x 300 x 35	€37.45

APO 51

Code	Description	Dimensions (HxWxD)	Price
10055/100	Enclosure	485 x 300 x 175	€65.98
10055/099	Base	485 x 300 x 130	€58.00
10051/105	Opaque cover	485 x 300 x 45	€40.07
10051/084	Clear cover	485 x 300 x 80	€41.27
10051/035	Clear Hinged Cover	485 x 300 x 45	€42.67
10051/070	Mounting plate	413 x 254	€20.42

APO 61

Code	Description	Dimensions (HxWxD)	Price
10065/100	Enclosure	600 x 300 x 175	€104.05
10065/099	Base	600 x 300 x 130	€70.12
10061/105	Opaque cover	600 x 300 x 45	€35.37
48000/084	Clear cover	600 x 300 x 80	€54.57
10061/035	Clear Hinged Cover	600 x 300 x 45	€155.02
48050/070	Mounting plate	528 x 254	€22.58
10061/016	Dept. Ext Frame	600 x 300 x 60	€57.81

APO 71

Code	Description	Dimensions (HxWxD)	Price
10075/100	Enclosure	370 x 300 x 175	€57.68
10075/099	Base	370 x 300 x 130	€44.67
10071/105	Opaque cover	370 x 300 x 45	€30.61
40560/092	Clear cover	370 x 300 x 45	€30.34
10071/035	Clear Hinged Cover	370 x 300 x 45	€48.13
40600/070	Mounting plate	298 x 254	€15.87
10071/016	Depth ext. Frame	370 x 300 x 35	€37.69

APO 81

Code	Description	Dimensions (HxWxD)	Price
10085/100	Enclosure	555 x 300 x 175	€101.45
10085/099	Base	555 x 300 x 130	€67.11
10081/105	Opaque cover	555 x 300 x 45	€34.91
40771/084	Clear cover	555 x 300 x 80	€44.21
40520/074	Mounting plate	484 x 254	€24.07
10081/016	Depth ext. frame	555 x 300 x 60	€59.35

APO ENCLOSURES - Accessories
• Accessories for APO Enclosures

ACCESSORIES

Code	Product	Description	Price
10000/070	Padlocking Set	Max Ø of Padlock 8mm	€8.62
10000/215	Safety Locks	2 Keys V 2432E	€33.07
10000/005A	Hinges	All boxes without depth extension frame	€10.71
10000/089C	Hinges	APO 31 & 12 with depth extension frame	€7.35
41523/000	Triangular Sealing Screws	Set of 2	€3.35
10000/221	Mounting Brackets	Mounting Brackets (4)	€10.22
41519/160	Nylon Hinged Screws	Nylon Hinged Screws	€11.54
79100/010	Ventilator	Ventilator (Set of 2)	€3.88

The unique modular concept of APO boxes enables mounting of different standard functions in coupled boxes.

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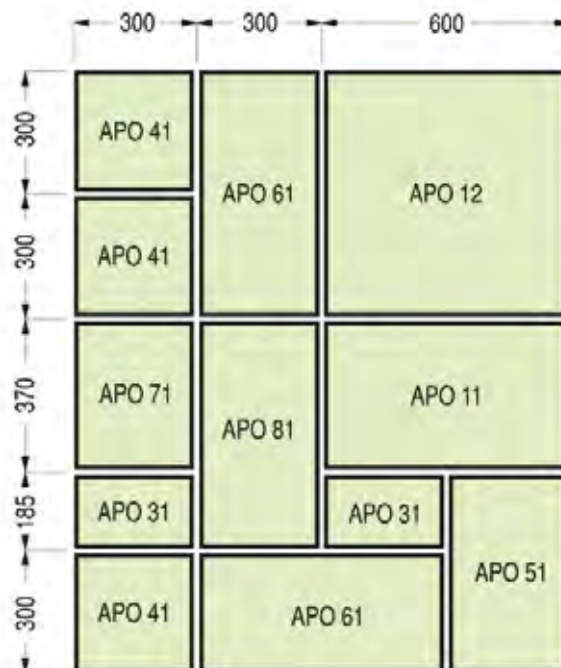
ARIA ENCLOSURES
• GRP Glassfibre Reinforced Polyester Enclosures IP66 RAL 7032

ARIA - UNIVERSAL POLYESTER CABINETS

Range of seven universal multipurpose cabinets for both indoor and outdoor applications.

Ideal for high performance applications in:

• Heavy industry (pulp & paper mills, mining sites, wood & lumber production, steel mills
• Petroleum refineries, chemical and petrochemical plants.
• Temporary connection (for construction yards, camping sites, harbours for pleasure crafts, market places, fairs.
• Food and Drink Industry.
• Waste water treatment, public lighting, traffic control, and signalisation.

ARIA 32

Code	Description	Price
54032/110	Enclosure 300 x 200 x 170	€99.54
54032/140	Metal M/Plate 250 x 150	€13.76
54032/142	Pertinax M/Plate 250 x 150	€19.98
54032/162	Mounting Frame 2 Row/12 Mod	€53.24
54032/150	Cover Plate Plain	€27.11
54032/152	Cover Plate *(with openings for Din Rail Equipment)	€36.26

ARIA 43

Code	Description	Price
54043/110	Enclosure 400 x 300 x 170	€143.50
54243/110	Glazed Door Enclosure	€234.59
54043/140	Metal M/Plate 350 x 250	€21.44
54043/142	Pertinax M/Plate 350 x 250	€22.36
54043/162	Mounting Frame 2 Rows/24 Mod	€50.16
54043/150	Cover Plate Plain	€32.42
54043/152	Cover Plate *(with openings for Din Rail Equipment)	€35.32

ARIA 54

Code	Description	Price
54054/130	Enclosure 500 x 400 x 230	€186.12
54254/130	Glazed Door Enclosure	€287.03
54054/140	Metal M/Plate 450 x 350	€29.42
54054/142	Pertinax M/Plate 450 x 350	€28.88
54054/163	Mounting Frame 3 Rows/54 Mod	€74.04
54054/150	Cover Plate Plain	€40.56
54054/153	Cover Plate *(with openings for Din Rail Equipment)	€56.30

ARIA 64

Code	Description	Price
54064/130	Enclosure 600 x 400 x 230	€204.24
54264/130	Glazed Door Enclosure	€325.42
54064/140	Metal M/Plate 550 x 350	€40.60
54064/142	Pertinax M/Plate 550 x 350	€34.85
54064/163	Mounting Frame 3 Rows/54 Mod	€75.99
54064/150	Cover Plate Plain	€45.59
54064/153	Cover Plate *(with openings for Din Rail Equipment)	€63.67

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ARIA ENCLOSURES
• GRP Glassfibre Reinforced Polyester Enclosures IP66 RAL 7032

ARIA 75

Code	Description	Price
54075/130	Enclosure 700 x 500 x 270	€283.85
54275/130	Glazed Door Enclosure	€523.65
54075/140	Metal M/Plate 650 x 450	€56.23
54075/142	Pertinax M/Plate 650 x 450	€35.84
54075/164	Mounting Frame 4 Rows/88 Mod	€83.15
54075/150	Cover Plate Plain	€56.98
54075/154	Cover Plate *(with openings for Din Rail Equipment)	€69.20

ARIA 86

Code	Description	Price
54086/130	Enclosure 800 x 600 x 300	€366.87
54286/130	Glazed Door Enclosure	€683.51
54086/140	Metal M/Plate 750 x 550	€75.69
54086/142	Pertinax M/Plate 750 x 550	€62.44
54086/164	Mounting Frame 4 Rows/112 Mod	€98.81
54086/150	Cover Plate Plain	€86.25
54086/154	Cover Plate *(with openings for Din Rail Equipment)	€96.27

ARIA 108

Code	Description	Price
54108/130	Enclosure 1000 x 800 x 300	€525.98
54308/130	Glazed Door Enclosure	€934.95
54108/140	Metal M/Plate 950 x 750	€117.28
54108/142	Pertinax M/Plate 950 x 750	€96.36
54108/165	Mounting Frame 5 Rows/200 Mod	€118.54
54108/150	Cover Plate Plain	€138.13
54108/155	Cover Plate *(with openings for Din Rail Equipment)	€140.91

ACCESSORIES

Code	Product	Description	Price
54000/107	Enclosures	Set of 4 Fixing Lugs	€18.21
54000/175	Enclosures	Supports for Cover Plates. Terminal Block - Earth T. Green	€16.18
29200/035	Enclosures	6 x 10mm - 2 x 16mm. Terminal Block - Neutral T. Blue	€1.67
29200/040	Enclosures	6x10mm - 2x16mm	€1.77
54000/161	Enclosures	Ventilation Grids (Set)	€3.57
54000/141	Lock & Handles	8mm Triangular	€4.89
54000/143	Lock & Handles	Double Bit	€4.89
54000/140	Lock & Handles	8mm Square	€4.89
54000/142	Lock & Handles	11mm Triangular	€4.89
54000/125	Lock & Handles	Neutral Handle	€19.50
54000/126	Lock & Handles	Handle With Lock & Keys 2432E	€32.74
70000/408	Lock & Handles	Padlockable Handle	€60.87
811451	Sealable Screws	Sealable Screws	€1.61

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FAMATEL ENCLOSURES - Magna IP65
• PVC IP65 Enclosures • Modular Enclosure IP40 Flush • Mounted Metal & Plastic • Plus Farm Meter Box

famatel

PVC ENCLOSURES

Code	Size (HxWxD)	Price
39123	280 x 210 x 130	€37.93
39134	400 x 300 x 165	€57.37
39145	500 x 400 x 175	€86.58
39146	600 x 400 x 200	€102.13
39157	700 x 500 x 245	€169.67
39168	800 x 600 x 265	€301.61
39120	(Key Lock)	€11.36

MODULAR ENCLOSURE IP 40 FLUSH MOUNTED/METAL & PLASTIC ENCLOSURE

Code	Size (HxWxD)	Description	Price
3114	315x310x90	(14MOD)Metal	€62.61
3128	315x430x90	(28MOD)Metal	€86.53
3142	315X560X90	(42 MOD)Metal	€102.86
3156	315x685x90	(56MOD)Metal	€154.44
3536 (Flush)	440x286x78	(36MOD)Plastic	€37.54
3636 (WALL)	460x305x112	(36MOD)Plastic	€43.89
Lock 39120		Key Lock	€11.36

FARM METER BOX

⚠ * Prices Below includes Base, cover, Mounting Plate

Code	Description	Size (HxWxD)	Price
54064/130	Farm Meter Enclosure Aria 64 IP66 (GRP)	615 x 415 x 230	€243.98
39146	Farm Meter Enclosure Famatel IP65 (PVC)	600 x 400 x 200	€102.13

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REG FARRELL ENGINEERING LTD

POLYSAFE ENCLOSURES
• Glassfibre Reinforced Polyester • IP65 Single Door • Two Door IP54

POLYSAFE - MULTIPURPOSE POLYESTER CABINETS

Range of fourteen multipurpose, factory assembled cabinets in one depth 320 mm, for indoor and outdoor applications.

All cabinets are made of self-extinguishing, hot moulded, glassfibre reinforced polyester, offering a high protection degree IP65 & IP54 with a mechanical impact strength of IK10 (IP55-IK07 for cabinets with glazed door).

Commercial
• Leisure (market places, camping sites, harbours for pleasure crafts, amusement parks)
• Fuel stations
• Car washes
• Launderettes and laundries
• Service enclosures for construction yards

Utilities
• Waste water treatment
• Waste management
• Telecommunications
• Traffic signalisation
• Traffic control
• Public transport
• Energy distribution (electricity, gas, water)
• Cable television (CATV)
• Public lighting
• Railways

Industrial
• Shipyards
• Mining
• Automotive
• Paper and pulp
• Food and beverage
• Petrochemicals
• Transformers
• System monitoring

Please note: Prices for Glazed Door Enclosures, Depth Extension Frames, Rainhood & Bases can be supplied on Application.

For configurations see diagrams

PS 220 PS 230 PS 320 PS 330 PS 340 PS 352 PS 420

PS 430 PS 440 PS 442 PS 452 PS 530 PS 542 PS 546
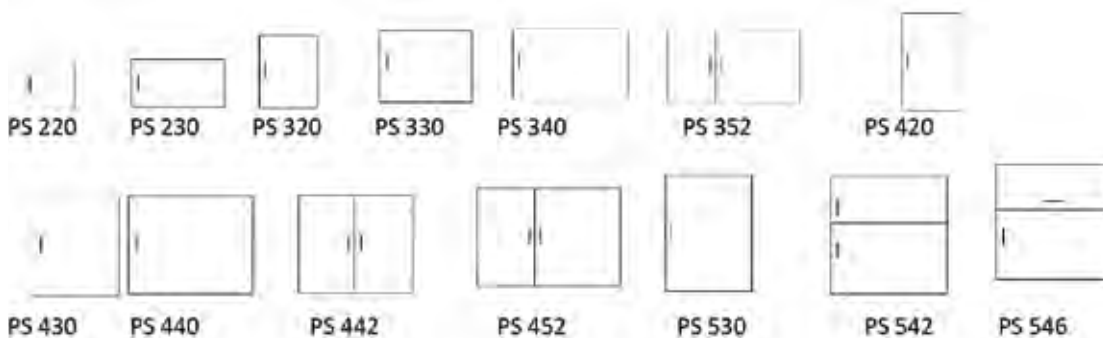
POLYSAFE ENCLOSURES
• Glassfibre Reinforced Polyester • IP65 Single Door • Two Door IP65

GRP ENCLOSURES IP65 & IP54

Code	Description	Type	Price
579220/000	Enclosure 500 x 500 x 320	PS220 IP65	€486.08
079014/122	Mounting Plate Pertinax 5mm	PS220 IP65	€53.51
579320/000	Enclosure 750 x 500 x 320	PS320 IP65	€499.93
079014/132	Mounting Plate Pertinax 5mm	PS320 IP65	€46.05
579230/000	Enclosure 500 x 750 x 320	PS230 IP65	€456.70
079014/132	Mounting Plate Pertinax 5mm	PS230 IP65	€46.05
579330/000	Enclosure 750 x 750 x 320	PS330 IP65	€557.26
079014/133	Mounting Plate Pertinax 5mm	PS330 IP65	€69.00
579340/000	Enclosure 750 x 1000 x 320	PS340 IP65	€668.93
079014/143	Mounting Plate Pertinax 5mm	PS340 IP65	€80.89
579420/000	Enclosure 1000 x 500 x 320	PS420 IP65	€621.07
079014/142	Mounting Plate Pertinax 5mm	PS420 IP65	€79.92
579440/000	Enclosure 1000 x 1000 x 320	PS440 IP65	€849.30
079014/144	Mounting Plate Pertinax 5mm	PS440 IP65	€89.34
579452/000	Enclosure 1000 x 1250 x 320	PS452 IP54	€1065.98
079014/145	Mounting Plate Pertinax 5mm	PS452 IP54	€120.95
579352/000	Enclosure 750 x 1250 x 320	PS352 IP65	€1169.48
079014/153	Mounting Plate Pertinax 5mm	PS352 IP65	€93.22
579430/000	Enclosure 1000 x 750 x 320	PS430 IP65	€723.58
079014/143	Mounting Plate Pertinax 5mm	PS430 IP65	€80.89
579442/000	Enclosure 1000 x 1000 x 320	PS442 IP54	€1087.51
079014/144	Mounting Plate Pertinax 5mm	PS442 IP54	€89.34
579530/000	Enclosure 1250 x 750 x 320	PS530 IP65	€833.90
079014/153	Mounting Plate Pertinax 5mm	PS530 IP65	€93.22
579542/000	Enclosure 1250 x 1000 x 320	PS542 IP54	€1065.98
079014/145	Mounting Plate Pertinax 5mm	PS542 IP54	€120.95
579546/000	Enclosure 1250 x 1000 x 320	PS546 IP54	€1065.98
079014/145	Mounting Plate Pertinax 5mm	PS546 IP54	€120.95

ACCESSORIES

Code	Product	Description	Price
70000/525	Lock & Key	Lock & Key	€55.62
70000/529	For Triangle Key, 8mm	For Triangle Key, 8mm	€55.62
70000/530	For Triangle Key, 11mm	For Triangle Key, 11mm	€55.62
70000/523	With Double Bit Yale Key, 3mm	With Double Bit Yale Key, 3mm	€55.62
70200/000	Coupling Kit	Cabinet Width 500mm	€18.34
70300/000	Coupling Kit	Cabinet Width 750mm	€30.76
70400/000	Coupling Kit	Cabinet Width 1000mm	€30.68
70500/000	Coupling Kit	Cabinet Width 1250mm	€40.46
79100/100	Door Stop/Canopy Stop	Left	€29.69
79100/110	Door Stop/Canopy Stop	Right	€29.69
70000/408	Handle	Padlockable Handle (max 10mm)	€60.66

Please note: Prices for Glazed Door Enclosures, Depth Extension Frames, Rainhood & Bases can be supplied on Application.

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EMITER ENCLOSURES - HYDRA IP66
• HYDRA (GRP) Glassfibre Reinforced Polyester

emiter

HYDRA / IP66 (GRP Enclosure)

Used in various applications, in the energy sector, automation, telecommunication industry, and especially in places with a large extent of contamination and also places exposed to flooding (production plants, waste water treatment plants). HYDRA enclosures are made of glassfibre reinforced polyester, they are corrosion resistant against the impact of chemicals and solvents.

IP66 - equipped with 4-point locking system, which includes: tight lock ZIP66, rod and locking elements. The doors of enclosure are equipped with polyurethane gasket. Reversible Door (left/right).

Basic parameters:
• Temperature operating conditions: -50 ÷ 85 ºC
• Protection class: II
• Halogen-free material

HYDRA / IP66 (GRP Enclosure)

Code	Description	Price
HYDRA466	438 x 618 Dimensions	€173.26
HYDRA466 MP	Steel mounting plate	€18.88
HYDRA686	616 x 816 Dimensions	€313.14
HYDRA686 MP	Steel mounting plate	€39.16
HYDRA816	850 x 1044 Dimensions	€475.64
HYDRA816 MP	Steel mounting plate	€66.77

Dimensions

Type	A	B	C	A1	A2	B1	B2	C1	C2	C3
HYDRA466	438	618	251	364	317	556	510	270	204	179
HYDRA686	616	816	323	538	493	750	700	340	275	250
HYDRA816	850	1004	323	772	727	934	884	340	275	250
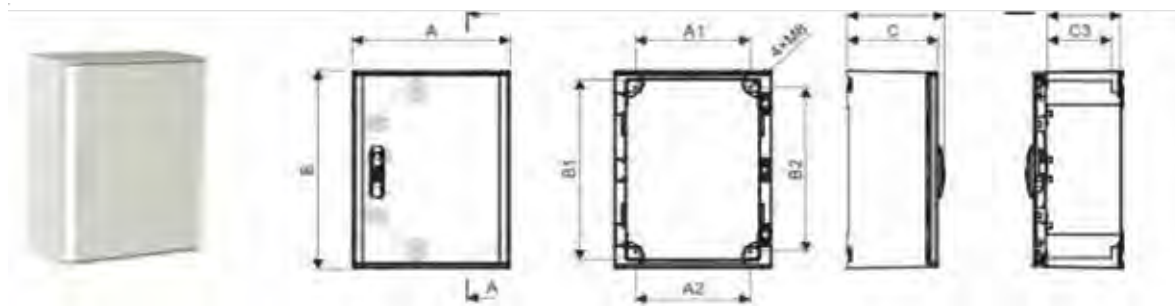
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ABB GE

VMS - MODULAR ENCLOSURES SYSTEM

Range of five modular boxes based on a 100mm module.
Rapid assembly of any configuration of units without the need for tools. For indoor applications.

• Industry
• Public utilities
• Motor control centres
• Electronic instrumentation
• Low voltage distribution boards

The boxes are made of glassfibre reinforced polycarbonate. Covers are made of either transparent or opaque polycarbonate.
VMS boxes provide a high protection degree of IP65 and mechanical impact strength of IK08 for the bases and end-plates and IK10 for the covers.

• The range consists of five boxes based on a 100 mm module.
• The innovative coupling concept allows easy, rapid assembly of any combination of units without the need for tools.
• The open bases offer excellent accessibility and wiring space for installation, mounting and cable connection, even after coupling.
• The side panel openings can be closed by either blind or combi end plates.
• Once mounted, end plates fit perfectly flush with the side panels of the base.
• Each large box is a multiple of a smaller one. Its fixing points in increments of 25 mm in bottom plate and top end are also a multiple of those of a small box.
• The base and end plates are made of light grey (RAL 7035) glassfibre reinforced polycarbonate. The cover is made of either transparent or opaque light grey (RAL 7035) polycarbonate.
• A multiple of accessories like mounting plates, cover plates, depth extension frame, makes the VMS a complete system for electrical distribution and control applications.
• VMS boxes are halogen-free.
• VMS boxes provide optimum security to both operations and equipment because they feature total insulation and protection degree IP65 according to EN/IEC 60529.

VMS ENCLOSURES
• VMS Modular Enclosure System • The Ultimate Modular IP65 Enclosure System
• Plus Accessories

ABB | **GE**

1. Base
2. Transparent cover
3. Opaque cover
4. Hinged cover
5. Depth extension frame
6. Mounting plate in metal
7. Mounting plate in pertinax
8. Blind cover plate
9. Blind end-plate
10. Combi end-plate

11. Cable end-plate
12. Cable stress release
13. Bridge
14. Partition plate
15. Busbar support
16. DIN profile
17. Mounting rail 12 x 2 mm
18. Coupling dowels
19. Coupling clamp
20. Universal support
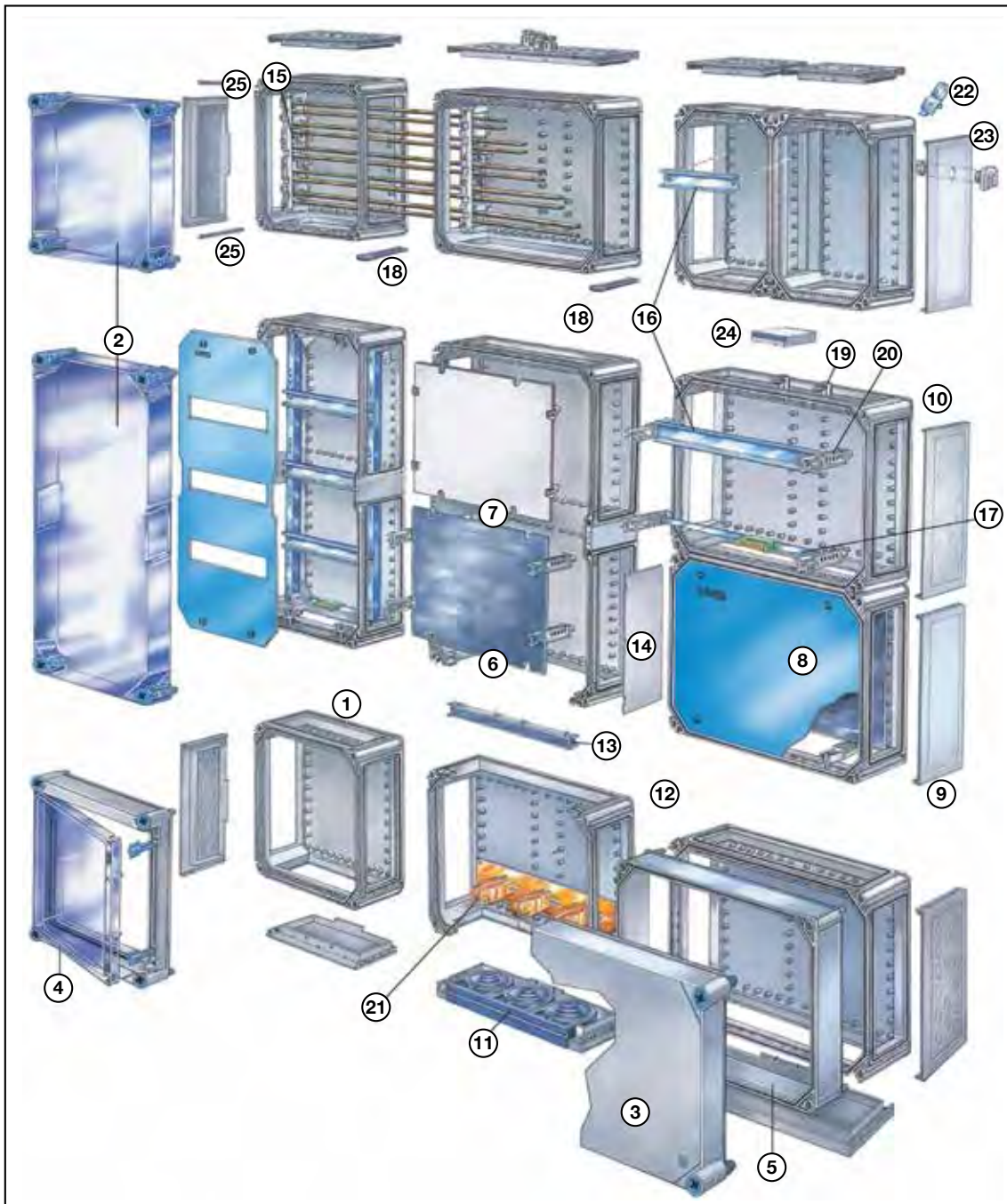
21. Stress relieving cable clamp
22. Fixing bracket
23. Air vent
24. Coupling set 2 x 220mm
25. Locking key

VMS ENCLOSURES
• VMS Modular Enclosure System • The Ultimate Modular IP65 Enclosure System
• Plus Accessories

ABB | **GE**

BASE

Code	Model	Dimensions (HxWxD)	Price
25132/001	VMS 32	320 x 220 x 130	€35.53
25133/001	VMS 33	320 x 320 x 130	€43.68
25143/001	VMS 43	440 x 320 x 130	€51.93
25163/001	VMS 63	640 x 320 x 130	€78.07
25164/001	VMS 64	640 x 440 x 130	€93.24

TRANSPARENT COVER

Code	Model	Dimensions (HxWxD)	Price
25132/010	VMS 32	320 x 220 x 50	€26.79
25133/010	VMS 33	320 x 320 x 50	€32.32
25143/010	VMS 43	440 x 320 x 50	€41.14
25163/010	VMS 63	640 x 320 x 50	€59.73
25164/010	VMS 64	640 x 440 x 50	€81.74

OPAQUE COVER

Code	Model	Dimensions (HxWxD)	Price
25132/015	VMS 32	320 x 220 x 50	€25.77
25133/015	VMS 33	320 x 320 x 50	€32.32
25143/015	VMS 43	440 x 320 x 50	€39.57
25163/015	VMS 63	640 x 320 x 50	€62.12
25164/015	VMS 64	640 x 440 x 50	€81.74

HINGED COVER

Code	Model	Dimensions (HxWxD)	Price
25133/035	VMS 33	320 x 320 x 50	€50.93
25143/035	VMS 43	440 x 320 x 50	€72.29

DEPTH EXTENSION FRAME

Code	Model	Dimensions (HxWxD)	Price
25132/045	VMS 32	320 x 220 x 75	€24.77
25133/045	VMS 33	320 x 320 x 75	€33.57
25143/045	VMS 43	440 x 320 x 75	€39.10
25163/045	VMS 63	640 x 320 x 75	€52.48
25164/045	VMS 64	640 x 440 x 75	€67.68

MOUNTING PLATE METAL

Code	Model	Dimensions (HxWxD)	Price
25132/050	VMS 32	260 x 160	€10.44
25133/050	VMS 33	260 x 260	€14.11
25143/050	VMS 43	380 x 260	€17.50
25163/050	VMS 63	580 x 260	€27.04
25164/050	VMS 64	580 x 380	€29.73
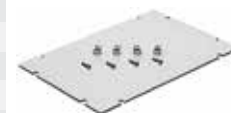
MOUNTING PLATE PERTINAX

Code	Model	Dimensions (HxWxD)	Price
25132/052	VMS 32	260 x 160	€13.67
25133/052	VMS 33	260 x 260	€19.13
25143/052	VMS 43	380 x 260	€24.20
25163/052	VMS 63	580 x 260	€37.45
25164/052	VMS 64	580 x 380	€40.40

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VMS ENCLOSURES
• VMS Modular Enclosure System • Plus Accessories • Empty MCB Boards

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BLIND COVER PLATE

Code	Model	Description	Price
25132/054	VMS 32	301 x 201	€8.18
25133/054	VMS 33	301 x 301	€18.67
25143/054	VMS 43	421 x 301	€10.86
25163/054	VMS 63	621 x 301	€26.46
25164/054	VMS 64	621 x 421	€22.95

ACCESSORIES

Code	Description	Price
25102/000	Flanges - Side Size = 220mm	€7.38
25103/000	Flanges - Side Size = 320mm	€8.57
25104/000	Flanges - Side Size = 440mm	€11.27
25100/004	Universal Support, Fits Mounting Plates, Over Plates, Copper & Mounting Rail	€1.79
25100/050	Set of Hinges (2)	€10.56
25100/002	Coupling Key	€0.94
25100/009	Hinge Screw(2)	€4.71
25102/019	Din Profile	€4.08
25100/019	Fixing Brackets (4)	€10.56

EMPTY MCB BOARDS

ⓘ **VMS 32 + VMS 63 Does Not Have a Hinged Door.*

Code	Model	Dimensions (HxWxD)	MCB Board	Price
25230/100	VMS 32**	320 x 220 x 180	14 MOD	€74.50
25330/100	VMS 33	320 x 320 x 180	14 MOD	€115.17
25430/100	VMS 43	440 x 320 x 180	28 MOD	€127.21
25630/100	VMS 63**	640 x 320 x 180	42 MOD	€164.48

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ENCLOSURES - Outdoor Pedestals
• Pedestals Outdoor EH1, EH2, EH3 • GRP (Glassfibre reinforced polyester)

ABB **GE**

PEDESTALS

Our wide range of GRP Pedestals are used for electrical applications such as, Power Distribution, Telecommunications, Waste Water Treatment, Pump Control & Traffic Signalling.

Wide range of DIN-size and non DIN-size pedestals for outdoor application such as:

OUTDOOR PEDESTALS MINI PILLARS EH1 IP 43

⚠ *Overall Height 752mm - Mounting area 280mm x 230mm.*

Code	Description	Price
841038	Enclosures	€112.22

OUTDOOR PEDESTALS MINI PILLARS EH2 IP 43

Code	Description	Dimensions (HxWxD)	Price
301100/100	EH2/A	1097 x 425 x 240	€185.04
300000/910	Mounting Plate	200 x 395 x 5	€17.20
301200/100	EH2/B	1349 x 425 x 240	€501.08
300000/900	Mounting Plate	450 x 395 x 5	€33.21
301300/100	EH2/C	1622 x 425 x 240	€588.36
300000/905	Mounting Plate	700 x 395 x 5	€37.55

OUTDOOR PEDESTALS MINI PILLARS EH3 IP 43

Code	Description	Dimensions (HxWxD)	Price
410310/090	EH3/0 KIT Format	875 x 590 x 320	€611.51
400000/140	Mounting Plate	665 x 485 x 5	€85.23
410311/090	EH3/1 KIT Format	875 x 785 x 320	€725.70
400001/140	Mounting Plate	665 x 680 x 5	€98.12
410312/090	EH3/2 KIT Format	875 x 1115 x 320	€1077.54
400002/140	Mounting Plate	705 x 1000 x 5	€198.10
410313/090	EH3/3 KIT Format	875 x 1445 x 320	€983.66
400003/140	Mounting Plate	705 x 1340 x 5	€178.46
410320/090	EH3/20 KIT Format	1125 x 590 x 320	€999.87
400020/140	Mounting Plate	915 x 485 x 5	€87.53
410321/090	EH3/21 KIT Format	1125 x 785 x 320	€1046.21
400021/140	Mounting Plate	915 x 680 x 5	€138.53
410322/090	EH3/22 KIT Format	1125 x 1115 x 320	€1536.09
400022/140	Mounting Plate	915 x 1000 x 5	€213.70
410323/090	EH3/23 KIT Format	1125 x 1445 x 320	€1837.05
400023/140	Mounting Plate	915 x 1340 x 5	€273.64

HEADING HYDRA (GRP) PEDESTAL

Code	Description	Dimensions (HxWxD)	Price
HYDRA816	Hydra GRP Cabinet (IP66) with 4-point locking system	1000 x 800 x 320	€475.64

LOCKS & KEYS FOR EH2/EH3 PEDESTALS

Code	Description	Price
700000/329	EH2 lock 8mm Triangular	€55.62
70000/523	Double Bit Key Lock	€55.62
70000/525	Key Lock V2432e	€55.62
70000/529	Triangular Key Lock 8mm	€55.62
70000/530	Triangular Key Lock 11mm	€55.62

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ENCLOSURES - Galvanised Steel Telecom Cabinets
• RFE Midi/Mini/Telecom Cabinets • Galvanised Sheet Steel

RFE MIDI PILLAR MK2 | Public Lighting - Single Phase (Unmetered)
⚠ *Enclosure comes complete with Lock, Vents, Mounting Plate (Mounting Area 465 x 230)*

Type	Dimensions (HxWxD)	Code	Price
Midi Pillar (2mm/3mm)	900mm x 250mm x 150mm	MIDIMK2	POA
Triangular Key			POA

RFE MINI PILLAR | Public Lighting - Three Phase (Unmetered)
⚠ *Enclosure comes complete with Lock, Mounting Plate (Mounting Area 520 x 350)*

Type	Dimensions (HxWxD)	Code	Price
Mini Pillar	1020mm x 375mm x 210mm	MIN375	POA
Triangular Key			POA

RFE Telecom Cabinet - Three Phase / Single Phase Metered
⚠ *Enclosure comes complete with Lock, Mounting Plate (Mounting Area 730 x 500)600mm Min to bottom of Meter Min Ope Size 900(h)mm x 465(w)mm x 225(d)mm*

Type	Dimensions (HxWxD)	Code	Price
RFE Telecom Cabinet	1600mm x 525mm x 225mm	RFETELEMK2	POA
8mm Triangular Key			POA

RFE SPLIT DOOR CABINET | Three Phase/Single Phase Metered c/w Customer Section
⚠ *Mounting Area for Top/Bottom chamber: 520 x 500*

Type	Dimensions (HxWxD)	Code	Price
RFE Split Door Cabinet	1600mm x 525mm x 225mm	RFE 2DOOR	POA
8mm Triangular Key			POA

Approved to ESB Specification

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ENCLOSURES - Stainless Steel Enclosures
• Stainless Steel Electrical Enclosures Rated IP66 (ATEX Certified)

compex

NEW PRODUCTS

COMPEX STAINLESS STEEL ENCLOSURES AND JUNCTION BOX

COMPEX, A full range of stainless-steel enclosures for electrical panels: high-quality, efficient and strong junction boxes, enclosures and cabinets. Certified products designed to distribute and control the energy offering the best insulation, safety, protection and high resistance to atmospheric conditions and aggressive substances.
Rated IP66 (ATEX Certified.

Code	Description	Material	Nº Door	Width	Height	Depth	Price
CCA02003015/P	Enclosure With Blind Door	AISI304	1	200	300	150	€254.11
CCA03003021/P	Enclosure With Blind Door	AISI304	1	300	300	210	€305.92
CCA03004021/P	Enclosure With Blind Door	AISI304	1	300	400	210	€321.96
CCA04004021/P	Enclosure With Blind Door	AISI304	1	400	400	210	€347.86
CCA04005021/P	Enclosure With Blind Door	AISI304	1	400	500	210	€377.47
CCA04006021/P	Enclosure With Blind Door	AISI304	1	400	600	210	€424.34
CCA04504521/P	Enclosure With Blind Door	AISI304	1	450	450	210	€379.93
CCA04506025/P	Enclosure With Blind Door	AISI304	1	450	600	250	€468.75
CCA05005021/P	Enclosure With Blind Door	AISI304	1	500	500	210	€428.04
CCA05007025/P	Enclosure With Blind Door	AISI304	1	500	700	250	€511.92
CCA06004525/P	Enclosure With Blind Door	AISI304	1	600	450	250	€468.75
CCA06006025/P	Enclosure With Blind Door	AISI304	1	600	600	250	€578.54
CCA06006030/P	Enclosure With Blind Door	AISI304	1	600	600	300	€622.94
CCA06006040/P	Enclosure With Blind Door	AISI304	1	600	600	400	€720.39
CCA06007525/P	Enclosure With Blind Door	AISI304	1	600	750	250	€632.81
CCA06008030/P	Enclosure With Blind Door	AISI304	1	600	800	300	€720.39
CCA06009040/P	Enclosure With Blind Door	AISI304	1	600	900	400	€1,034.95
CCA06012030/P	Enclosure With Blind Door	AISI304	1	600	1200	300	€1,039.88
CCA06012040/P	Enclosure With Blind Door	AISI304	1	600	1200	400	€1,201.48
CCA08008030/P	Enclosure With Blind Door	AISI304	1	800	800	300	€933.80
CCA08010030/P	Enclosure With Blind Door	AISI304	1	800	1000	300	€1,079.36
CCA08012030/P	Enclosure With Blind Door	AISI304	1	800	1200	300	€1,186.68
CCA08012040/P	Enclosure With Blind Door	AISI304	1	800	1200	400	€1,417.35
CCA10007530/P	Enclosure With Blind Door	AISI304	2	1000	750	300	€1,141.04
CCA10010030/P	Enclosure With Blind Door	AISI304	2	1000	1000	300	€1,491.23
CCA10012030/P	Enclosure With Blind Door	AISI304	2	1000	1200	300	€1,891.45
CCA12008030/P	Enclosure With Blind Door	AISI304	2	1200	800	300	€1,282.89

*** Mounting plates and A full range of accessories available***

JUNCTION BOX

Code	Description	Material	Nº Door	Width	Height	Depth	Price
SCA01501509	Terminal Boxes	AISI304	NA	150	150	90	€133.22
SCA01501512	Terminal Boxes	AISI304	NA	150	150	120	€155.43
SCA02002009	Terminal Boxes	AISI304	NA	200	200	90	€152.96
SCA02002012	Terminal Boxes	AISI304	NA	200	200	120	€178.87
SCA03003012	Terminal Boxes	AISI304	NA	300	300	120	€206.00

Terminals can be fitted on request

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ENCLOSURES - Sheet Steel
• Sheet Steel Enclosures IP 66/65/55

DKC

SOLID DOOR

⚠ *Mounting Plate Supplied Free of Charge with Enclosure. Enclosures with Glazed Doors available on request.*

Code	Dimensions (HxWxD)	IP Rating	Price
CE.0391	300 x 250 x 150	66	€67.67
CE.0331	300 x 300 x 150	66	€75.06
CE.0341	300 x 400 x 150	66	€83.67
CE.0431	400 x 300 x 150	66	€83.67
CE.0531	500 x 300 x 150	66	€98.45
CE.0432	400 x 300 x 200	66	€88.60
CE.0442	400 x 400 x 200	66	€94.93
CE.0462	400 x 600 x 200	66	€137.82
CE.0532	500 x 300 x 200	66	€100.89
CE.0542	500 x 400 x 200	66	€116.90
CE.0552	500 x 500 x 200	66	€137.82
CE.0642	600 x 400 x 200	66	€137.82
CE.0752	700 x 500 x 200	66	€172.29
CE.0549	500 x 400 x 250	66	€119.36
CE.0649	600 x 400 x 250	66	€141.50
CE.0669	600 x 600 x 250	65	€168.56
CE.0759	700 x 500 x 250	65	€175.95
CE.0869	800 x 600 x 250	65	€205.49
CE.1069	1000 x 600 x 250	65	€263.32
CE.0683	600 x 800 x 300	55	€240.09
CE.0863	800 x 600 x 300	65	€221.49
CE.0883	800 x 800 x 300	65	€271.92
CE.0813	800 x 1000 x 300	55	€372.23
CE.1063	1000 x 600 x 300	65	€258.96
CE.1083	1000 x 800 x 300	65	€337.17
CE.1263	1200 x 600 x 300	65	€329.77
CE.1283	1200 x 800 x 300	65	€382.71

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ENCLOSURES - Sheet Steel
• Sheet Steel Enclosures IP 66/65/55 • Accessories

DKC

COMPLETE CHASSIS SYSTEMS

Dimensions (HxWxD)	Code	Rows	Modules	Price
400 x 300	TM43	2 Rows	20	€75.56
400 x 400	TM44	2 Rows	32	€76.61
500 x 400	TM54	3 Rows	48	€96.27
500 x 500	TM55	3 Rows	63	€102.11
600 x 400	TM64	4 Rows	64	€109.10
700 x 500	TM75	4 Rows	84	€126.73
800 x 600	TM86	4 Rows	104	€181.57
1000 x 600	TM106	5 Rows	130	€219.34
1200 x 600	TM126	6 Rows	156	€259.55

EARTH, NEUTRAL CONFIGURATION CHART

210mm

Connections	N	E
N7 N7 N7 — 21	21	
PE7 PE7 PE7 — 21		21
N7 N7 PE7 — 21	14	7
N7 PE7 PE7 — 21	7	14
N12 N12 — 24	24	
PE12 PE12 — 24		24
N12 PE12 — 24	12	12
N15 N7 — 22	22	
PE15 PE7 — 22		22
N15 PE7 — 22	15	7
PE15 N7 — 22	7	15

310mm

N7 N7 N7 N7 N7	35
PE7 PE7 PE7 PE7 PE7	35
N12 N12 N12	36
PE12 PE12 PE12	36
N15 N15 N7	37
PE15 PE15 PE7	37
N12 N12 N7 N7	38
PE12 PE12 PE7 PE7	38

410mm

N7 N7 N7 N7 N7 N7 N7	49
PE7 PE7 PE7 PE7 PE7 PE7 PE7	49
N12 N12 N12 N12	48
PE12 PE12 PE12 PE12	48
N15 N15 N15	45
PE15 PE15 PE15	45
N12 N12 N12 N7 N7	50
PE12 PE12 PE12 PE7 PE7	50
N12 N12 N15 N15	54
PE12 PE12 PE15 PE15	54

510mm

N7 N7 N7 N7 N7 N7 N7 N7 N7	63
PE7 PE7 PE7 PE7 PE7 PE7 PE7 PE7 PE7	63
N12 N12 N12 N12 N12	60
PE12 PE12 PE12 PE12 PE12	60
N15 N15 N15 N15 N7	67
PE15 PE15 PE15 PE15 PE7	67
N7 N7 N7 N7 N7 N12 N12	59
PE7 PE7 PE7 PE7 PE7 PE12 PE12	59
N7 N7 N7 N7 N12 N12 N12	64
PE7 PE7 PE7 PE7 PE12 PE12 PE12	64
N7 N7 N7 N15 N15 N15	51
PE7 PE7 PE7 PE15 PE15 PE15	51

WALL BRACKETS

Code		Price
A50		€7.71

KEY LOCKS

Code	Length	Price
CE224	8mm Triangular Insert	€6.08
CE227	Key Locks	€26.28

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ENGINEERING LTD

ENCLOSURES - Mini Junction Boxes
• Mini Junction Sealed/Boxes In Polycarbonate

CAJA MINI JUNCTION BOXES

Manufactured in shock-proof thermoplastic material, with ultraviolet ray protection and is halogen-free. These boxes with an IP55 degree of protection ensures optimum airtightness in any type of installation. The new cone design allows you to secure the degree of airtightness allowing direct entry of the cable without the use of a rigid tube installation.

SEALED BOXES IP55

Code	Description (HxWxD)	Price
3002	80 x 80 x 36mm	€1.58
3063	100 x 100 x 45mm	€2.03
3074	220 x 170 x 85mm	€7.90
3075	310 x 240x 125mm	€20.86
3055 (*Item 3075)	Metal Plate	€3.43

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ALUMINIUM ENCLOSURES - For Electronic and IT Industry
• Industrial Enclosures - Electronic & IT Industry (Aluminium)

BOPLA

These Aluminium enclosures are IP66 and have exceptionally high stress-resistant qualities. The quality of the aluminium makes these an ideal enclosure line when optimal protection is required. There are 43 different enclosure dimensions and a series of accessories which provides the best possible solutions for a wide range of applications.

EUROMAS-ALUMINIUM

ⓘ *These ENCLOSURES can be supplied with DIN RAIL & TERMINALS as required.*

Model	Dimensions (HxWxD)	Price
A100	30 x 45 x 50	POA
A101	34 x 64 x 58	POA
A102	34 x 64 x 98	POA
A103	34 x 64 x 150	POA
A104	34.5 x 64 x 115	POA
A105	57 x 80 x 75	POA
A106	34.5 x 64 x 186	POA
A110	57 x 80 x 125	POA
A114	81 x 100 x 200	POA
A115	57 x 80 x 175	POA
A116	81 x 100 x 100	POA
A117	52 x 80 x 250	POA
A118	91 x 100 x 160	POA
A119	81 x 120 x 122	POA
A120	91 x 120 x 122	POA
A121	91 x 140 x 140	POA
A122	81 x 120 x 220	POA
A123	91 x 120 x 220	POA
A124	81 x 120 x 360	POA
A125	91 x 160 x 160	POA
A126	91 x 140 x 200	POA
A127	101 x 180 x 180	POA
A130	91 x 160 x 260	POA
A131	101 x 180 x 280	POA
A135	91 x 160 x 360	POA
A138	91 x 160 x 560	POA
A140	111 x 230 x 200	POA
A145	111 x 100 x 230	POA
A150	180 x 230 x 200	POA
A155	111 x 230 x 280	POA
A160	111 x 230 x 330	POA
A165	181 x 230 x 330	POA
A168	111 x 230 x 400	POA
A169	111 x 230 x 600	POA
A170	225 x 230 x 400	POA
A175	111 x 310 x 400	POA
A180	141 x 310 x 400	POA
A185	181 x 310 x 400	POA
A190	224 x 310 x 400	POA
A195	209.5 x 240 x 420	POA
A196	111 x 310 x 600	POA
A197	181 x 310 x 600	POA
A198	202.5 x 600 x 600	POA

Screw Fastening:	V2A Screws, Captive
Ingress Protection:	IP 66
Diecasting Alloy:	Gdaissi 12
Gravity Diecasting Alloy:	Gdaissi 12
Surface, Powder-Coated:	Grey, Similar to RAL 7001
Lid Seal, Foamed:	Neoprene, Polyurethane
Approvals:	Germ. Lloyd Cert. 91 184 HH Lloyd's Register Cert. 96/20063
Versions:	G:=With Clear Lid in Polycarbonate
	S1:=Lid with Silicone Seal

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RFE
REG FARRELL ENGINEERING LTD

POLYSTYRENE ENCLOSURES - For Electronic and IT Industry

• Electronic & Terminal Enclosure in High Quality ABS

WALL ENCLOSURE IN SHOCK-RESISTANT POLYSTYRENE. IDEAL FOR USE AS A MEASUREMENT & CONTROL ENCLOSURE, WITH SLOTS FOR PRINTED CIRCUIT BOARD INSERTION.

Features: Large terminal compartment which can be lead-sealed. Novel, robust hinge technology – the hinge side can be changed, the snap lock can also be lead-sealed.

100 Version: open, with cover frame
100F Version: with closed membrane front
1000 Version: with clear lid in polycarbonate

EUROMAS II ENCLOSURE ABS

Model	Dimensions (LxWxD)	Price
ET205	52 x 50 x 37	POA
ET206	65 x 50 x 37	POA
ET207 LP	82 x 60 x 57	POA
ET208	98 x 64 x 38	POA
ET210	82 x 80 x 57	POA
ET212	100 x 100 x 57	POA
ET214 LP	200 x 120 x 57	POA
ET215	120 x 80 x 57	POA
ET217	122 x 120 x 57	POA
ET218 LP	150 x 150 x 57	POA
ET220	160 x 80 x 57	POA
ET221	200 x 120 x 77	POA
ET223	200 x 150 x 77	POA
ET224 LP	240 x 80 x 60	POA
ET225	82 x 80 x 87	POA
ET227	122 x 120 x 87	POA
ET231	160 x 80 x 87	POA
ET236 LP	240 x 80 x 80	POA
ET237	200 x 120 x 92	POA
ET238	160 x 120 x 92	POA
ET239	250 x 160 x 57	POA
ET240	250 x 160 x 92	POA
ET241	250 x 160 x 122	POA
ET242	240 x 120 x 102	POA
E247 LP	300 x 160 x 120	POA

ELECTRONIC & TERMINAL ENCLOSURE IN HIGH-QUALITY ABS

Ingress Protection:	IP 65
Notched Bar Impact Value:	(DIN 53453) 9kj/m^2
Shape Permanence to Heat:	(DIN 53461) 75 deg C
Flame Resistance:	UL94-HB/3mm
Colour:	Light Grey, Similar to RAL 7035
Features:	Particularly suitable to house electronic component parts
	Recyclable due to high quality plastics without any metal inserts
Versions:	-F = Lid for membrane Keypad -LP = Base with slot-in PCB facility

BOPLA…

Is a major manufacturer of enclosures for the electronic and it industries. There are over 5000 standard products in the range. Customised solutions are also available.

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METAL CONSUMER UNITS - (IP) Flush & Wall Mounted C/Units

FIX-O-RAIL F144 CONSUMER UNIT IP40

Flush Mounted electrical consumer unit, for commercial and residential applications. Due to the discreet design and colour of the masking frame and door, the Fix-o-Rail flush mounting enclosure offers significant aesthetic appeal, particularly in applications where appearance is important, easy to install, easy removable protection plates and generous wiring room.

F144 FLUSH MOUNTING CONSUMER UNIT IP40

Model	Type	Dimensions	Price
39186-100	Flush Mounting With Plain Door 14 MOD	350 x 375 x 110	€81.18
39286-100	Flush Mounting With Plain Door 28 MOD	530 x 375 x 110	€95.87
39386-100	Flush Mounting With Plain Door 42 MOD	680 x 375 x 110	€123.42
39486-100	Flush Mounting With Plain Door 56 MOD	830 x 375 x 110	€151.10
39186-000	Flush Mounting With Transp. Door 14 MOD	350 x 375 x 110	€82.80
39286-000	Flush Mounting With Transp. Door 28 MOD	530 x 375 x 110	€111.53
39386-000	Flush Mounting With Transp. Door 42 MOD	680 x 375 x 110	€149.86
39486-000	Flush Mounting With Transp. Door 56 MOD	830 x 375 x 110	€188.33
39185-160	Half Insert Frame 1 ROW		€43.47
39285-160	Half Insert Frame 2 ROW		€59.53
39385-160	Half Insert Frame 3 ROW		€52.56
39068-000	Security Lock With Keys		€12.76

METAL MODULAR ENCLOSURE SYSTEM *Other Sizes Available - up to 256 Mods**

Model	Item	Rows/Module	H x W x D	Price
CURFE 32	Cu-mini 2x2	2/32	380 x 380 x 165	€193.70
CURFE 64	Cu-mini 2x3	4/64	572 x 380 x 165	€258.20
CURFE 80	Cu-mini 2x4	5/80	764 x 380 x 165	€306.20
CURFE 112	Cu-mini 2x5	7/112	956 x 380 x 165	€348.20
CURFE 128	Cu-mini 2x6	8/128	1148 x 380 x 165	€400.50

ACCESSORIES

Code	Description	Price
2020202	12 Way Earth 12 x 16	€2.85
2020207	12 Way Neutral 12 x 16	€2.85
4502-4200	Gland plate	€11.65

CUBIC

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CONSUMER UNITS - Surface Mounted C/Unit
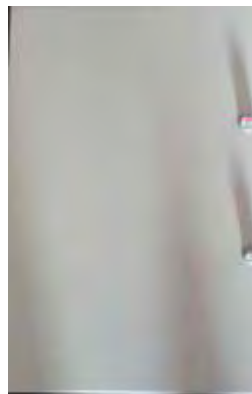
New Equipped Consumer Units

1 row 12 mod €105.55
1 row 18 mod €108.50
2 row 24 mod €112.50
2 row 36 mod €119.50
3 row 36 mod €130.70

- Surface mounted enclosure
- 12 or 18 mod per row
- Transparent or white door
- Includes earth and neutrals

Customisable options available.

NOArK

IP55 CONSUMER UNITS

Code	Rows	Modules	Dimensions	Price
59100/000	1	12	250 x 285 x 138	€41.24
59200/000	2	24	375 x 285 x 138	€59.71
59300/000	3	36	500 x 285 x 138	€72.57

COVERS

Code	Modules	Dimensions	Price
18020/000	2	139 x 51 x 61	€3.48
18040/000	4	139 x 88 x 61	€3.84
18060/000	6	140 x 165 x 72	€8.28
18080/000	8	198 x 200 x 72	€11.91

IP40 CONSUMER UNIT
⚠ *Complete with Earth & Neutral Terminals*

Code	Modules	Dimensions	Price
29040/000	4	175 x 90 x 100	€16.98
29080/000	8	175 x 170 x 120	€20.77

1 ROW - SMOKED FLIP COVER IP40
⚠ *Complete with Earth & Neutral Terminals*

Code	Modules	Dimensions	Price
18014/200	14	208 x 292 x 108	€33.28
18018/200	18	208 x 370 x 108	€42.64

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CONSUMER UNITS - Acqua Plus IP65

ACQUA PLUS IP65

The new range of IP65 Acqua Plus surface enclosures consists of four models from 18 to 72 modules with the option of installing a sealable ICP. They stand out for their quick and easy installation in any environment

39018

39036

39054

39072

Code	Description	Dimensions	Price
39018	Famatel 18 MOD 1 ROW IP65 CU	289 x 432 x 160 mm	€60.74
39036	Famatel 36 MOD 2 ROW IP65 CU	464 x 432 x 160 mm	€103.25
39054	Famatel 54 MOD 3 ROW IP65 CU	639 x 432 x 160 mm	€133.62
39072	Famatel 72 MOD 4 ROW IP65 CU	879 x 432 x 160 mm	€197.39

- Range from 18 up to 72 modules.
- Ample space for cabling.
- Detachable module holder and front panel for quick and easy installation.
- Option of installing sealed power control switch.
- Knock-out bi-material membrane that allows easy installation of metric tubes, cables, glands, etc., ensuring an IP65 degree of protection.

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Filter Fans - High performance, fast mounting and easy maintenance

Modern design

A positive visual impact is given by the up-to-date design of the grills and the minimal external projection. All molded parts are made of highly resistant and self-extinguishing ABS, UL94 VO grade. The standard color is RAL 7035.

Easy maintenance

Easy maintenance thanks to openable front grill. Replacement of soiled filter mat takes only few seconds and it doesn't require tools.

Wide range of air flow ratings

The range of air flow ratings goes from 26 to 700m3/h

Optimal enclosure protection

The special configuration of the grill, the foam seal gasket and the filter mat ensure an IP54 protection degree towards the enclosure.

Quick electrical connection

ATV are fitted with spring terminals for a faster and safer wiring. Default terminals position is above the fan but it can easily be changed at the bottom of the fan according to wiring needs without tools thanks to Fan Quick Lock system.

Fan Quick Lock (FQL)

Default air flow direction is from the outside towards the inside of the enclosure. If needed the user can easily reverse the direction thanks to Fan Quick Lock system, without tools.

Fast installation

Installation is fast thanks to the simple square cutout on the enclosure and to the snap-in fixing system. No screws are needed.

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FAN QUICK LOCK (FQL)

Reverse Air Flow

STANDARD AIR FLOW DIRECTION

PUSH

FIRST STEP

180°

CLICK

SECOND STEP

REVERSE AIR FLOW DIRECTION
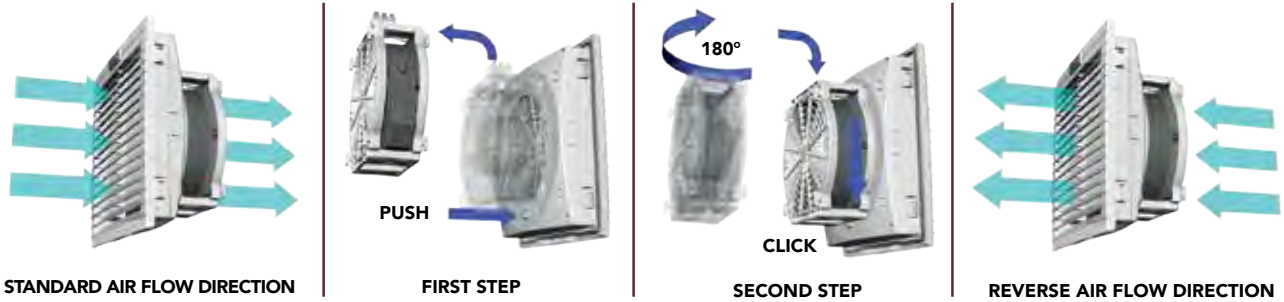
Terminal top/bottom inversion

WIRING TERMINAL ON THE TOP OF THE FAN

PUSH

FIRST STEP

180°

WIRING TERMINAL ON THE BOTTOM OF THE FAN

SECOND STEP
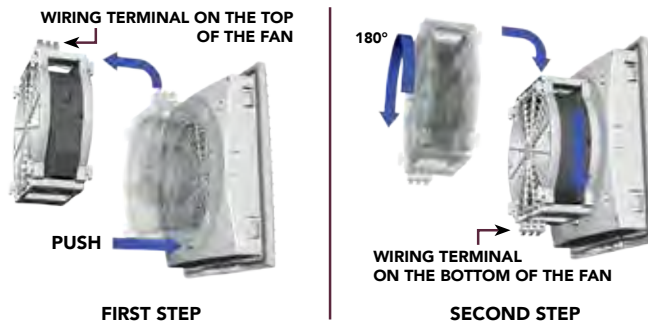
EASY MAINTENANCE Fast filter mat replacement (FMR)

Replace new filter mat

Remove soiled filter mat

CLICK

FRONT GRILL OPENING

FILTER MAT REPLACEMENT

FRONT GRILL CLOSING

COOLING PERFORMANCE DIAGRAM

Cooling capacity (W)

Temperature difference

Air flow rate (m³/hr)
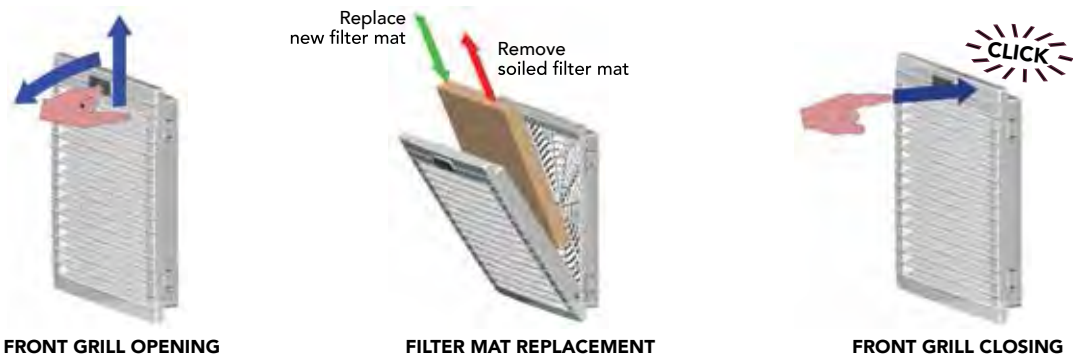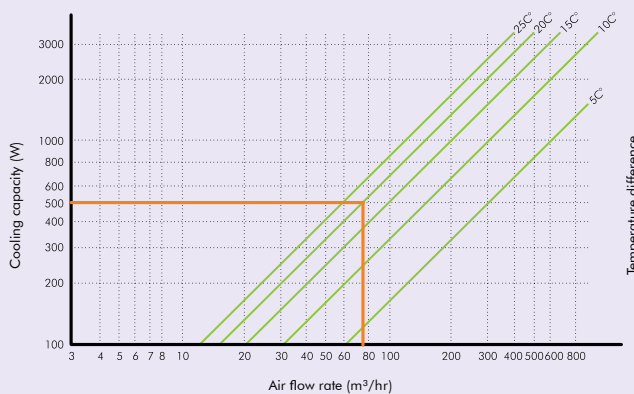
FILTER FAN SELECTION WITH WATT-A-CALCULATOR

Watt-a-Calculator is a selection software that matches the best model to the specific customer application. For more information please contact a member of our sales team.

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THERMAL SOLUTIONS - For Electrical Enclosures
• Ventilation/Filter Fans & Grills

ALFA ELECTRIC

NEW PRODUCTS

GRILL & FANS

Model	Ventilation	Power Supply	HxWxD	Price
ATV1100	Filter fan 26 m³/h	230V-50/60Hz	114 x 14 x73mm	€53.65
ATV1101	Filter fan 26 m³/h	115V-50/60Hz	114 x 14 x 73mm	€53.65
ATV1112	Filter fan 26 m³/h	12VDC	114 x 114 x 60mm	€59.60
ATV1124	Filter fan 26 m³/h	24VDC	114 x 114 x 60mm	€59.60
ATV2200	Filter fan 58 m³/h	230V-50/60Hz	150 x 150 x 86mm	€58.20
ATV2201	Filter fan 58 m³/h	115V-50/60Hz	150 x 150 x 86mm	€58.20
ATV2224	Filter fan 58 m³/h	24VDC	150 x 150 x 86mm	€65.75
ATV2248	Filter fan 58 m³/h	48VDC	150 x 150 x 86mm	€72.00
ATV3200	Filter fan 115 m³/h	230V-50/60Hz	204 x204 x 104mm	€77.50
ATV3201	Filter fan 115 m³/h	115V-50/60Hz	204 x204 x 104mm	€77.50
ATV3224	Filter fan 115 m³/h	24VDC	204 x204 x 104mm	€86.20
ATV3248	Filter fan 115 m³/h	48VDC	204 x204 x 104mm	€92.50
ATV4200	Filter fan 125 m³/h	230V-50/60Hz	250 x 250 x 107mm	€80.50
ATV4201	Filter fan 125 m³/h	115V-50/60Hz	250 x 250 x 107mm	€80.50
ATV4224	Filter fan 125 m³/h	24VDC	250 x 250 x 107mm	€89.20
ATV4248	Filter fan 125 m³/h	48VDC	250 x 250 x 107mm	€95.45
ATV4300	Filter fan 255 m³/h	230V-50/60Hz	250 x 250 x 128mm	€116.25
ATV4301	Filter fan 255 m³/h	115V-50/60Hz	250 x 250 x 128mm	€116.25
ATV4324	Filter fan 255 m³/h	24VDC	250 x 250 x 128mm	€164.50
ATV4348	Filter fan 255 m³/h	48VDC	250 x 250 x 128mm	€164.50
ATV4400	Filter fan 410 m³/h	230V-50/60Hz	250 x 250 x 136mm	€187.80
ATV4401	Filter fan 410 m³/h	115V-50/60Hz	250 x 250 x 136mm	€195.25
ATV4440	Filter fan 410 m³/h	400V-3ph-50/60Hz	250 x 250 x 136mm	€202.75
ATV5400	Filter fan 550 m³/h	230V-50/60Hz	325 x 325 x 140mm	€189.30
ATV5401	Filter fan 550 m³/h	115V-50/60Hz	325 x 325 x 140mm	€196.75
ATV5440	Filter fan 550 m³/h	400V-3ph-50/60Hz	325 x 325 x 140mm	€204.20
ATV5500	Filter fan 700 m³/h	230V-50/60Hz	325 x 325 x 154mm	€245.90
ATV5501	Filter fan 700 m³/h	115V-50/60Hz	325 x 325 x 154mm	€260.80

*** UL Approved Filter Fans available upon request ***

FILTER UNITS

Model	Ventilation	HxWxD	Price
ATV1000	Grill with filter mat	114 x 114 x 27mm	€7.60
ATV2000	Grill with filter mat	150 x150 x 37mm	€8.80
ATV3000	Grill with filter mat	204 x 204 x 37mm	€21.60
ATV4000	Grill with filter mat	250 x 250 x 38mm	€23.20
ATV5000	Grill with filter mat	320 x 320 x 42mm	€31.90

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THERMAL SOLUTIONS - For Electrical Enclosures
• Ventilation/Filter Fans & Grills

ALFA ELECTRIC

NEW PRODUCTS

ROOF FAN & VENT IP44

Model	Ventilation	Power Supply	Price
ALFATORRB	Roof exhaust without fan V0 ABS	-	€91.15
ALFATORR0600B	Roof exhaust with fan 600 m³/h	230V-50/60Hz	€195.40
ALFATORR0610B	Roof exhaust with fan 600 m³/h	115V-50/60Hz	€212.70
ALFATORR0860B	Roof exhaust with fan 860 m³/h	230V-50/60Hz	€246.00
ALFATORR0861B	Roof exhaust with fan 860 m³/h	115V-50/60Hz	€257.55
ALFATORR1000B	Roof exhaust with fan 1000 m³/h	230V-50/60Hz	€284.10
ALFATORR1010B	Roof exhaust with fan 1000 m³/h	115V-50/60Hz	€303.85
ALFATORRMETB	Roof exhaust without fan in painted steel	-	€337.60
ALFATORR1450B	Roof exhaust with fan 1500 m³/h, steel frame	230V-50/60Hz	€463.00
ALFATORR1451B	Roof exhaust with fan 1500 m³/h steel frame	115V-50/60Hz	€506.50

** IP54 & UL Approved Roof Fans Available upon request **

19" FAN TRAY RACK SERIES

Model	Ventilation	Power Supply	Price
RACK0222	2-fans tray	230 V 50-60 Hz	€188.10
RACK0212	2-fans tray	115 V 50-60 Hz	€202.60
RACK0224	2-fans tray	24 V DC	€217.05
RACK0248	2-fans tray	48 V DC	€231.50
RACK0322	3-fans tray	230 V 50-60 Hz	€202.70
RACK0312	3-fans tray	115 V 50-60 Hz	€217.05
RACK0324	3-fans tray	24 V DC	€231.50
RACK0348	3-fans tray	48 V DC	€246.00

IP55 METAL HOODS

Model	Ventilation	Price
CUFF10B	Metal hood for series 1000BP-RAL7035	€41.40
CUFF20B	Metal hood for series 2000BP-RAL7035	€62.00
CUFF30B	Metal hood for series 3000BP-RAL7035	€103.35

REPLACEMENT FILTER MATS

Model	Ventilation	Price
ATVF1	Filter mat for ATV1000	€2.20
ATVF2	Filter mat for ATV2000	€2.60
ATVF3	Filter mat for ATV3000	€4.05
ATVF4	Filter mat for ATV4000	€4.35
ATVF5	Filter mat for ATV5000	€6.10
ATVF1X	Filter mat for ATV1000, high efficiency	€2.75
ATVF2X	Filter mat for ATV2000, high efficiency	€3.20
ATVF3X	Filter mat for ATV3000, high efficiency	€4.90
ATVF4X	Filter mat for ATV4000, high efficiency	€5.20
ATVF5X	Filter mat for ATV5000, high efficiency	€6.95

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REG FARRELL ENGINEERING LTD

Anticondensation Heaters

Application

Enclosure heaters are often necessary to prevent failures or corrosion caused by low temperatures or high humidity inside the enclosure. Such conditions are likely to occur when ambient temperature is low and the equipment inside the enclosure is not powered or fails to dissipate enough heat to keep enclosure temperature above the minimum threshold. Outdoor enclosures, for instance, are almost always in such conditions.

Safety

According to the type of heater, surface temperature is limited either by a PTC or by an over temperature safety switch. This allows a safe operation and a self-adjusted heating power. All heaters are in Class II, except FSHT, FPH, FMHT and FMHTS series in Class I.

Wide range of solutions

Alfa electric offers a wide range of solutions, all for DiN rail mounting:
SHT – PTC heaters with connection on terminals, 25-150W
SHT/W – PTC heaters with wire connection, 15-50W
HT – PTC heaters with connection on terminals, 25-150W
STHT – PTC heaters with connection on terminals, 25-150W
FSHT – Resistor heaters, fan assisted, 250-750W
TMX – PTC heaters, fan assisted, 150-400W
FPH – PTC fan heaters, 1200-2000W
MHT – PTC mini heaters, 5-30W
FMHT – Resistor heaters , fan assisted, 75-300W
FMHTS – Resistor heaters, fan assisted 100-300W

Fast installation

Installation is fast and simple. All units are designed for fast mounting on 35mm DiN eN 50022 rail.

ANTICONDENSATION HEATERS SELECTION WITH WATT-A-CALCULATOR

Watt-a-Calculator is a selection software that matches the best model to the specific customer application. For more information please contact a member of our sales team.

Thermostat THR
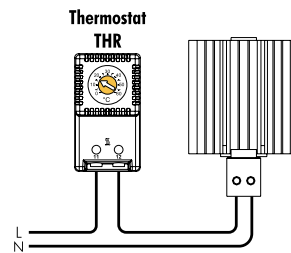
Example:
Enclosure surface	3m^2
Temperature difference	10K
Heating capacity required	170W
Possible heater solutions	n. 2 SHT100
	n. 1 FSHT250
	n. 1 FMHT230

HEATING PERFORMANCE DIAGRAM

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THERMAL SOLUTIONS - For Electrical Enclosures

• Anticondensation Heaters
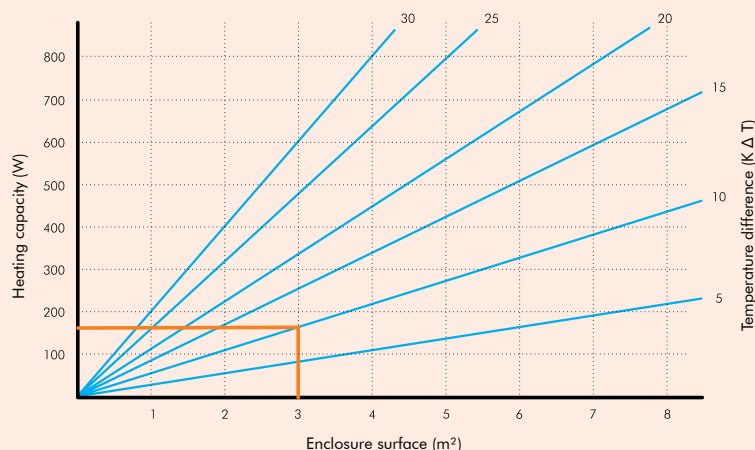
HT COMPACT PTC HEATER (UL APPROVED)

Model	Heating	H x W x D	Price
HT25	Heater PTC 25 W cables	100 x 40 x 40 mm	€42.15
HT50	Heater PTC 50 W cables	100 x 40 x 40 mm	€45.15
HT75	Heater PTC 75 W screw terminals	140 x 59 x 61 mm	€66.25
HT100	Heater PTC 100 W screw terminals	140 x 59 x 61 mm	€69.25
HT150	Heater PTC 150 W screw terminals	220 x 59 x 61 mm	€91.40

STHT-TOUCH SAFE PTC HEATER (UL APROVED)

Model	Heating	H x W x D	Price
STHT25	Heater PTC 25 W screw terminals	125 x 41 x 41 mm	€48.10
STHT50	Heater PTC 50 W screw terminals	125 x 41 x 41 mm	€52.75
STHT75	Heater PTC 75 W screw terminals	140 x 63 x 70 mm	€76.15
STHT100	Heater PTC 100 W screw terminals	140 x 63 x 70 mm	€80.80
STHT150	Heater PTC 150 W screw terminals	220 x 63 x 70 mm	€101.35

MHT - MINI PTC HEATER

Model	Heating	H x W x D	Price
MHT5	Heater PTC 5 W cables	40 x 40 x 55 mm	€34.75
MHT15	Heater PTC 15 W cables	40 x 40 x 55 mm	€36.20
MHT30	Heater PTC 30 W cables	40 x 40 x 65 mm	€39.10

FSHT (FAN ASSISTED, RESISTOR HEATER)

Model	Heating	H x W x D	Price
FSHT250	Fan Heater 250 W -230 V	135 x 112 x 82 mm	€135.65
FSHT251	Fan Heater 250 W -115 V	135 x 112 x 82 mm	€135.65
FSHT400	Fan Heater 400 W -230 V	165 x 112 x 82 mm	€143.60
FSHT401	Fan Heater 400 W -115 V	165 x 112 x 82 mm	€143.60
FSHT500	Fan Heater 500 W -230 V	165 x 112 x 82 mm	€152.00
FSHT501	Fan Heater 500 W -115 V	165 x 112 x 82 mm	€152.00
FSHT750	Fan Heater 750 W -230 V	225 x 112 x 82 mm	€202.60
FSHT751	Fan Heater 751 W -115 V	225 x 112 x 82 mm	€202.60

THERMAL SOLUTIONS - For Electrical Enclosures
• Anticondensation Heaters

FMHT- FAN ASSISTED, COMPACT HEATERS, DUAL SUPPLY

Model	Heating	H x W x D	Price
FMHT75	Fan Heater PTC 75 W wires - Fan 24Vac/dc, Heater 230Vac	97 x 41 x 66 mm	€92.60
FMHT100	Fan Heater PTC 100 W wires - Fan 24Vac/dc, Heater 230Vac	97 x 40 x 66 mm	€96.95
FMHT150	Fan Heater PTC 150 W wires - Fan 24Vac/dc, Heater 230Vac	132 x 40 x 66 mm	€108.55
FMHT230	Fan Heater PTC 230 W wires - Fan 24Vac/dc, Heater 230Vac	142 x 40 x 66 mm	€127.40
FMHT300	Fan Heater PTC 300 W wires - Fan 24Vac/dc, Heater 230Vac	157 x 40 x 66 mm	€147.60

FMHT-FAN ASSISTED COMPACT HEATER- POWER SUPPLY 230VAC

Model	Heating	H x W x D	Price
FMHT100-S	Mini fan Heater PTC 100 W 230V, terminals	97 x 41 x 66 mm	€124.90
FMHT150-S	Mini fan Heater PTC 150 W 230V terminals	132 x 41 x 66 mm	€135.90
FMHT230-S	Mini fan Heater PTC 230 W 230V terminals	142 x 41 x 66 mm	€153.70
FMHT300-S	Mini fan Heater PTC 300 W 230V terminals	157 x 41 x 66 mm	€182.10

TMX - FAN ASSISTED PTC HEATER-TOUCHSAFE

Model	Heating	H x W x D	Price
TMX150.00	Compact fan heater PTC 150W 230V	88 x 66 x 97 mm	€110.25
TMX250.00	Compact fan heater PTC 250W 230V	88 x 66 x 97 mm	€114.75
TMX300,00	Compact fan heater PTC 300W 230V	88 x 66 x 97 mm	€118.10
TMX400.00	Compact fan heater PTC 400W 230V	88 x 66 x 97 mm	€121.50
TMX150.10	Compact fan heater PTC 150W 115V	88 x 66 x 97 mm	€121.50
TMX250.10	Compact fan heater PTC 250W 115V	88 x 66 x 97 mm	€126.25
TMX300,10	Compact fan heater PTC 300W 115V	88 x 66 x 97 mm	€129.90
TMX400.10	Compact fan heater PTC 400W 115V	88 x 66 x 97 mm	€133.65

FPH - FAN ASSISTED PTC HEATERS

Model	Heating	H x W x D	Price
FPH1200.00	Fan Heater PTC 1200 W -230 V	95 x 160 x 120 mm	€146.00
FPH1200.01	Fan Heater PTC 1200 W -230 V w/bimetal thermostat	95 x 160 x 120 mm	€260.50
FPH1200.02	Fan Heater PTC 1200 W -230 V w/electronic control	95 x 160 x 120 mm	€289.40
FPH1500.00	Fan Heater PTC 1500 W -230 V	95 x 160 x 120 mm	€274.95
FPH1500.01	Fan Heater PTC 1500 W -230 V w/bimetal thermostat	95 x 160 x 120 mm	€289.40
FPH1500.02	Fan Heater PTC 1500 W -230 V w/electronic control	95 x 160 x 120 mm	€218.40
FPH2000.00	Fan Heater PTC 2000 W -230 V	95 x 160 x 120 mm	€303.85
FPH2000.01	Fan Heater PTC 2000 W -230 V w/bimetal thermostat	95 x 160 x 120 mm	€313.35
FPH2000.02	Fan Heater PTC 2000 W -230 V w/electronic control	95 x 160 x 120 mm	€347.30

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THERMAL SOLUTIONS - For Electrical Enclosures
• Panel Control - Thermostats

THERMOSTATS

Compact Thermostat for DIN 35 mm. rail mounting. Based on bimetallic junction, provides high capacity NO or NC contact. Two versions available.

THVx	NO Contact 🔵	Typically used for controlling ventilation devices
THRx	NC Contact 🔴	Typically used for controlling heaters

Thermostat THV
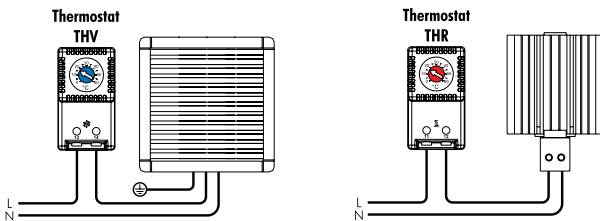
Thermostat THR

THRF - THVF
BIMETALLIC THERMOSTAT FIXED SET

Fixed set point compact thermostat for DIN 35 mm. rail mounting. Based on bimetallic junction, provides high capacity NO or NC contact. Two versions available.

THVF

THRF
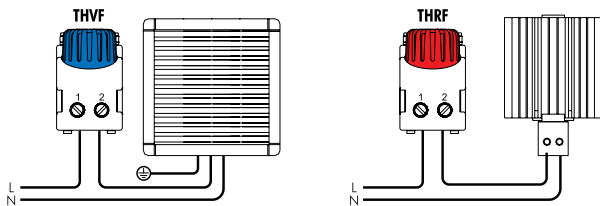
THRV - THVV
DOUBLE-THERMOSTATS

Compact double thermostat for DIN 35 mm. rail mounting. Based on bimetallic junction, provide high capacity and separated NO and NC contacts in different combinations. Three versions available.

THRV13	NC 🔴	NO 🔵
THRV22	NC 🔴	NO 🔵
THVV22	NO 🔵	NO 🔵

Thermostat THRV

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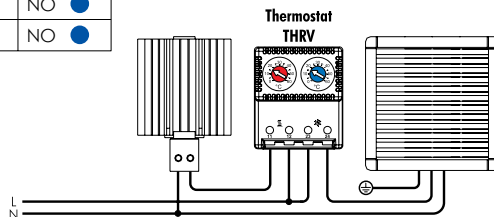
THS
THERMOSTAT CHANGE-OVER CONTACT WITH LOW HYSTERESIS

4-pole terminal for 2.5 mm² wire
Protection degree EN60529 IP20

EUH
HYGROSTAT

Electronic Hygrostat for DIN 35 mm. rail mounting.
Typically used to control enclosure heaters.
LED display of power on and status.

ETUH
THERMO-HYGROSTAT

Electronic Hygrothermostat for DIN 35 mm. rail mounting.
Typically used to control enclosure heaters. The change over contact triggers either for high humidity or low temperature, independently set adjustable. LED display of power on and status.

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ETHM - ETHDM
TEMPERATURE CONTROLLERS

Compact Size - 1 DIN Module (17,5mm) or 2 DIN modules (35mm)
Supply 20-30 VAC/DC or 200-240 VAC
Din rail mounting
Analog temperature adjustment
Suitable for temperature control inside electric panel
(Fan control and resistor control)
One or two independent NTC probe inputs
1 relay output x 8A (ETHM10,ETHM14),
2 relay outputs x 16A (ETHDM10, ETHDM14)

FSC
FAN SPEED CONTROLLER

Electronic temperature-regulated fan speed controller
for DIN 35 mm. rail mounting.
Speed controller helps to reduce fan noise, air flow rate
is reduced to the optimum speed required.

FS
FLASHING SAFETY DEVICE

The flashing safety devices series FS prevents accidents,
alerting the operator that the electrical system is live. The
FS devices are suitable for connection to three or single-
phase lines. FS is also a phase-loss and phase-sequence
control device: in case of failure, it points out the missing
phase. The device functions can be increased with auxiliary
contacts that allow to switch-on the lamp when opening
the cabinet door or to control other equipment inside the
cabinet (air conditioner, etc.)

THERMAL SOLUTIONS - For Electrical Enclosures
• Panel Control - Thermostats

ALFA ELECTRIC

NEW PRODUCTS

THERMOSTATS- THR FOR USE TO CONTROL HEATERS
THV - CONTROLLING VENTILATION DEVICES

Model	Description	H X W X D	Price
THR1	Thermostat NC -10/50 °C	61 x 34 x 35 mm	€19.40
THR2	Thermostat NC 0/60 °C	61 x 34 x 35 mm	€18.55
THR3	Thermostat NC 20/80 °C	61 x 34 x 35 mm	€20.70
THV1	Thermostat NO -10/50 °C	61 x 34 x 35 mm	€19.40
THV2	Thermostat NO 0/60 °C	61 x 34 x 35 mm	€18.55
THV3	Thermostat NO 20/80 °C	61 x 34 x 35 mm	€20.70

THERMOSTAT W/ CHANGE-OVER CONTACT

Model	Description	H X W X D	Price
THS2	Thermostat change-over contact 0:60 °C	64 x 37 x 45 mm	€44.10

DOUBLE THERMOSTATS

Model	Description	H X W X D	Price
THRV13	Double thermostat NC -10/50°C NO 20/80°C	61 x 53 x 35 mm	€38.10
THRV22	Double thermostat NC 0/60°C NO 0/60°C	61 x 53 x 35 mm	€34.50
THVV22	Double thermostat NO 0/60°C NO 0/60°C	61 x 53 x 35 mm	€34.50
THRF05	Bimetallic Fixed set NC 5°C	47 x 27 x 35 mm	€16.55
THVF35	Bimetallic Fixed set NO 35°C	47 x 27 x 35 mm	€16.55
THVF50	Bimetallic Fixed set NO 50°C	47 x 27 x 35 mm	€16.55

MECHANICAL HYGROSTAT

Model	Description	Power Supply	Price
MUH	Mechanical Hygrostat 10-90%RH	230V-50/60Hz	€66.15

ELECTRONIC HYGRO-THERMOSTAT

Model	Description	Power Supply	Price
ETUH11	Electronic Hygro-thermostat 0-60 °C 30-90% RH	110 V-50/60Hz	€188.10
ETUH22	Electronic Hygro-thermostat 0-60 °C 30-90% RH	230V-50/60Hz	€188.10
EUH11	Electronic Hygrostat 20-90%RH	230v-50/60Hz	€165.40
EUH22	Electronic Hygrostat 20-90%RH	230V-50/60Hz	€165.40

ELECTRONIC THERMOSTATS

Model	Description	Power Supply	Price
ETH10	Electronic thermostat -20:65 °C, digital display, 1 relay output	200-240VAC	€86.81
ETH14	Electronic thermostat -20:65 °C, digital display, 1 relay output	10-30V AC/DC	€101.28
ETHD10	Electronic thermostat -20:65 °C, digital display, 2 relay output	200-240VAC	€151.58
ETHD14	Electronic thermostat -20:65 °C, digital display, 2 relay output	10-30V AC/DC	€165.36
ETHM10	Electronic thermostat -20:65 °C, trimmer setting, 1 relay output	200-240VAC	€78.55
ETHM14	Electronic thermostat -20:65 °C, trimmer setting, 1 relay output	10-30V AC/DC	€81.30
ETHDM10	Electronic thermostat -20:65 °C, trimmer setting, 2 relay output	200-240VAC	€110.24
ETHDM14	Electronic thermostat -20:65 °C, trimmer setting, 2 relay output	10-30V AC/DC	€114.37

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THERMAL SOLUTIONS - For Electrical Enclosures
• Panel Control - Thermostats

FAN SPEED CONTROLLER

Model	Description	Power Supply	Price
FSC	Fan speed controller	100-230v/50-60Hz	€227.40

FLASHING SAFETY DEVICE

Model	Description	Price
FS	Flashing safety device with phase sequence detection	€94.05
FSL	Flashing safety device with phase sequence detection, integrated door limit switch for lamp	€101.30
FSLA	Flashing safety device with phase sequence detection, integrated door limit switches for lamp and other auxiliary devices	€108.50

FS- Flashing Safety Device - The flashing safety devices series FS prevents accidents, alerting the operator that the electrical system is live. The FS devices are suitable for connection to three or single-phase lines. FS is also a phase-loss and phase-sequence control device: in case of failure, it points out the missing phase. The device functions can be increased with auxiliary contacts that allow to switch-on the lamp when opening the cabinet door or to control other equipment inside the cabinet (air conditioner, etc.)

IF YOU REQUIRE ASSISTANCE PLEASE CONTACT OUR SALES TEAM TO DISCUSS YOUR REQUIREMENTS

STANDARD AIR FLOW DIRECTION

PUSH

FIRST STEP

180°

CLICK

SECOND STEP

REVERSE AIR FLOW DIRECTION

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ALFA ELECTRIC

LEDLAMP 32

SLIM, HIGH EFFICENCY ENCLOSURE LED LAMP WITH MOTION SENSOR

Wide voltage range from 20VDC up to 265VAC in a single model.
Spring terminal. More units can be connected together in a chain.
Fixing clips in each model permit to rotate the lamp according to lighting needs.
Magnet fixing or screw fixing. Motion sensor or switch ON/OFF available.

SPRING TERMINAL

MOTION SENSOR

CLIP FIXING WITH MAGNET OR SCREW

ORIENTABLE

LAMP CP22

COMPACT, HIGH EFFICIENCY ENCLOSURE LAMP

Fitted with Schuko socket and switch, it can be mounted with clips on DIN rail, on a bracket (ALFASTAFF) with screws or with magnetic fixing. It fits exactly one 19" height/unit (44 mm).
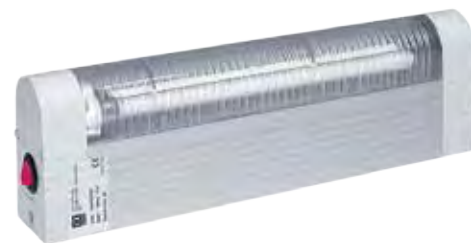
LED LAMP CP22

COMPACT, HIGH EFFICIENCY ENCLOSURE LED LAMP WITH MOTION SENSOR

Fitted with Schuko socket and switch, it can be mounted with clips on DIN rail, on a bracket (ALFASTAFF) with screws or with magnetic fixing. It fits exactly one 19" height/unit (44 mm). Models LED LAMPCP22S and LED LAMPSP22S are fitted with motion sensor.

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THERMAL SOLUTIONS - For Electrical Enclosures
• Panel Lamps/LED Lighting

ALFA ELECTRIC

NEW PRODUCTS

LL4
SLIM ENCLOSURE LED LAMP

Slim and versatile led lamp. More units can be connected togheter in a chain up to a total power of 100W, by using the addition interconnection cable including in the packaging.

LAMP 36
SLIM ENCLOSURE LAMP

Slim and versatile fluorescent lamp. More units can be connected together in a chain up to a total power of 100W, by using the addition interconnection cable including in the packaging.

LAMP 3012
ENCLOSURE LAMP

LAMP 2005

Slim and versatile fluorescent lamp. More units can be connected together in a chain up to a total power of 100W, by using the addition interconnection cable including in the packaging.

THERMAL SOLUTIONS - For Electrical Enclosures
• Panel Lamps/LED Lighting

ALFA ELECTRIC

NEW PRODUCTS

LED LAMP

Model	Description	Power Supply	Price
LEDLAMP 3200	LED Lamp 400Lm, on/off switch, screw mount	24-48Vdc/100-240Vac 50-60Hz100-240 V 50 Hz	€88.35
LEDLAMP 3201	LED Lamp 400Lm, on/off switch, magnet mount	24-48Vdc/100-240Vac 50-60Hz100-240 V 50 Hz	€91.65
LEDLAMP 3210	LED Lamp 400Lm, motion sensor, screw mount	24-48Vdc/100-240Vac 50-60Hz100-240 V 50 Hz	€124.35
LEDLAMP 3211	LED Lamp 400Lm, motion sensor, magnet mount	24-48Vdc/100-240Vac 50-60Hz100-240 V 50 Hz	€127.60

LED SLIM LAMP- CAN BE LINKED UP TO 100W (screw Fix)

Model	Description	Power Supply	Price
LL44W100	LED Slim Lamp, 4W	100-230v	€29.30
LL49W100	LED Slim Lamp, 9W	100-230v	€32.60
LL413W100	LED Slim Lamp, 13W	100-230v	€41.75
LL418W100	LED Slim Lamp, 18W	100-230v	€50.85

LAMPCP22

Model	Description	Power Supply	Price
LAMPCP22+CLIP	Compact Lamp w/socket, clip mount,fluorescent	220 V 50 Hz	€82.00
LAMPCP22+STAF	Compact Lamp w/socket, bracket mount,fluorescent	220 V 50 Hz	€88.70
LAMPSP22+CLIP	Compact Lamp w/o socket, clip mount,fluorescent	220 V 50 Hz	€71.55
LAMPSP22+MAGN	Compact Lamp w/o socket, magnet mount,fluorescent	220 V 50 Hz	€79.00
LAMPSP22+STAF	Compact Lamp w/o socket, bracket mount,fluorescent	220 V 50 Hz	€78.25
ALFASTAFF	Bracket for LampXX22		€6.70
ALFAMAGNETE	Magnet for LampXX22		€7.45

Led lamp fitted with Schuko socket and switch, it can be mounted with clips on DIN rail, on a bracket (ALFASTAFF) with screws or with magnetic fixing.

It fits exactly one 19" height/unit (44 mm).

Models LED LAMPCP22S and LED LAMPSP22S are fitted with motion sensor.

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THERMAL SOLUTIONS - For Electrical Enclosures
• Accessories

DIN RAIL SOCKET

DIN RAIL CLIPS

PRESSURE EQUALIZER

SOCKETS FOR DIN RAIL

Model	Description	AMP	Price
ALFAPRSCH02	Socket British Standards 1363	13A	€10.10
ALFASOCKET02F	Socket 10A/16A double-step and Schuko with fuse 6A	16A	€9.00

DIN RAIL BRACKET

Model	Description	Price
GUIDADINPL	DIN rail bracket	€2.54

PRESSURE EQUALIZER

Model	Description	Price
PRESSCOMP	Pressure equalizer (1 UNIT = 2 pcs)	€15.65

CLIP FOR 35 MM. DIN RAIL

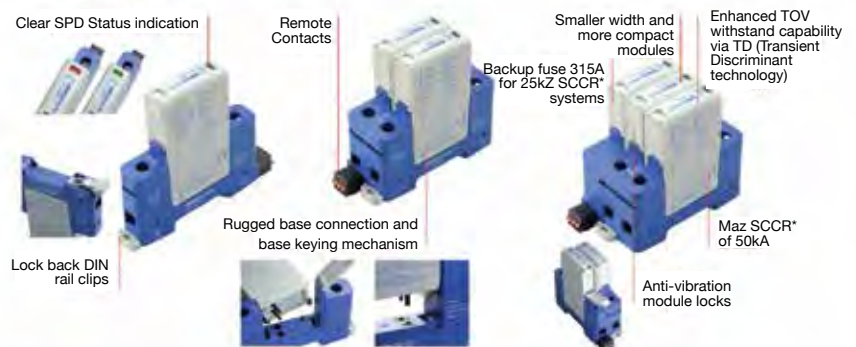| Model	Description	Price
CLIPP	Plastic clip for 35 mm. DIN rail	€2.50
CLIPM	Metal clip for 35 mm. DIN rail	€1.25

MODULAR DEVICES - Surge Protection Devices

DINLINE SURGE ARRESTERS

Code	Description	Price
DT130030R	Surge Diverter Type 1 300V 30	POA
10020	TYPE 1+2+3 1 Pole Surge Arrester 12.5 / 50KA	POA
10020/2	TYPE 1+2+3 2 Pole Surge Arrester 12.5 / 50KA	POA
10020/4	TYPE 1+2+3 TP+N (4Pole) Surge Arrester 50KA	POA
10811/LED	Type 1+2+3 Combined Lightning & Surge Arresters 4 pole, 100ka 10/350µs	POA
	Enhanced protection Mode protection common and differential	
DT130020R	CLASS 1 +2 2 Pole 12.5 / 50KA 300V 2M Surge Arrester	POA
DT130040R	CLASS 1 +2 4 Pole 12.5 / 50KA 300V 4M Surge Arrester	POA
SY2D	CLASS 2 2 Pole *** 1 mod *** Live & Neutral CLASS 2 Pluggable	POA
DT230010R	CLASS 2 + 3 1 Pole 50KA 300V 1M Surge Arrester	POA
SY1-C 40X	CLASS 2 + 3 2 Pole L+N Surge Arrester	POA
DT230020R	CLASS 2 + 3 2 Pole 50KA 300V 2M Surge Arrester	POA
DT230030R	CLASS 2 + 3 3 Pole 50KA 300V 3M Surge Arrester	POA
DT230040R	CLASS 2 + 3 4 Pole 50KA 300V 4M Surge Arrester	POA
SY2-C 40X LED	CLASS 2 + 3 4 Pole Surge Arrester LED	POA

DATA/SIGNAL SURGE PROTECTION DEVICES

Code	Description	Price
SP30	Data/Signal Surge Arrester up to 30vDC	POA
SP48	Data/Signal Surge Arrester up to 48vDC	POA
DTB2/ART	Surge Arrester for Telephone	POA
32006	class 2/3 Fire / Burglar Alarm Individual Sockets	POA
P1S1	Status Indicator for Surge Arrester Panel Mount	POA
210200	Surge For Cable TV (COAX) male/female	POA
210210	Surge for Satellite SKY (F type)	POA
220205	Surge for Signal Cable 5V DC (1pair)	POA
220212	Surge for Signal Cable 12V DC (1 pair)	POA
220248	Surge for Signal Cable 48V DC (1pair)	POA
210228	Surge for TV (BNC type)	POA
220194	Surge for Analogue Telephone (1 Pair)	POA
220224	Surge for Signal Cable 24V DC (1pair)	POA
210130	Surge P-TK/Z- CAT 5 CAT 6 S	POA
207201	Plug in P-HMS 280 Surge	POA

ERIFLEX ERITECH

Bonding, Grounding, Surge Protection and Low Voltage Panel Components

Clear SPD Status indication

Remote Contacts

Smaller width and more compact modules

Enhanced TOV withstand capability via TD (Transient Discriminant technology)

Backup fuse 315A for 25kZ SCCR* systems

Lock back DIN rail clips

Rugged base connection and base keying mechanism

Maz SCCR* of 50kA

Anti-vibration module locks

APPROVALS

RFE (REG FARRELL ENGINEERING LIMITED)
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MODULAR DEVICES · Connecting Busbars • Din Rail Heating Contactor

CONNECTING BUSBARS (1M LENGTH)

Code	Description	Part No.	Price
2210101	Fork Insulated 1P	OB FI 1	€9.81
2220104	Pin Insulated 1P	OB PI 1	€12.36
2213204	Fork Insulated 2P	OB FI 2	€18.99
2223202	Pin Insulated 2P	OB PI 2	€18.46
2213301	Fork Insulated 3P	OB FI 3	€20.13
2223302	Pin Insulated 3P	OB PI 3	€20.72
2213419	Fork Insulated 3P+N	OBFl3+N	€56.58

Pollmann Elektrotechnik

CONNECTING BUSBARS FOR MCBS

Code	Description	Part No.	Price
2213450	Fork Insulated 3P+N	L1, L2, L3, N, Suitable for 3P+N RCBO's, 4 Pole RCD's	€55.22
2217418	Fork Insulated 4P	MCB's, RCD's 3 x 4 Four Pole MCB's 210mm	€11.60

DIN RAIL HEATING CONTACTOR

Noark

Code	AMP	Module/Contact	Price
107320	25A	1 (2NO)	€16.40
107017	25A	1 (2NC)	€16.64
102412	25A	2 (4NO)	€27.07
102416	40A	3 (4NO)	€52.19
102427	63A	3 (4NO)	€75.84

RFE REG FARRELL ENGINEERING LTD

MODULAR DEVICES - ISOLATORS (LOCKABLE)

NOARK
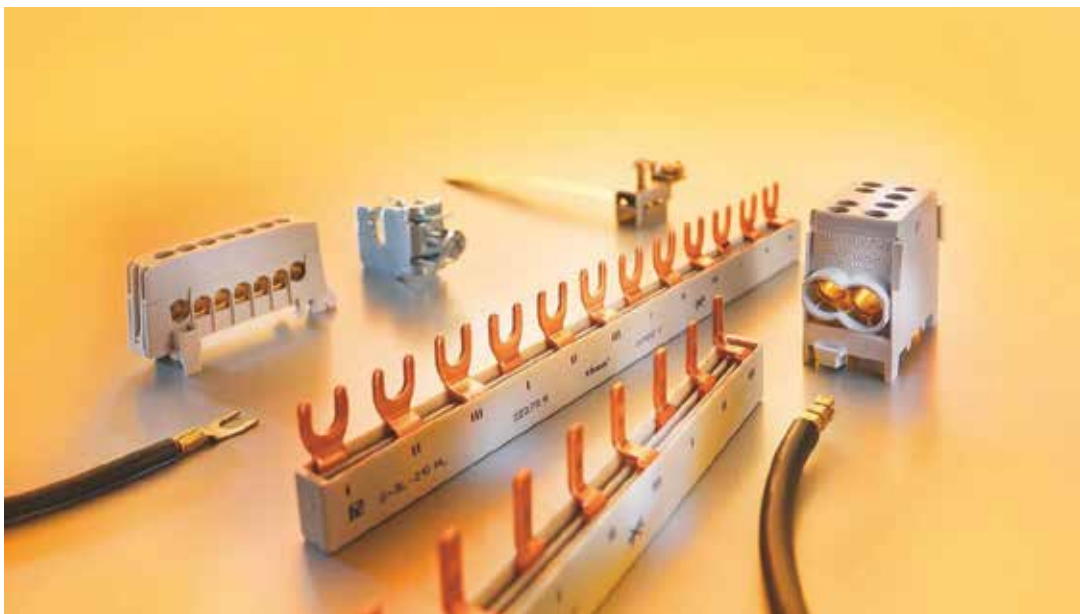
1 POLE   2 POLE   3 POLE   4 POLE

1 POLE

Code	Rated Current	Poles	Price
102304	16 A	1	€5.45
102305	25 A	1	€5.95
100862	32 A	1	€7.20
100863	40 A	1	€9.30
100864	63 A	1	€14.05
100865	80 A	1	€12.55
100866	100 A	1	€14.85
100867	125 A	1	€14.85

2 POLE

Code	Rated Current	Poles	Price
102306	16 A	2	€9.05
102307	25 A	2	€10.20
100868	32 A	2	€14.45
100869	40 A	2	€16.95
100870	63 A	2	€18.75
100871	80 A	2	€21.65
100872	100 A	2	€25.90
100873	125 A	2	€29.30

3 POLE

Code	Rated Current	Poles	Price
102308	16 A	3	€13.60
102309	25 A	3	€14.30
100874	32 A	3	€14.95
100875	40 A	3	€15.20
100876	63 A	3	€30.00
100877	80 A	3	€27.45
100878	100 A	3	€33.70
100879	125 A	3	€47.50

4 POLE

Code	Rated Current	Poles	Price
102308	16 A	4	€21.20
102309	25 A	4	€23.45
100874	32 A	4	€30.25
100875	40 A	4	€31.75
100876	63 A	4	€36.45
100877	80 A	4	€44.10
100878	100 A	4	€51.00
100879	125 A	4	€57.95

MODULAR CHANGEOVER SWITCH WITHOUT OFF

AMP	Code	Pole	Module	Description	Price
32A	35423/000	2P	1	Without OFF	€17.92
32A	35523/000	2P	1	With OFF	€19.65

OVERCURRENT DEVICE FOR METER CABINET

Code	Pole	Module	Price
63 RFE IP55 3mod ENCL + 63A	1P	10KA MCB	€23.66

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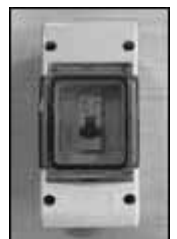
MODULAR DEVICES - Earth & Neutral Bars

CONNECTING BUSBARS (1M LENGTH)

Code	Rating	Description	Price
PDT 15.4	100 AMP	15x4 40 Screws M8x15	€50.34
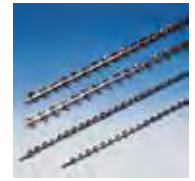
FLEXIBLE WIRE BRIDGES 10mm² CABLE

Code	Description	Price
1420239	VB 10 - 90mm Ferruled Cable Blue	€0.69
1420250	VB 10 - 90mm Ferruled Cable Brown	€0.69
1420257	VB 10 - 280mm Ferruled Cable Blue	€1.13
1420256	VB 10 - 280mm Ferruled Cable Brown	€1.13

DIN RAIL NEUTRAL & EARTH BARS

Code	Description	Price
2020201(N7)	7 Way Neutral 7x16	€1.66
2020202(N12)	12 Way Neutral 12x16	€2.85
2020203(N15)	15 Way Neutral 15x16	€3.23
2020206(PE7)	7 Way Earth 7x16	€1.66
2020207(PE12)	12 Way Earth 12x16	€2.85
2020208(PE15)	15 Way Earth 15x16	€3.23
2020301	Equipotential Insulated Busbar (POT16/25)	€7.26
2020548	2 x 19 x 16 sq Earth & Neutral Bar (DI 288mm)	€6.34
2020537	Earth/Neutral Bar 170 x 16s (1m)	€14.79
1300110	Din Support (NSCHT)	€0.50
1320401	MCB Blanking Strip (1m)	€2.03
1320405	220mm Blanking Strip	€0.80

**Finger safer versions now available

STEPPED BUSBAR TERMINALS

Code	Description	Price
18000/121	14x16mm²	€6.26
12901/099	BAR 12x4mm 160A (3P+N)	€24.38
12901/199	BAR 6.5MM x 9mm 63A (3P+N)	€11.29
12901/100	Shroud for 160A	€3.41

Universal Connecting Bar CB 7 x 16²-450A

High-conductivity brass material, the connecting bar is quick and easy to install, requiring only two M5 to M10 screws with a pitch from 18 mm to 25 mm. The hexagonal key helps simplify wiring, and the convenient design allows visual inspection of the wire and confirmation of the connection. The high fill ratio allows an output connection with or without a terminal. The connecting bar is a 450A power distribution bar that is designed to be connected to threaded or perforated copper or tinned aluminium busbar. This compact system is only 68mm long and allows for the connection of up to seven 1.5 to 16mm² output cables.

€13.83 Code: 553150

MODULAR DEVICES - Connection Terminals for Busbar
• Connection & CU-Bar Terminals

Pollmann
Elektrotechnik

INSULATED CONNECTION TERMINALS FOR FORK & PIN TYPES

Code	Description	Pack	Cross Section	Price
2010103	AS/25-GN	30	25 (Fork)	€1.33
2010201	AS/25-SN	30	25 (Pin)	€1.33
2010235	AS/6-50-SN	30	25 (Pin)	€3.14
2010302	AS/35-K	50	35 (Fork)	€1.09
2010402	AS/35-S	50	35 (Pin)	€1.22
2010304	AS/35-M/N	50	35 (Fork)	€1.49
2010404	AS/F-35-S	50	35 (Pin)	€1.22
2010807	AS-2 x 25-SNK	20	25 (Pin)	€2.51
2010804	AS-3 x 16 SNS	20	16 (Pin)	€2.70

AS-3 x 16-SNS

AS-3 x 16-SNK
AS-2 x 25-SNK

AS-2 x10-SN 0,5 Mod PO
AS-2 x 10-SN 0,5 Mod PU
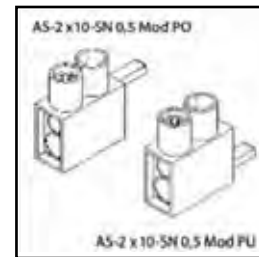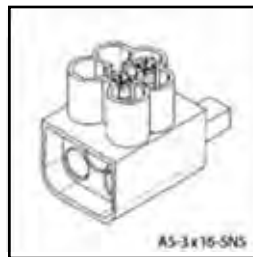
CU-BAR TERMINALS FOR EASY MOUNTING

Code	Description	Pack	Cross Section	Price
2010739	SK 16 F 5	100	1.5-16	€0.71
2010740	SK 16 F 10	100	1.5-16	€0.83
2010732	SK 35 F 5	50	1.5-35	€1.01
2010733	SK 35 F 10	50	1.5-35	€1.07
2010727	SK 70 F 5	25	16-70	€1.39
2010734	SK 70 F 10	25	16-70	€2.90
2010709	SK 120 F 5	25	16-120	€4.18

ASF/25-K   AS/35-S   AS/35-FS/N   AS/35-SL

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TIME CLOCKS & CENTRAL HEATING CONTROLS

SOCKET BOX TIMERS FOR HEATING (WiFi)

Code	Description	Price
OP-SBWF01 *(WiFi)*	Single Channel Socket Box 16amp *(WiFi)* Digital	€71.13
OP-SBWF02 *(WiFi)*	Two Channel Socket Box 5amp *(WiFi)* Digital	€91.05
OP-SBWF03 *(WiFi)*	Three Channel Socket Box 5amp *(WiFi)* Digital	€104.98
OP-SBST	24V - 24 Hour Socket Box Timer (Analogue-15min Tappet Interval 16Amp (Volt Free)	€28.39
OP-SBSW	24V-7 day Socket Box Timers (Analogue)-2Hr Tappet Interval 16Amp (Volt Free)	€34.28

DIGITAL/ANALOGUE IMMERSION HEATING TIMERS

Code	Description	Price
RFE-TS1	Single Channel Digital Controller 230V 3Amp	€58.06
RFE-PR2	Two Channel Digital Controller 230V 3Amp	€62.47
RFE-PR3	Three Channel Digital Controller 230V 3Amp	€92.66
OP-EBT2	Electronic Boost Timer	€24.96
Ecosave	ECOSAVE Immersion Timer	€87.92

RFE-TS/P1-3

OP-EBT2   **ECOSAVE**

UNIVERSAL TIME SWITCHES (WiFi)

Code	Description	Price
OP-BM/1HTWF01 *(WiFi)*	Universal Boiler Module *(WiFi)*	€71.13
OP-TS211.1	24hr Quartz with Running Reserve 1 Channel	€59.11

DIN RAIL TIMER (WiFi)

Code	Description	Price
OP-DRWF01 *(WiFi)*	24 hour / 7 day 16amp 230V Din Rail Switch	€71.13

ROOM THERMOSTATS

Code	Description	Price
OP-Touch	Touch Screen Thermostat	€60.83
OP-Touch (RF)	RF Touchscreen Thermostat	€79.54

PLUG-IN TIMERS (WiFi)

Code	Description	Price
OP-TIP1000	24 HOUR SYNCHRONOUS PLUG-IN TIME SWITCH	€14.59
OP-TIPMF01 *(WiFi)*	*(WiFi)* Plug in timer	€40.28

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PANEL ACCESSORIES - Panel Trunking

L1 **legrand**®

SLOTTED PVC CABLE TRUNKING

ⓘ **(A=Height B= Width C=Thickness) Standard Length 2m.*

Code	A	B	C	Pack(M)	Price/M
30-25P	30	25	1.6	70	€3.36
40-25P	40	25	1.8	60	€3.70
40-40P	40	40	1.8	60	€4.28
40-60P	40	60	1.8	48	€5.42
60-25P	60	25	1.9	60	€4.69
60-40P	60	40	1.9	40	€5.42
60-60P	60	60	1.9	32	€6.47
60-80P	60	80	2	32	€7.92
60-100P	60	100	2	24	€9.93
60-120P	60	120	2.3	16	€11.36
80-25P	80	25	1.9	40	€5.62
80-40P	80	40	2	36	€6.12
80-60P	80	60	2	24	€7.49
80-80P	80	80	2.3	24	€9.32
80-100P	80	100	2.3	18	€11.56
80-120P	80	120	2.3	12	€13.25
100-25P	100	25	2	32	€6.61
100-40P	100	40	2	28	€7.31
100-60P	100	60	2	24	€10.34
100-80P	100	80	2.3	20	€11.56
100-100P	100	100	2.3	16	€13.25
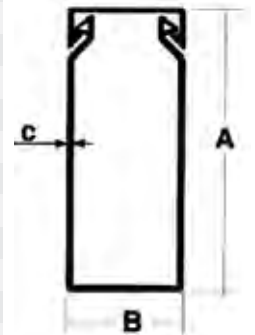
COVER FOR TRUNKING

ⓘ *Normally supplied with slotted base. Standard DIN 43659. On request, and for quantities over 500mm, these trunkings can be supplied with special round hole slotted wall.*

W	L	Code	Price/M
25	2m	4N066020	€1.28
40	2m	4N066021	€2.09
60	2m	4N066022	€3.00
80	2m	4N066023	€3.67
100	2m	4N066024	€4.74
120	2m	4N066025	€5.43

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PANEL ACCESSORIES - Inspection Windows

legrand®

INSPECTION WINDOWS

A practical, waterproof system for the operation and protection (mechanical) of MCB's, RCD's and modular apparatus. In both flat and raised versions, there is a sealing device, as well as with or without a rust proof spring, to prevent the cover of the inspection window remaining open, especially when this is installed outdoors.
Because of their great ease of assembly, they can be used in metal enclosures, without the possibility of electrical contact, internal-external.

RAISED INSPECTION WINDOW IP65 WITHOUT SPRING

Code	Dimensions	Price
2ma	50x59	€11.49
4ma	50x94	€14.49
6ma	50x130	€17.53
8ma	50x163	€18.38
10ma	50x200	€22.39
12ma	50x233	€25.27

FLAT INSPECTION WINDOW IP65 WITHOUT SPRING

Code	Dimensions	Price
2m	50x59	€8.08
24m	196x233	€28.67
36m	247x235	€41.62
45m	292x292	€50.33

WINDOWS

Code	Dimensions	Price
80200-101	IP67 Window (240mm x 190mm)	€30.49
11911-016	IP55 Hinged Window (120mm x 227mm)	€36.66
31840-005	IP44 Fixed Windows (123mm x 123mm)	€20.70
80200-115	IP67 Window (240mm x 139mm)	€29.68

MCB ADAPTOR FOR RAISED AND FLAT INSPECTION WINDOWS

ⓘ *A practical accessory which permits mutual assembly of the circuit breakers with the window, mounted on the box door, with the possibility of adjustment in 9 distinct positions.*
Moreover this accessory can be used as an elevator for "O" profiles.

Code	Price
AP A/K	€4.37

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RFE
REG FARRELL ENGINEERING LTD

PANEL ACCESSORIES - Inspection Windows + Din Rail

• Inspection Windows • DIN+G Rail • Hinged Window-Fuse Windows IP66/67 (Watertight)

legrand

FIXED WINDOWS

The fixed windows are indispensable elements for the ease and comfortable readings of meters and interior inspection of control panels.

FIXED INSPECTION WINDOW IP65

Code	Dimensions	IP	Price
V-98	95x82	IP65	€9.59
V12	118x118	IP65	€10.16
V-1915	146x186	IP65	€15.65

HINGED WINDOW-FUSE WINDOWS IP66/67 (Watertight)

Code	Description	Dimensions	Price
23003	FAMATEL 2 MOD Inspection Window IP 66 /67	49 x 27 x 32	€16.34
23006	FAMATEL 6 MOD Inspection Window IP 66 /67	121 x 50.5 x 108	€23.84
23010	FAMATEL 10 MOD Inspection Window IP 66 /67	193 x 86.5 x 180	€31.74
1829	FAMATEL Window Mounting clamp for DIN-RAIL		€4.45

famatel

DIN PROFILES

Profiles specially made for fixing switchgear in switchboards and panels, mounting of chassis etc.
Material: profiles made of sheet metal, finished in chromium plate.

DIN RAIL PLAIN

⚠ *Please note: Prices per 2M Length.*

Code	Height	Pack	Price per 2Mtr Length
O D/R	7.5mm	30m (Standard)	€6.21
OR D/R	15mm	30m (Heavy Duty)	€7.59

DIN RAIL SLOTTED

Code	Height	Pack	Price
OP D/R	7.5mm	30m (Standard)	€6.62
ORP D/R	15mm	30m (Heavy Duty)	€9.12

G. RAIL

Code	Height	Pack	Price
J Plain	9-15mm	30m	€4.63
JP Slotted	9-15mm	30m	€10.57

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PANEL ACCESSORIES - Switchboard Accessories

HEIGHT EXTENSION STUDS (SPACER BOLTS)

Code	Height	Thread	Price
P10M6	10mm	6mm	€0.53
P15M6	15mm	6mm	€0.44
P20M6	20mm	6mm	€0.56
P30M6	30mm	6mm	€0.58
P40M6	40mm	6mm	€0.61
P50M6	50mm	6mm	€0.64
P60M6	60mm	6mm	€0.68
P70M6	70mm	6mm	€0.74
P80M6	80mm	6mm	€1.34
P90M6	90mm	6mm	€1.03
P100M6	100mm	6mm	€1.42
P10M4	10mm	4mm	€0.41
P15M4	15mm	4mm	€0.41
P20M4	20mm	4mm	€0.41
P30M4	30mm	4mm	€0.47
P40M4	40mm	4mm	€0.50
P50M4	50mm	4mm	€0.58
P70M4	70mm	4mm	€0.58
P30M8	30mm	8mm	€0.74
P40M8	40mm	8mm	€0.82
P50M8	50mm	8mm	€0.88
P100M8	100mm	8mm	€3.46

GROMMETS

These grommets are made in plastic PVC, colour RAL 7035 which are self extinguishing, dust proof and watertight and offer an economic and simple solution to the problem of fitting cable entries and plain tubing through insulating casing. Can be cut to the Ø of the cable or plain tube, covering all the possibilities from 6/87mm.

DOCUMENT HOLDER (SWITCHGEAR CABINET)

Code	Description	Price
1320801	Diagram Pocket 230X220X30	€ 5.64

GROMMETS

Code	Ø Cable Min	Ø Cable Max	Tube Min	Tube Max	Price
C 18	6	6	PG 9	PG 11	€0.47
C 25	10	28	PG 9	PG 16	€0.60
C 38	6	38	PG 9	PG 29	€0.71
C 90	30	87	PG 21	-	€3.74

CABLE SLEEVING

⚠ *Expandable cable sleeving for the rapid & flexible binding cable bundles.*

Adaptable for all types of wiring in the electrical industries.

Code	Max Bundle Ø	Coil	Price/M
FE4/17	4-17mm	100m	€1.50
FE10/35	10-35mm	100m	€3.43
FE20/50	20-50mm	50m	€11.79

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PANEL ACCESSORIES - Insulators
• Stand-off Insulators (Spacing Insulator Type DB/P)

INSULATORS BARREL TYPE

Code	Type	Thread	H	D1	S	D2	OP/Volt	Pk Qty	Price
DB12/PM4	12/P	M4	12mm	10mm	3mm	11mm	220	100	€1.26
DB16/PM4	16/P	M4	16mm	13mm	6mm	14mm	380	100	€1.32
DB20/PM4	20/P	M4	20mm	15mm	8mm	17mm	500	100	€1.38
DB20/PM6	20/P	M6	20mm	15mm	8mm	17mm	500	100	€1.50
DB25/PM6	25/P	M6	25.2mm	15mm	9mm	19mm	600	250	€1.58
DB30/PM6	30/P	M6	30mm	26mm	10mm	30mm	600	80	€2.40
DB30/PM8	30/P	M8	30mm	26mm	10mm	30mm	600	80	€2.40
DB34/PM6	34/P	M6	35mm	28mm	10mm	32mm	1000	64	€2.58
DB34/PM8	34/P	M8	35mm	28mm	10mm	32mm	1000	64	€2.58
DB34/PM10	34/P	M10	35mm	28mm	10mm	32mm	1000	64	€2.64
DB35/PM6	35/P	M6	35.5mm	35mm	10mm	41mm	1000	36	€3.29
DB35/PM8	35/P	M8	35.5mm	35mm	10mm	41mm	1000	36	€3.29
DB35/PM10	35/P	M10	35.5mm	35mm	10mm	41mm	1000	36	€3.29
DB45/PM6	45/P	M6	45mm	35mm	15mm	41mm	1500	27	€3.82
DB45/PM8	45/P	M8	45mm	35mm	15mm	41mm	1500	27	€3.82
DB45/PM10	45/P	M10	45mm	35mm	15mm	41mm	1500	27	€3.82
DB50/PM6	50/P	M6	51mm	29mm	20mm	36mm	2000	36	€3.40
DB50/PM8	50/P	M8	51mm	29mm	20mm	36mm	2000	36	€3.40
DB50/PM10	50/P	M10	51mm	29mm	20mm	36mm	2000	36	€3.40
DB65/PM6	65/P	M6	63.5mm	35mm	30mm	41mm	3000	22	€4.58
DB65/PM8	65/P	M8	63.5mm	35mm	30mm	41mm	3000	22	€4.58
DB65/PM10	65/P	M10	63.5mm	35mm	30mm	41mm	3000	22	€4.58
DB65/PM12	65/P	M12	63.5mm	35mm	30mm	41mm	3000	22	€4.87
DB75/PM8	75/P	M8	76mm	36mm	25mm	50mm	5000	12	€6.45
DB75/PM10	75/P	M10	76mm	36mm	25mm	50mm	5000	12	€6.45
DB75/PM12	75/P	M12	76mm	36mm	25mm	50mm	5000	12	€6.45
DB750/PM10	750/P	M10	75mm	52mm	25mm	65mm	5000	8	€13.22
DB750/PM12	750/P	M12	75mm	52mm	25mm	65mm	5000	8	€13.22
DB750/PM16	750/P	M16	75mm	52mm	25mm	65mm	5000	8	€15.05
DB100/PM10	100/P	M10	101mm	52mm	20mm	65mm	8000	4	€15.53
DB100/PM12	100/P	M12	101mm	52mm	19mm	65mm	8000	4	€15.53
DB100/PM16	100/P	M16	101mm	52mm	23mm	65mm	8000	4	€16.91

Diagrams Refer to Barrel Type DB Insulator
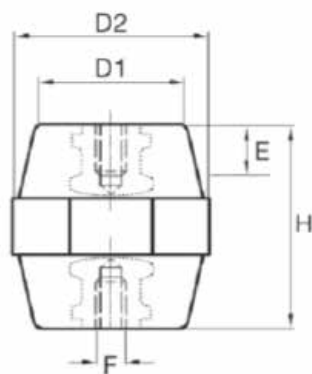

Available in Black (MOQ)

PANEL ACCESSORIES - Insulators
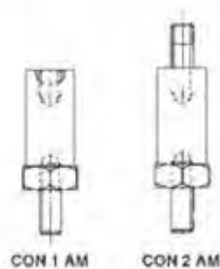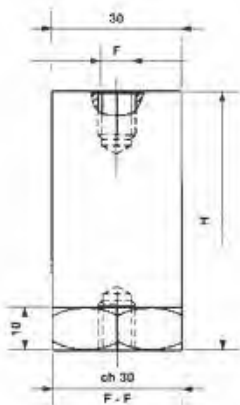• Stand-off Insulators (Spacing Stud Bolts Type CO/P)

HEXAGONAL BASE COLUMN INSULATORS

| Code	Type	Thread	H	OP/Volt	Pk Qty	Price
CO	P 16	M4	16mm	220	250	POA
CO	P 16	M5	16mm	220	250	POA
CO	P 16	M6	16mm	220	250	POA
CO	P 20	M4	20mm	400	200	POA
CO	P 20	M5	20mm	400	200	POA
CO	P 20	M6	20mm	400	200	POA
CO	P 20	M8	20mm	400	200	POA
CO	P 25	M5	25mm	500	150	POA
CO	P 25	M6	25mm	500	150	POA
CO	P 25	M8	25mm	500	150	POA
CO	P 30	M5	30mm	600	140	POA
CO	P 30	M6	30mm	600	140	POA
CO	P 30	M8	30mm	600	140	POA
CO	P 35	M5	35mm	600	120	POA
CO	P 35	M6	35mm	600	120	POA
CO	P 35	M8	35mm	600	120	POA
CO	P 40	M6	40mm	600	110	POA
CO	P 40	M8	40mm	600	110	POA
CO	P 45	M6	45mm	750	100	POA
CO	P 45	M8	45mm	750	100	POA
CO	P 50	M6	50mm	750	80	POA
CO	P 50	M8	50mm	750	80	POA
CO	P 60	M6	60mm	750	70	POA
CO	P 60	M8	60mm	750	70	POA

PANEL ACCESSORIES - Insulators
• Stand-off Insulators (Spacing Stud Bolts CS/P)
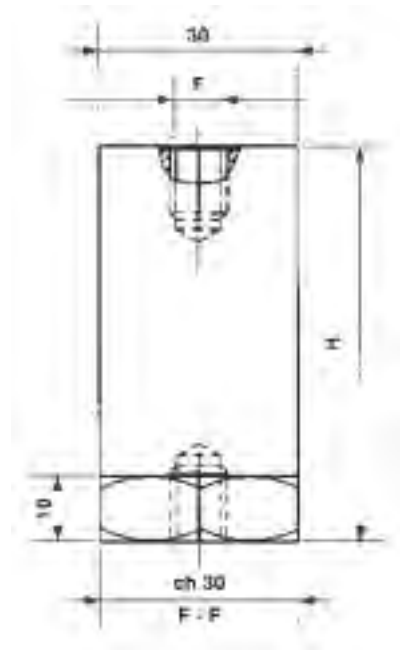
HEXAGONAL BASE COLUMN INSULATORS

Code	Type	Thread	H	OP/Volt	Pk Qty	Price
CS	P 30	M6	30mm	750	80	POA
CS	P 30	M8	30mm	750	80	POA
CS	P 30	M10	30mm	750	80	POA
CS	P 35	M6	35mm	1000	64	POA
CS	P 35	M8	35mm	1000	64	POA
CS	P 35	M10	35mm	1000	64	POA
CS	P 40	M6	40mm	1000	60	POA
CS	P 40	M8	40mm	1000	60	POA
CS	P 40	M10	40mm	1000	60	POA
CS	P 45	M6	45mm	1000	48	POA
CS	P 45	M8	45mm	1000	48	POA
CS	P 45	M10	45mm	1000	48	POA
CS	P 50	M6	50mm	1500	48	POA
CS	P 50	M8	50mm	1500	48	POA
CS	P 50	M10	50mm	1500	48	POA
CS	P 55	M6	55mm	1500	40	POA
CS	P 55	M8	55mm	1500	40	POA
CS	P 55	M10	55mm	1500	40	POA
CS	P 60	M6	60mm	1500	40	POA
CS	P 60	M8	60mm	1500	40	POA
CS	P 60	M10	60mm	1500	40	POA
CS	P 65	M6	65mm	1500	32	POA
CS	P 65	M8	65mm	1500	32	POA
CS	P 65	M10	65mm	1500	32	POA
CS	P 70	M6	70mm	1500	32	POA
CS	P 70	M8	70mm	1500	32	POA
CS	P 70	M10	70mm	1500	32	POA

CON 1 AM   CON 2 AM

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PANEL ACCESSORIES - Insulators
• Stand-off Insulators (Spacing Stud Bolts Type CT/P)

HEXAGONAL BASE COLUMN INSULATORS

Code	Type	Thread	H	OP/Volt	Pk Qty	Price
CT	P 30	M8	30mm	750	45	POA
CT	P 30	M10	30mm	750	45	POA
CT	P 35	M8	35mm	750	36	POA
CT	P 35	M10	35mm	750	36	POA
CT	P 40	M8	40mm	1000	27	POA
CT	P 40	M10	40mm	1000	27	POA
CT	P 45	M8	45mm	1000	27	POA
CT	P 45	M10	45mm	1000	27	POA
CT	P 50	M8	50mm	1500	27	POA
CT	P 50	M10	50mm	1500	27	POA
CT	P 55	M8	55mm	1500	18	POA
CT	P 55	M10	55mm	1500	18	POA
CT	P 60	M8	60mm	1500	18	POA
CT	P 60	M10	60mm	1500	18	POA
CT	P 65	M8	65mm	1500	18	POA
CT	P 65	M10	65mm	1500	18	POA
CT	P 70	M8	70mm	1500	18	POA
CT	P 70	M10	70mm	1500	18	POA

CON 1 AM   CON 2 AM
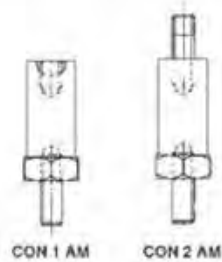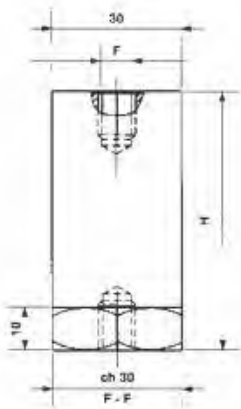
PASSING INSULATORS

Code	Type	Lmm	Amm	Hmm	Volt	Pack Qty	Price
PI/P-4	M4	50mm	10	12.5mm	600	60	€4.32
PI/P -6	M6	65mm	12	17mm	1000	40	€5.78
PI/P-8	M8	80mm	13.5	21mm	1000	30	€8.11
PI/P-10	M10	95mm	15	28mm	1000	20	€12.72
PI/P-12	M12	105mm	17	29mm	1000	15	€17.58
PI/P-16	M16	135mm	22	38mm	2000	10	€22.76
PI/P-20	M20	155mm	25	44mm	2000	5	€36.40

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PANEL ACCESSORIES - Pre-insulated Crimp Terminals

EGI
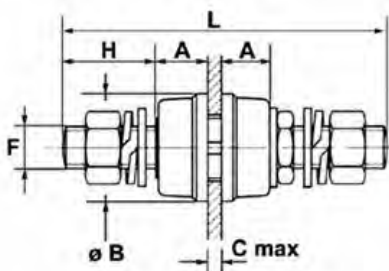
PRE-INSULATED RING TERMINAL CABLE SIZE 1.5MM / RED

Code	ØA Screw	B	Price/100
A3/P	3.6mm	5.7	€6.24
A4/P	4.2mm	6.5	€6.24
A5/P	5.2mm	8	€6.24
A6/P	6.2mm	11	€6.24
A8/P	8.2mm	11	€9.36
A10/P	10.2mm	15	€11.44

PRE-INSULATED RING TERMINAL CABLE SIZE 2.5MM / BLUE

Code	ØA Screw	B	Price/100
B4/P	4.2mm	6.4	€6.24
B5/P	5.2mm	8.8	€6.24
B6/P	6.2mm	9.4	€7.28
B8/P	8.2mm	13	€9.36
B10/P	10.2mm	13	€13.52
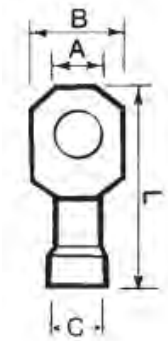
PRE-INSULATED RING TERMINAL CABLE SIZE 4.6MM / YELLOW

Code	ØA Screw	B	Price/100
C4/P	4.2mm	9.9	€11.44
C5/P	5.2mm	9.9	€11.44
C6/P	6.2mm	9.9	€11.44
C8/P	8.2mm	13.8	€14.56
C10/P	10.2mm	13.8	€14.56

PRE-INSULATED SPADE TERMINAL CABLE SIZE 1.5MM / RED

Code	ØA Screw	B	Price/100
A14/P	4.1mm	6.6	€6.24
A15/P	5.2mm	8.5	€6.24
A16/P	6.2mm	10.5	€6.24

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PANEL ACCESSORIES - Pre-insulated Crimp Terminals

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PRE-INSULATED SPADE TERMINAL CABLE SIZE 2.5MM / BLUE

Code	ØA Screw	B	Price/100
B14/P	4.1mm	6	€6.24
B16/P	6.2mm	10.5	€8.32
B18/P	8.2mm	12	€11.44

PRE-INSULATED SPADE TERMINAL CABLE SIZE 4/6mm / YELLOW

Code	ØA Screw	B	Price/100
C14/P	4.3mm	7.5	€11.44
C15P	5.2mm	10	€12.48
C16P	6.4mm	13	€14.56

PRE-INSULATED FEMALE TERMINAL PUSH ON

Code	Cable Size	A Male	Colour	B	Price/100
A00/P	1.5mm	2.8 x 0.8	Red	6	€10.40
A01/P	1.5mm	4.8 x 0.8	Red	6	€11.44
A02/P	1.5mm	6.3 x 0.8	Red	7.8	€11.44
B00/P	2.5mm	2.8 x 0.8	Blue	6	€11.44
B02/P	2.5mm	6.3 x 0.8	Blue	7.8	€11.44
C02/P	4/6mm	6.3 x 0.8	Yellow	7.8	€16.64

PRE-INSULATED MALE-PUSH ON

Code	Cable Size	ØA Male	Colour	Price/100
A22/P	1.5mm	6.3 x 0.8	Red	€7.28
B22/P	2.5mm	6.3 x 0.8	Blue	€8.32
C22/P	4/6mm	6.3 x 0.8	Yellow	€11.44

FULLY INSULATED FEMALE PUSH ON

Code	Cable Size	ØA Male	Colour	Price/100
A02/TP	1.5mm	6.3 x 0.8	Red	€16.64
B02/TP	2.5mm	6.3 x 0.8	Blue	€16.64
C02/TP	6mm	6.3 x 0.8	Yellow	€19.76

PANEL ACCESSORIES - Pre-insulated Crimp Terminals

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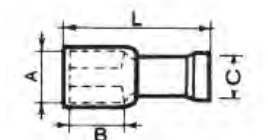
ROUND PIN (INSULATED)

Code	Cable Size	ØA Male	Colour	B	Price/100
A1/P	1.5mm	1.7	Red	11.5	€6.24
A1C/P	1.5mm	1.7	Red	9	€6.24
B1/P	2.5mm	1.8	Blue	11	€6.24
B1C/P	2.5mm	1.8	Blue	7	€6.24
C1/P	4/6mm	2.6	Yellow	13	€11.44

BUTT CONNECTORS (INSULATED)

Code	Cable Size	L	C	Colour	Price/100
A20/P	1.5mm	21.5	1.8	Red	€9.36
B20/P	2.5mm	23	2.4	Blue	€11.44
C20/P	4/6mm	27	3.6	Yellow	€16.64

MALE/FEMALE PIGGY BACK (INSULATED)

Code	Cable Size	ØA Male	Colour	Price/100
A30/P	1.5mm	6.3 x 0.8	Red	€14.56
B30/P	2.5mm	6.3 x 0.8	Blue	€15.60
C30/P	4/6mm	6.3 x 0.8	Yellow	€20.80

ROUND PIN (INSULATED)

Code	Cable Size	ØA Male	Colour	B	Price/100
A11/P	1.5mm	3	Red	12	€6.24
B11/P	2.5mm	3	Blue	12	€6.24
C11/P	4/6mm	3.9	Yellow	13	€14.56
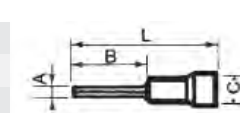
FEMALE SOCKET (INSULATED)

Code	Cable Size	ØA Male	Colour	Price/100
A69/P	1.5mm	4	Red	€13.52
B69/P	2.5mm	5	Blue	€15.60
C69/P	4/6mm	5	Yellow	€20.80

PANEL ACCESSORIES - Insulated Crimp Terminals
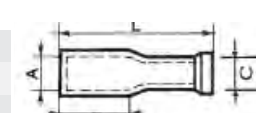
MALE BULLET (INSULATED)

Code	Cable Size	ØA Male	Colour	Price/100
A96/P	1.5mm	4	Red	€13.52
B96/P	2.5mm	5	Blue	€13.52
C96/P	6mm	5	Yellow	€18.72
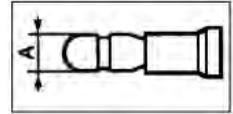
NON-INSULATED RING TERMINALS

Code	Cable Size	ØA Screw	B	Price/100
A4	1.5mm	4.2	6.5	€4.16
B4	2.5mm	4.2	6.4	€5.20
B6	2.5mm	6.2	9.4	€6.24
C6	4/6mm	6.2	9.9	€9.36
C8	4/6mm	8.2	13.8	€11.44
C10	4/6mm	10.2	13.8	€12.48

We stock a Complete range of Tools for all your Lug Crimping requirements

ART. 40

ART. 54

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INSULATED FERRULES (BOOTLACE)

Code	Colour	Type	Pack	Price/100
501	Pink	0.25	500	€3.00
502	White	0.5	500	€1.50
503	Grey	0.75	500	€1.50
504	Red	1	500	€1.56
505	Black	1.5	500	€1.56
506	Blue	2.5	500	€2.08
507	Grey	4	500	€3.12
508	Yellow	6	100	€4.40
509	Red	10	100	€6.03
510	Blue	16	100	€7.80
511	Red	25	50	€14.66
512	Yellow	35	50	€18.35
513	Blue	50	50	€34.94
514	Yellow	70	25	€73.84
515	Red	95	25	€85.28
516	Blue	120	25	€111.28
517	Yellow	150	25	€148.72

UNINSULATED FERRULES (BOOTLACE)

Code	MM	Lmm	Pack	Price/100
93	0.75	8	5000	€3.12
94	1	8	5000	€3.12
95	1.5	10	5000	€3.12
96	2.5	10	1000	€3.12
97	4	9	1000	€3.12
98	6	12	1000	€4.16
99	10	12	500	€4.16
100/20	16	20	500	€7.28
100	16	12	500	€4.16
101	25	15	500	€8.32
102	35	18	500	€43.00
103	50	18	500	€49.00

PANEL ACCESSORIES - Bootlace Ferrules

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INSULATED FERRULES (BOOTLACE) - DOUBLE ENTRY

Code	Colour	Wire mm²	Length	Pack	Price/100
503/2	Grey	0.75mm²	8	500	€3.12
504/2	Red	1mm²	8	500	€3.12
505/2	Black	1.5mm²	8	500	€3.12
506/2	Blue	2.5mm²	10	500	€4.16
507/2	Grey	4mm²	12	100	€8.32
508/2	Yellow	6mm²	14	100	€14.56
509/2	Red	10mm²	14	100	€15.60
510/2	Blue	16mm²	14	100	€21.84
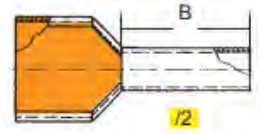
UNINSULATED PIN LUG

Code	Stud Size	A	B	Price/100
D1	10mm²	5	11.5	€32.74
E1	16mm²	6	14.5	€44.72
F1	25mm²	7	15.5	€56.16
G01	35mm²	9	18	€84.24
H1	50mm²	10	20	€197.60
I1	70mm²	12	23.5	€263.12
LI	95mm²	13	25	€295.48

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PANEL ACCESSORIES - Lugs
• Tinned Copper Tube Lugs (Standard)

TINNED COPPER TUBE LUGS

Code	Cable Size	ØD Screw	B	C	Price/100
CT6	6mm	6	12	3.6	€34.00
CT8	6mm	8	13	3.6	€33.00
D6	10mm	6	11	4.6	€33.00
D8	10mm	8	13	4.6	€34.00
D10	10mm	10	15	4.6	€36.00
D12	10mm	12	18	4.6	€45.00
E6	16mm	6	12	6	€37.00
E8	16mm	8	13	6	€41.00
E10	16mm	10	15	6	€45.00
E12	16mm	12	18	6	€49.00
F6	25mm	6	13	7	€47.00
F8	25mm	8	13	7	€49.00
F10	25mm	10	15	7	€56.00
F12	25mm	12	18	7	€59.00
G6	35mm	6	17	9	€79.00
G8	35mm	8	17	9	€84.00
G10	35mm	10	17	9	€90.00
G12	35mm	12	19	9	€100.00
G14	35mm	14	21	9	€106.00
H6	50mm	6	20	10	€108.00
H8	50mm	8	20	10	€111.00
H10	50mm	10	20	10	€115.00
H12	50mm	12	20	10	€128.00
H14	50mm	14	21	10	€139.00
H16	50mm	16	23	10	€148.00
I6	70mm	6	22	12	€123.00
I8	70mm	8	22	12	€148.00
I10	70mm	10	22	12	€156.00
I12	70mm	12	22	12	€164.00
I14	70mm	14	22	12	€158.00
I16	70mm	16	23	12	€190.00
I18	70mm	18	27	12	€212.00
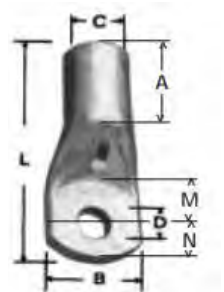
TINNED COPPER TUBE LUGS (STANDARD)

Code	Cable Size Rigid	Cable Size Flex	ØD Screw	B	C	Price/100
L8	95	70	8	26	13.5	€213.00
L10	95	70	10	26	13.5	€227.00
L12	95	70	12	26	13.5	€261.00
L14	95	70	14	26	13.5	€285.00
L16	95	70	16	26	13.5	€279.00
M8	120	95	8	29	15.2	€294.00
M10	120	95	10	29	15.2	€315.00
M12	120	95	12	29	15.2	€329.00
M14	120	95	14	29	15.2	€346.00
M16	120	95	16	29	15.2	€355.00
N10	150	120	10	32	16.5	€437.00
N12	150	120	12	32	16.5	€450.00
N14	150	120	14	32	16.5	€448.00
N16	150	120	16	32	16.5	€480.00

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PANEL ACCESSORIES - Lugs
• Tinned Copper Tube Lugs (Standard)

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TINNED COPPER TUBE LUGS

Code	Cable Size Rigid	Cable Size Flex	ØD Screw	B	C	Price
O10	185	150	10	36	19.2	€576.00
O12	185	150	12	36	19.2	€593.00
O14	185	150	14	36	19.2	€598.00
O16	185	150	16	36	19.2	€657.00
P10	240	185	10	39	21.5	€788.00
P12	240	185	12	39	21.5	€806.00
P14	240	185	14	39	21.5	€839.00
P16	240	185	16	39	21.5	€870.00
Q12	300	240	12	44	23.7	€1244.00
Q14	300	240	14	44	23.7	€1267.00
Q16	300	240	16	44	23.7	€1296.00
R16	400	300	16	51	27	€1692.00
S16	500	400	16	57	30.3	€2710.00
T16	630	500	16	62	33	POA

RIGHT ANGLED TINNED COPPER TUBE LUGS (STANDARD)

Code	Cable Size Rigid	Cable Size Flex	ØD Screw	B	C	Price
D8C	10	10	8	13	4.6	€53.00
D10C	10	10	10	15	4.6	€58.00
E8C	16	16	8	13	6	€74.00
E10C	16	16	10	15	6	€76.00
F8C	25	25	8	13	7	€82.00
F10C	25	25	10	15	7	€82.00
G8C	35	35	8	17	9	€126.00
G10C	35	35	10	17	9	€126.00
H8C	50	50	8	20	10	€155.00
H10C	50	50	10	20	10	€158.00
I8C	70	70	8	22	12	€205.00
I10C	70	70	10	22	12	€205.00
M10C	120	120	10	29	15.2	€440.00
N10C	150	150	8	32	16.5	€367.00

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PANEL ACCESSORIES - Lugs
• Tinned Copper Lugs (Economy)

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TINNED LUGS   ECONOMY RANGE

Code	Cable Size	Ø Hole	Price/100
CT6-H	6sq	M6	€13.00
CT8-H	6sq	M6	€13.00
D6-H	10sq	M6	€14.00
D8-H	10sq	M8	€14.00
D10-H	10sq	M10	€40.00
E8-H	16sq	M8	€18.00
E10-H	16sq	M10	€21.00
F8-H	25sq	M8	€27.00
F10-H	25sq	M10	€30.00
F12-H	25sq	M12	€27.00
G8-H	35sq	M8	€40.00
G10-H	35sq	M10	€40.00
G12-H	35sq	M12	€36.00
H12-H	50sq	M12	€51.00
I10-H	70sq	M10	€84.00
N10-H	150sq	M10	€262.00
N12-H	150sq	M12	€260.00
016-H	185sq	M16	€479.00
P12-H	240sq	M12	€543.00

PIN LUGS

Code	Pin Terminal	Nominal Cross Section Size	Price/100
D1 H	10mm LUG	10(mm²) 10	€24.00
E1 H	16mm LUG	16(mm²) 16	€36.00
F1 H	25mm LUG	25(mm²) 25	€48.00

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PANEL ACCESSORIES - Butt & C Connectors

C CONNECTORS

Code	Wire Range mm²	A	B	Price
GC1	06-06mm²	9	10	POA
GC2	10-10mm²	12	12	POA
GC3	16-16mm²	17	19.5	POA
GC4	25-16mm²	17	19	POA
GC5	25-25mm²	17	20.5	POA
GC6	35-16mm²	20.5	24	POA
GC7	35-35mm²	20.5	26.5	POA
GC8	70-35mm²	26	32	POA
GC9	70-50mm²	24	31	POA
GC10	95-35mm²	29	40.5	POA
GC11	95-70mm²	27	40.5	POA
GC12	95-95mm²	29	41	POA
GC13	120-120mm²	30	45	POA
GC14	150-150mm²	31	45.5	POA
GC15	185-95mm²	31	44.4	POA

BUTT CONNECTORS

Code	Cable Size	L	B	Price/100
C20	6	22mm	3.6mm	€18.00
D20	10	25mm	4.8mm	€33.00
E20	16	27mm	6mm	€37.00
F20	25	29mm	7mm	€45.00
G20	35	36mm	9mm	€82.00
H20	50	37mm	10mm	€102.00
I20	70	39mm	12mm	€132.00
L20	95	43mm	13.5mm	€198.00
M20	120	47mm	15.2mm	€295.00
N20	150	58mm	16.5mm	€414.00
O20	185	64mm	19.2mm	€542.00
P20	240	75mm	21.5mm	€822.00
Q20	300	90mm	23.7mm	€1281.00
R20	400	94mm	27mm	POA
S20	500	98mm	30.3mm	POA
T20	630	105mm	33mm	POA
U20	800	112mm	38mm	POA
V20	1000	120mm	44mm	POA

POWER SPADE TERMINALS 10-70mm²

ⓘ *Suitable for equipment where connection screw is non-removable.*

Code	Wire Range	Ø Screw	CØ	B	L	Price
D106	10mm	6	4.6	11mm	29mm	POA
E106	16mm	6	6	12mm	30mm	POA
F106	25mm	6	7	13mm	33mm	POA
G108	35mm	8	9	17mm	41mm	POA
H108	50mm	8	10	20mm	42mm	POA
I108	70mm	8	12	22mm	50mm	POA

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PANEL ACCESSORIES- Cable Clamps

CABLE CLAMPS - 2 BOLT Ø A STANDARD

Code	Wire Range mm²	Ø A	B	C	D	L	Price
355	10-16mm²	9	16mm	5mm	12.5mm	40mm	POA
356	25mm²	10	17.5mm	5mm	13mm	43mm	POA
357	35mm²	10-12	21mm	5.5mm	15.5mm	49mm	POA
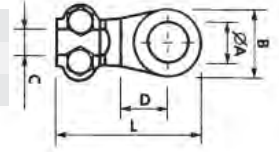
CABLE CLAMPS - 4 BOLT Ø A STANDARD

Code	Wire Range mm²	Ø A	B	C	D	L	Price
358	50mm²	10	21mm	8mm	16mm	56mm	POA
360	75mm²	12	27mm	12mm	17mm	64mm	POA
361	100mm²	12	31mm	12mm	17mm	66mm	POA
362	125mm²	15	33mm	14mm	18mm	71mm	POA
363	150mm²	14	34mm	16mm	19.5mm	75mm	POA
364	175mm²	14	36mm	16mm	21mm	78mm	POA
365	200mm²	16	38mm	18mm	23mm	84mm	POA
366	250mm²	16	41mm	18mm	25mm	93mm	POA
367	300mm²	16-20	46mm	23mm	28mm	103mm	POA
368	400/500mm²	20	52mm	25mm	32mm	116mm	POA
369	700mm²	20	59mm	30mm	34mm	120mm	POA
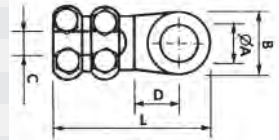
CABLE CLAMPS - 1 BOLT CABLE CLAMP

Code	Wire Range mm²	Ø A	B	L	Price/100
323	06-16 mm²	03-05	24mm	20mm	POA
326	16-50 mm²	06-08	30mm	25mm	POA
329	35-70 mm²	09-12	39mm	30mm	POA
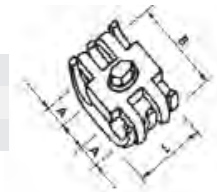
CABLE CLAMPS - 2 BOLT CABLE CLAMP

Code	Wire Range mm²	Ø A	B	L	Price/100
333	06-16 mm²	03-05	24mm	32mm	€293.00
336	25-50 mm²	06-08	31mm	36mm	€408.00
339	35-70 mm²	09-12	40mm	43mm	POA
342	70-95 mm²	12-14	52mm	53mm	€1197.00
344	95-150 mm²	14-16	51mm	53mm	POA
346	150-300 mm²	16-22	70mm	70mm	POA

CABLE CLAMPS - LOZENGE

Code	Wire Range mm	Ø A	B	L	Price
303	7 mm	3	17mm	24mm	POA
304	12 mm	4	20mm	27mm	POA
305	19 mm	5	24mm	30mm	POA
306	28 mm	6	27mm	36mm	POA
307	38 mm	7	31mm	36mm	POA
308	50 mm	8	34mm	41mm	POA
309	63 mm	9	37mm	46mm	POA
310	78 mm	10	40mm	51mm	POA
311	95 mm	11	45mm	60mm	POA
312	113 mm	13	47mm	66mm	POA
313	132 mm	13	50mm	70mm	POA
314	153 mm	14	50mm	70mm	POA

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CRIMPING + CABLE STRIPPING & CUTTING TOOLS

ART. 40 **Price** €87.69

Tool For Ferrules
0.5 - 6mm^2

ART. 53 **Price** €12.96

Hand Tool for Non & Pre Insulated
0.25 - 6mm^2

ART. 41 **Price** €87.68

Tool For Ferrules
6 - 16mm^2

ART. 54 **Price** €75.72

Tool for Pre-Insulated Terminals
0.25 - 6mm^2 with block

ART. 42 **Price** €185.22

Tool for Ferrules
25 - 50mm^2

ART. 57 **Price** €393.79

Tool for Terminals
10 - 120mm^2

ART. 51 **Price** €89.27

Tool for Pre Insulated Terminal
0.5 - 6mm^2

ART. 57 bis **Price** €262.84

Tool for Terminals
10 - 120mm^2

ART. 52 **Price** €70.18

Tool for Non Insulated Terminal
1.5 - 10mm^2

ART. 60 **Price** €70.18

Tool for Pre Insulated Terminal
0.25 - 6mm^2

ART. 52 bis **Price** €70.18

Tools for Non Insulated Terminal
10 - 16mm^2

ART. 61 **Price** €38.42

Tool for Stripping Wires
0.25 - 6mm^2

ART. 61 bis **Price** €41.06

Automatic Tool for stripping wires
0.25-6mm^2

ART. CT 100 **Price** €308.71

Hand Tool for Terminal
25-120mm^2

ART. CT 38 **Price** €193.71

Hand Tool for Terminal
10-50mm^2

ART. RYC 325 **Price** €232.08

Cable Cutting Tool
10 - 300mm^2

ART. 103 T **Price** €42.35

Tool for Ferrules
0.75 - 10mm^2

ART. RYC 500 **Price** POA

Cable Cutting Tool
16 - 50mm

PANEL ACCESSORIES - MCB Busbars, Earth & Neutral Bars

CONNECTING BUSBARS (Tinned Brass)

Code	Rating	Description	Price
PDT15-4	100 AMP	15x4 40 Screws M8x15	€50.34

FLEXIBLE WIRE BRIDGES 10mm² CABLE

Code	Description	Price
1420239 VB	10-90 - 90mm Ferruled Cable Blue	€0.69
1420250 VB	10-90 - 90mm Ferruled Cable Brown	€0.69
1420257 VB	10-280 - 280mm Ferruled Cable Blue	€1.13
1420256 VB	10-280 - 280mm Ferruled Cable Brown	€1.13

DIN RAIL NEUTRAL & EARTH BARS

Code	Description	Price
2020201	7 Way Neutral 7x16	€1.66
2020202	12 Way Neutral 12x16	€2.85
2020203	15 Way Neutral 15x16	€3.23
2020206	7 Way Earth 7x16	€1.66
2020207	12 Way Earth 12x16	€2.85
2020208	15 Way Earth 15x16	€3.23
2020301	Equipotential Insulated Busbar (POT16/25)	€7.26
2020548	19 x 16 sq Earth & Neutral Bar (D1 288MM)	€6.34
2020537	Neutral Bar 170 x 16 sq (1M)	€14.79
1300110	Din Support (NSCHT)	€0.50
1320401	Blanking Strip (1M)	€2.03

Finger Safer Version Now Available in 7/12/15 Way- Neutral, Earth & Grey

STEPPED BUSBAR TERMINALS

Code	Description	Price
18000/121	14x16mm²	€6.26
12901/099	BAR 12x4mm 160A (3P+N)	€24.38
12901/199	BAR 6.5MM x 9mm 63A (3P+N)	€11.29
12901/100	Shroud for 160A	€3.41

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PANEL ACCESSORIES - EB Earth and Neutral Busbar

nVent ERICO

EB EARTH AND NEUTRAL BUSBAR

Code	Material	Description	Connections	D	H	W	Price
568610	Brass	EB 12	12	6mm	13mm	120mm	POA
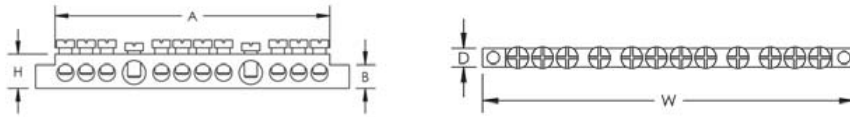
EB EARTH AND NEUTRAL BUSBAR

Code	Material	Description	Connections	D	H	W	Price
568662	Brass	EB 20	20	12mm	13mm	215mm	POA
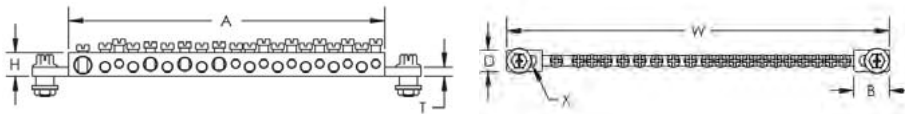
EB EARTH AND NEUTRAL BUSBAR

Code	Material	Description	Connections	D	H	W	Price
568620	Brass/Copper	EB 36	36	15mm	17mm	470mm	POA
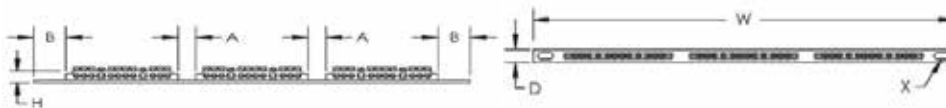
EB EARTH AND NEUTRAL BUSBAR

Code	Material	Description	Connections	D	H	W	Price
568660	Brass	EB 44	44	13mm	13mm	462mm	POA

EB EARTH AND NEUTRAL BUSBAR

Code	Material	Description	Connections	D	H	W	Price
568661	Brass	EB 60	60	13mm	13mm	462mm	POA

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ELECTRICAL EARTH BAR - SINGLE DISCONNECT LINKS

Features

- Provides a convenient, single-point grounding and bonding location
- Busbars with disconnect links allow for convenient testing of the earth termination system
- High conductivity, hard drawn, electrolytic tough pitch copper per EN 13601
- Includes halogen-free polyamide insulators, stainless steel (EN 1.4401) hardware and mounting brackets
- Custom bars can be designed and manufactured to customer specifications

ELECTRICAL EARTH BAR - DOUBLE DISCONNECT LINKS

Features

- Provides a convenient, single-point grounding and bonding location
- Busbars with disconnect links allow for convenient testing of the earth termination system
- High conductivity, hard drawn, electrolytic tough pitch copper per EN 13601
- Includes halogen-free polyamide insulators, stainless steel (EN 1.4401) hardware and mounting brackets
- Custom bars can be designed and manufactured to customer specifications

EQUIPOTENTIAL EARTH BAR EEB SERIES

Size of copper bar: 50mm width x 5 mm thickness. Base (mounting): Galvanised steel profile, width 100mm. Halogen free polyamide insulators. Delivered with nuts, bolts and washers (size M10, spaced 50mm) installed on terminals location.

Code	Description	Terminals	Disconnect Links	L	W	H	Price
EEB04C506D0A	4 WAY Electrical Earth Bars (10mm bolts)	4	0	300	100	94	POA
EEB06C506D0A	6 WAY Electrical Earth Bar (10mm bolts)	6	0	400	100	94	POA
EEB06C506D1A	6 WAY with "Disconnect link " Electrical Earth Bar (10mm bolts)	6	1	475	100	94	POA
EEB06C506D2A	6 WAY Electrical Earth Bar ## With 2 Disconnects ## (10mm bolts)	6	2	550	100	94	POA
EEB08C506D0A	8 WAY Electrical Earth Bars (10mm bolts)	8	0	500	100	94	POA
EEB10C506D0A	10 WAY Electrical Earth Bar (10mm bolts)	10	0	600	100	94	POA
EEB10C506D1A	10 WAY with "Disconnect link " Electrical Earth Bar (10mm bolts)	10	1	675	100	94	POA
EEB12C506D0A	12 WAY Electrical Earth Bars (10mm bolts)	12	1	700	100	94	POA
EEB16C506D0A	16 WAY Electrical Earth Bar (10mm bolts)	16	0	950	100	94	POA
EEB20C506D0A	20 WAY Electrical Earth Bars (10mm bolts)	20	0	1150	100	94	POA
EEB20C506D2A	20 WAY Electrical Earth Bars (10mm bolts) * With 2 Disconnects *	20	2	1225	100	94	POA

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PANEL ACCESSORIES - MCB Busbars, Connection Terminals

Pollmann Elektrotechnik

CONNECTION TERMINALS FOR FORK & PIN TYPES

ⓘ *See Diagrams below.*

Code	Description	Pack	Cross Sect.	Price
2010103	AS/25-GN	30	25 Fork	€1.33
2010201	AS/25-SN (Insulated)	30	25 (Pin)	€1.33
2010302	AS/35-K	50	35 Fork	€1.09
2010402	AS/35-S	50	35 (Pin)	€1.22
2010304	AS/35-M/N	50	35 Fork	€1.49
2010404	AS/F-35-S	50	35 (Pin)	€1.22
2010235	AS/50/SN (Insulated)	25	50 (Pin)	€3.14
2010807	AS-2 x 25-SNK	20	25 (Pin)	€2.51
2010804	AS-3 x 16 SNS	20	16 (Pin)	€2.70
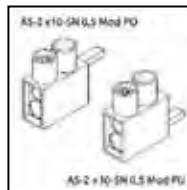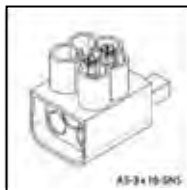
CU-BAR TERMINALS FOR EASY MOUNTING

Code	Description	Pack	Cross Sect.	Price
2010739	SK 16 F 5	100	1.5-16	€0.71
2010740	SK 16 F 10	100	1.5-16	€0.83
2010732	SK 35 F 5	50	1.5-35	€1.01
2010733	SK 35 F 10	50	1.5-35	€1.07
2010727	SK 70 F 5	25	16-70	€1.39
2010734	SK 70 F 10	25	16-70	€2.90
2010709	SK 120 F 5	25	16-120	€4.18

CONNECTING BUSBARS FOR MCBS

Code	Description	Part No.	Price
2210101	Fork Insulated 1P	OB FI 1	€9.81
2220104	Pin Insulated 1P	OB PI 1	€12.36
2213204	Fork Insulated 2P	OB FI 2	€18.99
2223202	Pin Insulated 2P	OB PI 2	€18.46
2213301	Fork Insulated 3P	OB FI 3	€20.13
2223302	Pin Insulated 3P	OB PI 3	€20.72
2213419	Fork Insulated 3P+N	OBFI3+N (L1,N, L2,N, L3,N)	€56.58
2213450	Fork Insulated 3P+N	L1, L2, L3, N, Suitable for 3P+N RCBO's, 4 Pole RCD's	€55.22
2217418	Fork Insulated 4P	MCB's, RCD's 3 x 4 Four Pole MCB's 210mm	€11.60

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PANEL ACCESSORIES - Feed-Through Terminal Blocks
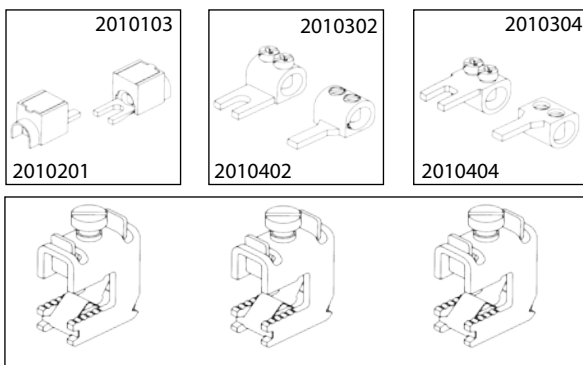
CBD SERIES - SCREW-CLAMP FEED-THROUGH TERMINAL BLOCKS (BEIGE)

ⓘ *(Height x Width x Pitch)*

CBD	H	W	Price	Pitch	End Sect.	Price
2	47	40.5	€0.49	5.5mm	CB2/PT	€0.28
4	52	44	€0.54	6.5mm	CB4/6/PT	€0.37
6	52	44	€0.88	8mm	CB4/6/PT	€0.37
10	55	44	€1.20	10mm	CB10/PT	€0.40
16	57	47	€1.72	12mm	CB16/PT	€0.43
35	60	52	€3.48	16mm	CB35/PT	€0.45
50	62	57	€4.46	18mm	CB50/PT	€0.47
70	71	62	€11.62	20.5mm	CB70/PT	€0.80

ACCESSORIES (BEIGE)

ⓘ *(Height x Width x Pitch)*

CBD	Common Bar	Price	Terms	Shunt/Screw	Price	Colour Partition	Price
2	PMP/01	€2.57	45	CPM/21	€0.44	DFU/1	€0.59
4	PMP/42	€2.85	38	CPM/12	€0.48	DFU/4	€1.02
6	PMP/13	€4.48	31	CPM/83	€0.76	DFU/4	€1.02
10	PMP/04	€4.08	25	CPM/03	€0.53	DFU/4	€1.02
16	PMP/05	€4.25	21	CPM/44	€0.59	DFU/4	€1.02
35	PMP/06	€4.56	16	CPM/06	€0.61	DFU/5	€1.08
50	PMP/07	€5.01	14	CPM/07	€0.78	DFU/5	€1.08
70	PMP/08	€4.67	12	CPM/08	€1.00	DFU/6	€1.24

CBD(Ex)i FEED-THROUGH TERMINAL INTRINSICALLY SAFE (BLUE)

CBD	H	W	Price	Pitch	End Sect.	Price
2(Ex)i	47	40.5	€0.70	5.5mm	CB2/PT(Ex)i	€0.33
4(Ex)i	52	44	€0.82	6.5mm	CB4/6/PT(Ex)i	€0.40
6(Ex)i	52	44	€1.07	8mm	CB4/6/PT(Ex)i	€0.40
10(Ex)i	55	44	€1.36	10mm	CB10/PT(Ex)i	€0.43
16(Ex)i	57	47	€2.07	12mm	CB16/PT(Ex)i	€0.46
35(Ex)i	60	52	€4.79	16mm	CB35/PT(Ex)i	€0.63
50(Ex)i	62	57	€5.15	18mm	CB50/PT(Ex)i	€0.49
70(Ex)i	71	62	€12.77	20.5mm	CB70/PT(Ex)i	€0.85

ACCESSORIES (BLUE)

CBD	Common Bar	Price	Terms	Shunt/Screw	Price	Colour Partition	Price
2(Ex)i	PMP/01	€2.57	45	CPM/21	€0.44	DFU/1	€0.59
4(Ex)i	PMP/42	€2.85	38	CPM/12	€0.48	DFU/4	€1.02
6(Ex)i	PMP/13	€4.48	31	CPM/83	€0.76	DFU/4	€1.02
10(Ex)i	PMP/04	€4.08	25	CPM/03	€0.53	DFU/4	€1.02
16(Ex)i	PMP/05	€4.25	21	CPM/44	€0.59	DFU/4	€1.02
35(Ex)i	PMP/06	€4.56	16	CPM/06	€0.61	DFU/5	€1.08
50(Ex)i	PMP/07	€5.01	14	CPM/07	€0.78	DFU/5	€1.08
70(Ex)i	PMP/08	€4.67	12	CPM/08	€1.00	DFU/6	€1.24

FEED-THROUGH TERMINAL BLOCKS, CBD Series

CBD.2   CBD.4   CBD.6   CBD.10   CBD.16   CBD.35   CBD.50   CBD.70

PANEL ACCESSORIES - Feed-Through Terminal Blocks

◆ cabur®

GPM/BB FEED-THROUGH BAR/BAR TERMINAL (FIXED)

ⓘ *Available in Din Rail Mount + Fixed (Height x Width x Pitch)*

GPM	H	W	Pitch	Price
95/BB Fixed	76mm	176mm	32	€14.94
150/BB Fixed	76mm	*200mm	42	€17.94
240/BB Fixed	84mm	*250mm	52	€25.02

* Fixing distance between center

GPM/BB FEED-THROUGH BAR/BAR TERMINAL (DIN RAIL MOUNT)

ⓘ *(Height x Width x Pitch)*

GPM	H	W	Pitch	Price
95/BB	81mm	176mm	32	€15.81
150/BB	81mm	200mm	42	€19.94
240/BB	89mm	*250mm	52	€33.21

* Fixing distance between center

HIGH CURRENT TERMINAL BLOCKS, GPM SERIES

■ GPM.95/BB	■ GPM.95/BB/FIX	■ GPM.95/BC	■ GPM.95/BC/FIX	■ GPM.95/CC	■ GPM.95/CC/FIX
■ GPM.150/BB	■ GPM.150/BB/FIX	■ GPM.150/BC	■ GPM.150/BC/FIX	■ GPM.150/CC	■ GPM.150/CC/FIX
■ GPM.240/BB	■ GPM.240/BB/FIX	■ GPM.240/BC	■ GPM.240/BC/FIX	■ GPM.240/CC	■ GPM.240/CC/FIX

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PANEL ACCESSORIES - Feed-Through Terminal Blocks
• Drop Link Terminals • Earth Terminals • Double Stack Terminal Accessories • Fuse Terminal

cabur

SCB6 DISCONNECT TERMINAL (DROP LINK)
ⓘ *(Height x Width x Pitch)*

GPM	H	W	Pitch	Price
SCB6	65mm	73mm	8	€3.33

ACCESSORIES (DROP LINK)
ⓘ *Drop link terminals are normally used in conjunction with Current Transformers. For each CT the following components are required.*

·2 No. SCB no.6   ·1 No. SCB PO2
·1 No. SCB 6 PT   ·2 No. SCB 6CPM

Code	Description	Price
SCB/6/PT	End Section • •	€0.70
SCB/6/PO/2	Cross Connection Link •	€1.06
SCB/6/PO/4	Cross Connection Link	€1.02
SCB/6/CPM	Sleeve for Short-Circuit Plate • •	€1.90
PMP/13	Multiple Commoning Bar	€4.48
POF/57	Permanent Cross Section	€1.85
CPM/57	Shunting Screw and Sleeve	€1.09
DFU/6	Coloured Partition	€1.24

EARTH TERMINALS
ⓘ *(End sections/plates also available)*

TEO	H	W	Pitch	Price
TEO.2	47mm	50mm	5.5	€2.05
TEO.4	52mm	50mm	6.5	€2.32
TE.6/0	52mm	47mm	8	€2.83
TE.10/0	55mm	47mm	10	€3.33
TE.16/0	56mm	47mm	12	€4.08
TE.50/0	62mm	57mm	18	€5.94
TE.70/0	70mm	75mm	20.5	€11.80

DOUBLE STACK TERMINAL

Code	A	B	C	D	Pitch	Price
DAS4	64	62	66	70	6	€1.52

ACCESSORIES

Code	Description	Price
DAS/PT	End Section	€0.42
PMP/58	Commoning Bar	€2.45
DFU/7	Colour Partition	€0.90
BTU	End Bracket	€0.87
BT/3	End Bracket	€0.55
PSD/A	Test Plug Socket	€1.75
CPM/01	Shunting Screw & Sleeve	€0.45

SFR/4 FUSE TERMINAL/DISCONNECT

Code	A	B	C	D	Pitch	Price
SFR.4	52	52	60	56	8	€3.30

Code	Description	Price
SF4/PT	End Section	€0.44

PANEL ACCESSORIES - Threaded + Punched Busbar

THREADED BUSBAR

ⓘ *Features Threaded Busbars · Electrolytic copper · Rounded corners · Thickness 5mm · Length 1000mm*

Code	Description	A mm	E mm	P mm	Hole Ømm	Ømm	LTG	Price
549010	TCB 20x5	20	5	17.5	8 x 12	M6	2mt	POA
550220	TCB 20x5	20	5	25	10 x 14	M6	1mt	POA
550230	TCB 32x5	32	5	25	12 x 16	M6	1mt	POA

Threaded Busbar

· Electrolytic Copper
· Rounded Corners
· Thickness 5mm
· Length 1000mm
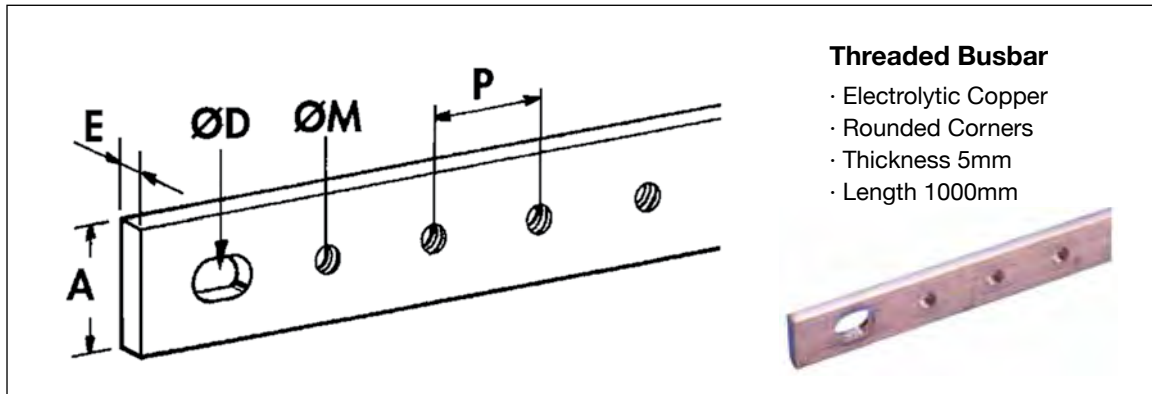
PUNCHED BUSBAR

ⓘ *Features Punched Busbars ·Thickness 5mm · Length 1750mm · Width 25-125mm.*

Code	Description	A mm	B mm	a mm	e mm	ØDmm	Price
550420	DPCB 63x5	63	38	17.5	17.5	10.5	POA

Punched Busbar

· Thickness 5mm
· Length 1750mm
· Width 25-125mm

Universal Connecting Bar CB 7 x 16²-450A

High-conductivity brass material, the connecting bar is quick and easy to install, requiring only two M5 to M10 screws with a pitch from 18 mm to 25 mm. The hexagonal key helps simplify wiring, and the convenient design allows visual inspection of the wire and confirmation of the connection. The high fill ratio allows an output connection with or without a terminal. The connecting bar is a 450A power distribution bar that is designed to be connected to threaded or perforated copper or tinned aluminium busbar. This compact system is only 68mm long and allows for the connection of up to seven 1.5 to 16mm² output cables.

€13.83 Code: 553150

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PANEL ACCESSORIES - Flexible Busbar
• Flexibar

nVent ERICO

FLEXIBAR

Offers advantages over solid bars or cables and lugs in most applications.
It has several advantages, which include space saving, copper saving, time saving and safety.

SPACE SAVING

The adjacent illustration gives an indication of the potential savings in space (and copper) by using Flexibar thanks to it's very small radius of curvature.
Cable HO7 V-K -120mm² - 320mm Long

COPPER SAVING

For the same working temperature, Flexibar can carry a higher current than an equivalent cable. Hence a smaller cross section of conductor can be used, thus using less copper.

TIME SAVING

The simplicity of removal of insulation, the extreme flexibility of Flexibar (even the large cross sections) and the elimination of lugs and crimping tools offer tremendous time savings during installation; particularly if the Eriflex punching tool is used.

SAFETY

By reducing the number of connections, which are the weak points in any electrical circuit, Flexibar offers;

· Better behaviour under short circuit conditions, better electrical efficiency.
· Less potential "Hot Spots"
· Less exposed "Live Parts"

ADMISSIBLE CURRENTS
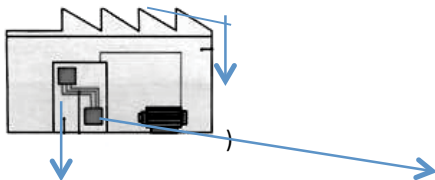
Internal Temperature (T1)
(T2) Temperature of Conductors

This table indicates the temperature rise produced by chosen circuit in the given section. This calculation does not take into account the heat dissipation from the switchgear. **SELECTION OF FLEXIBAR ACCORDING TO THE INTERNAL TEMPERATURE OF THE PANEL.**
Temperature rise of conductor $= T2 - T1 = \Delta T$ (K) With T2 max + 105°

1. Bars of Same Phase - doubled up to increase rating - bars in contact
DE-RATING ON FLEXIBARS 1. Bars of Same Phase - doubled up to increase rating - bars in contact.
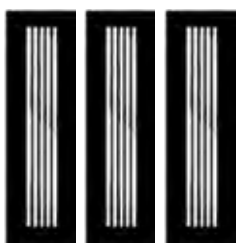
2. AC Three Phase System All phases touching or bound together de-rating factor 0.7.

Example to the left
6 x 32 flexibar would be de-rated to
0.7 x 700 = 490 Amps (for all 3 bars)

R   Y   B
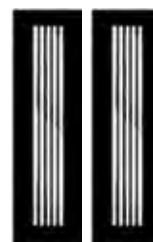
Current Rating = Current Rating for 1 bar x 1.7 x 0.9 Example6 x 32 Flexibar 'Green' rating of 700 Amps. Doubling up this bar as shown above would give total rating of 700 x 1.7 x0.9 = 1071 Amps

If bars are on edge you do not require the 0.9 so rating of above is 700 x 1.7 = 1190 Amps

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PANEL ACCESSORIES - Flexible Busbar

FLEXIBLE BUSBAR 2M LENGTHS

ⓘ *For sizing please refer to technical note on previous page.*

Code	Laminates	Section mm²	70º	60º	50º	40º	30º
552400	8 x 6 x 0.5	24	196	182	166	143	128
552410	3 x 9 x 0.8	21.6	158	147	134	120	104
552420	6 x 9 x 0.8	43.2	290	269	245	220	190
552430	9 x 9 x 0.8	64.8	314	291	265	237	206
552440	3 x 13 x 0.5	19.5	198	184	167	150	130
552450	6 x 13 x 0.5	39	300	277	253	226	196
552390	2 x 15.5 x 0.8	24.8	252	234	212	191	165
552460	4 x 15.5 x 0.5	49.6	380	350	320	286	248
552470	6 x 15.5 x 0.8	74.4	476	440	402	360	318
552480	10 x 15.5 x 0.8	124	538	498	455	407	352
552490	2 x 20 x 1	40	326	300	275	246	214
552500	3 x 20 x 1	60	428	395	360	323	280
552510	4 x 20 x 1	80	476	440	402	360	312
552520	5 x 20 x 1	100	498	460	420	376	326
552530	6 x 20 x 1	120	546	506	462	413	358
552540	10 x 20 x 1	200	762	706	645	576	500
552550	2 x 24 x 1	48	450	416	380	340	295
552560	3 x 24 x 1	72	490	453	413	370	320
552570	4 x 24 x 1	96	550	540	465	416	360
552580	5 x 24 x 1	120	608	563	514	460	398
552590	6 x 24 x 1	144	670	620	566	506	438
552600	8 x 24 x 1	192	802	743	678	606	525
552610	10 x 24 x 1	240	948	877	800	716	592
552620	2 x 32 x 1	64	480	445	406	363	315
552630	3 x 32 x 1	96	570	525	480	430	372
552640	4 x 32 x 1	128	648	600	548	490	425
552650	5 x 32 x 1	160	758	702	640	573	496
552660	6 x 32 x 1	192	846	783	715	640	555
552670	8 x 32 x 1	256	1018	943	860	770	667
552680	10 x 32 x 1	320	1230	1140	1040	930	805
552690	2 x 40 x 1	80	538	500	455	406	352
552700	3 x 40 x 1	120	617	570	522	466	405
552710	4 x 40 x 1	160	727	673	615	550	476
552720	5 x 40 x 1	200	900	832	760	680	590
552730	6 x 40 x 1	240	1018	943	860	770	667
552740	8 x 40 x 1	320	1230	1140	1040	930	805
552750	10 x 40 x 1	400	1400	1295	1181	1055	915
552760	3 x 50 x 1	150	700	650	592	530	460
552770	4 x 50 x 1	200	860	795	727	650	563
552780	5 x 50 x 1	250	1100	1016	930	830	718
552790	6 x 50 x 1	300	1225	1135	1035	925	802
552800	8 x 50 x 1	400	1393	1290	1175	1050	912
552810	10 x 50 x 1	500	1650	1525	1395	1245	1080
552820	3 x 63 x 1	189	798	740	675	603	522
552830	4 x 63 x 1	252	1010	935	855	763	661
552840	5 x 63 x 1	315	1220	1125	1030	920	797
552850	6 x 63 x 1	378	1437	1330	1215	1085	941
552860	8 x 63 x 1	504	1650	1525	1395	1245	1080
552870	10 x 63 x 1	630	1895	1755	1600	1435	1240
552880	3 x 80 x 1	240	980	906	827	740	640
552890	4 x 80 x 1	320	1200	1110	1015	906	785
552900	5 x 80 x 1	400	1390	1285	1175	1050	910
552910	6 x 80 x 1	480	1627	1505	1375	1230	1065
552920	8 x 80 x 1	640	1895	1755	1600	1430	1240
552930	10 x 80 x 1	800	2100	1945	1775	1585	1375
552940	4 x 100 x 1	400	1446	1340	1225	1093	947
552950	5 x 100 x 1	500	1635	1515	1385	1235	1070
552960	6 x 100 x 1	600	1843	1705	1550	1393	1205
552970	8 x 100 x 1	800	2147	1990	1815	1625	1405
552980	10 x 100 x 1	1000	2350	2170	1985	1775	1535
552990	12 x 100 x 1	1200	2500	2315	2115	1890	1636

Due to the volatility of raw material costs prices are subject to change.

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PANEL ACCESSORIES - Flexible Busbar

FLEXIBLE BUSBAR 2M LENGTHS

ⓘ *For sizing please refer to technical note on previous page.*

Code	AMP	Laminates	Outer Dimensions	Price
552400	143	8 x 6 x 0.5	8 x 10	POA
552410	120	3 x 9 x 0.8	6.4 x 13	POA
552420	220	6 x 9 x 0.8	8.8 x 13	POA
552430	237	9 x 9 x 0.8	11 x 13	POA
552440	150	3 x 13 x0.5	5.5 x 17	POA
552450	226	6 x13 x 0.5	7 x 17	POA
552390	191	2 x 15.5 x 0.8	5.6 x 19.5	POA
552460	286	4 x 15.5 x 0.8	7.2 x 19.5	POA
552470	360	6 x 15.5 x 0.8	8.8 x 19.5	POA
552480	407	10 x 15.5 x 0.8	12 x 19.5	POA
552490	246	2 x 20 x 1	6 x 24	POA
552500	323	3 x 20 x 1	7 x 24	POA
552510	360	4 x 20 x 1	8 x 24	POA
552520	376	5 x 20 x 1	9 x 24	POA
552530	413	6 x 20 x 1	10 x 24	POA
552540	576	10 x 20 x 1	14 x 24	POA
552550	340	2 x 24x 1	6 x 28	POA
552560	370	3 x 24 x 1	7 x 28	POA
552570	416	4 x 24 x 1	8 x 28	POA
552580	460	5 x 24 x 1	9 x 28	POA
552590	506	6 x 24 x1	10 x 28	POA
552600	606	8 x 24 x 1	12 x 28	POA
552610	716	10 x 24 x 1	14 x 28	POA
552620	363	2 x 32 x 1	6 x 36	POA
552630	430	3 x 32 x 1	7 x 36	POA
552640	490	4 x 32 x 1	8 x 36	POA
552650	573	5 x 32 x 1	9 x 36	POA
552660	640	6 x 32 x 1	10 x 36	POA
552670	770	8 x 32 x 1	12 x 36	POA
552680	930	10 x 32 x 1	14 x 36	POA
552690	406	2 x 40 x 1	6 x 44	POA
552700	466	3 x 40 x 1	7 x 44	POA
552710	550	4 x 40 x1	8 x 44	POA
552720	680	5 x 40 x1	9 x 44	POA
552730	770	6 x 40 x1	10 x 44	POA
552740	930	8 x 40 x1	12 x 44	POA
552750	1055	10 x 40 x 1	14 x 44	POA
552760	530	3 x 50 x 1	7 x 54	POA
552770	650	4 x 50 x 1	8 x 54	POA
552780	830	5 x 50 x 1	9 x 54	POA
552790	925	6 x 50 x 1	10 x 54	POA
552800	1050	8 x 50 x 1	12 x 54	POA
552810	1245	10 x 50 x 1	14 x 54	POA
552820	603	3 x 63 x 1	7 x 67	POA
552830	763	4 x 63 x 1	8 x 67	POA
552840	920	5 x 63 x 1	9 x 67	POA
552850	1085	6 x 63 x 1	10 x 67	POA
552860	1245	8 x 63 x 1	12 x 67	POA
552870	1435	10 x 63 x 1	14 x 67	POA
552880	740	3 x 80 x 1	7 x 84	POA
552890	906	4 x 80 x 1	8 x 84	POA
552900	1050	5 x 80 x 1	9 x 84	POA
552910	1230	6 x 80 x 1	10 x 84	POA
552920	1430	8 x 80 x 1	12 x 84	POA
552930	1585	10 x 80 x 1	14 x 84	POA
552940	1093	4 x 100 x 1	8 x 104	POA
552950	1235	5 x 100 x 1	9 x 104	POA
552960	1393	6 x 100 x 1	10 x 104	POA
552970	1625	8 x 100 x 1	12 x 104	POA
552980	1775	10 x 100 x 1	14 x 104	POA
552990	1890	12 x 100 x 1	16 x 104	POA

Due to the volatility of raw material costs prices are subject to change.

PANEL ACCESSORIES - Distribution Blocks

SINGLE POLE DISTRIBUTION BLOCKS

Code	Reference	AMPS	H x W x D	Description	Inputs	Outputs	Price
569010	UD 80 A	80	66x27x45	Single Pole Distribution Block 80A	1	6	€9.57
569020	UDJ 125 A	125	75x27x45	Single Pole Distribution Block 125A	2	6	€19.65
569030	UDJ 160 A	160	90x35x50	Single Pole Distribution Block 160A	2	6	€30.96
569040	UD 250 A	250	96x45x50	Single Pole Distribution Block 250A	1	11	€41.71
569050	UD 400 A	400	96x45x50	Single Pole Distribution Block 400A	1	11	€46.09
569060	UD 500 A	500	96x45x50	Single Pole Distribution Block 500A **FOR FLEXIBAR**	1	11	€49.29
569160	FLG 250	250	Direct Link	Direct Link **569160**			€6.67
569170	FLG 400	400	Direct Link	Direct Link**569170**			€6.92

2 & 4 POLE DISTRIBUTION BLOCKS

Code	Reference	Description	AMPS	Length	Price
563900	BD 80/100A	2P /6 HOLE	80-100A	64	€8.78
563910	BD 80/100AL	2P/14 HOLE	80-100A	130	€11.66
563920	TD 80/100A	4P/6 HOLE	80-100A	64	€12.32
563930	TD 80/100AL	4P/10 HOLE	80-100A	100	€17.22
563940	TD 80/100ALL	4P/14 HOLE	80-100A	130	€23.47
563990	TD 160AL	4P/11 HOLE	160A	170	€53.65
563890	TDC 100A	4P DIST BLOCK	100A	98	€21.84

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PANEL ACCESSORIES - Universal Terminal Blocks ETB

Elektro Bečov

ETB TERMINAL BLOCKS

have a large range of connectors (2,5 ÷ 240 mm²) with possible inputs 2, 4, 6. Terminal block with rated cross section 50 mm², we also offer in a 3-pole design. The terminals are composed of an electro-conductive part and insulating cover. Connections can be made with aluminum and copper conductors. Insulating properties ensure the cover made of polyamide (PA).

NEW PRODUCTS

Code	Description	Price
E151110	DIN Rails TH 35x7,5 - 2000 mm, plain, sendzimir	€1.45
E151113	DIN Rails TH 35x7,5 - 2000 mm perforated, sendzimir	€1.55
E451110	DIN Rails TH 35x15 - 2000 mm, plain, sendzimir	€2.90
E451113	DIN Rails TH 35x15 - 2000 mm, perforated, sendzimir	€2.90
ETB 16/1 - UK 1016.21	Universal terminal block 16mm	€2.75
ETB 16/1 - UK 1016.12	Universal terminal block 16mm	€2.75
ETB 16/1 - UK 1016.24	Universal terminal block 16mm	€2.75
ETB 50/1 - UK1050.21	Universal terminal block 50mm	€3.20
ETB 50/1 - UK1050.12	Universal terminal block 50mm	€3.20
ETB 50/1 - UK1050.24	Universal terminal block 50mm	€3.20
ETB 95/1 - UK1095.21	Universal terminal block 95mm	€7.90
ETB 95/1 - UK1095.12	Universal terminal block 95mm	€7.90
ETB 95/1 - UK1095.24	Universal terminal block 95mm	€7.90
ETB 150/1 - UK1151.21	Universal terminal block 150mm	€13.25
ETB 150/1 - UK1151.12	Universal terminal block 150mm	€13.25
ETB 150/1 - UK1151.24	Universal terminal block 150mm	€13.25
ETB 240/1 - UK1240.21	Universal terminal block 240mm	€19.30
ETB 240/1 - UK1240.12	Universal terminal block 240mm	€19.30
ETB 240/1 - UK1240.24	Universal terminal block 240mm	€19.30
ETB 50/1x2 - UK2050.21	Universal terminal block 2x50mm	€7.60
ETB 50/1x2 - UK2050.12	Universal terminal block 2x50mm	€7.60
ETB 50/1x2 - UK2050.24	Universal terminal block 2x50mm	€7.60
ETB 95/1x2 - UK2095.21	Universal terminal block 2x95mm	€15.20
ETB 95/1x2 - UK2095.12	Universal terminal block 2x95mm	€15.20
ETB 95/1x2 - UK2095.24	Universal terminal block 2x95mm	€15.20
ETB 150/1x2 - UK2150.21	Universal terminal block 2x150mm	€20.85
ETB 150/1x2 - UK2150.12	Universal terminal block 2x150mm	€20.85
ETB 150/1x2 - UK2150.24	Universal terminal block 2x150mm	€20.85
ETB 240/1x2 - UK2240.21	Universal terminal block 2x240mm	€38.50
ETB 240/1x2 - UK2240.12	Universal terminal block 2x240mm	€38.50
ETB 240/1x2 - UK2240.24	Universal terminal block 2x240mm	€38.50
ETB 50/1x3 - UK3050.21	Universal terminal block 3x50mm	€13.25
ETB 50/1x3 - UK3050.12	Universal terminal block 3x50mm	€13.25
ETB 50/1x3 - UK3050.24	Universal terminal block 3x50mm	€13.25
ETB 50/L1,L2,L3SE - UK3350.21	Universal terminal block 3x50mm	€13.25
ETB95/1X3 - UK3095.21	Universal terminal block 3x95mm	€21.95
ETB95/1X3 - UK3095.12	Universal terminal block 3x95mm	€21.95
ETB95/1X3 - UK3095.24	Universal terminal block 3x95mm	€21.95
ETB150/1X3 - UK3095.21	Universal terminal block 3x150mm	€36.05
ETB150/1X3 - UK3095.12	Universal terminal block 3x150mm	€36.05
ETB150/1X3 - UK3095.24	Universal terminal block 3x150mm	€36.05
ETB240/1X3 - UK3240.21	Universal terminal block 3x240mm	€47.00
ETB240/1X3 - UK3240.12	Universal terminal block 3x240mm	€47.00
ETB240/1X3 - UK3240.24	Universal terminal block 3x240mm	€47.00

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PANEL ACCESSORIES - Cable To Cable Power

POWER BLOCK SB SERIES
COMPACT POWER BLOCKS WITH SHORT-CIRCUIT CURRENT RATING

- Complete Power Blocks range, from 80A up to 630A IEC® – 85A up to 545A UL®

- Offer multiple connection possibilities with One cable, Two cables or ERICO® FLEXIBAR® and IBSB/IBSBR Power Braid

- Large cross section aluminum/ copper conductor connection

- Offer time saving and reliability

- High current short circuit resistance
  - 100kA SCCR (UL)
  - Ipk up to 51 kA (IEC)

- High voltage values under IEC & UL certification (minimum of 1000V AC/DC)

UL94V-0 Flammability Rating
Halogen Free RoHS Compliant

Gangable

IP20
Finger sale

>95% fill ratio
Allow conductor connection with or without ferrule

Patented design*
includes screw retaining transparent blue cover

Easy fixing
Attaches onto DIN rail with 2-position clip (open/closed) or mounts to panel with screws

Tinned Copper Block
For Copper or Aluminium Cables

Hinged or removable cover

Voltage detection / Measurement

Visual inspection of wire and confirmation of connection
(Patented design*)

POWER BLOCK SB SERIES

Code	Description	Max CSA (mm²)	PSF	Price
561150	POWER BLOCK SB 80	16	GT	€7.59
561158	POWER BLOCK SB 125	35	GT	€11.82
561151	POWER BLOCK SB 160	70	GT	€16.80
561159	POWER BLOCK SB 250	120	GT	€27.81
561152	POWER BLOCK SB 400	240	GT	€44.10
561153	POWER BLOCK SBF 400	240	GT	€41.97
561154	POWER BLOCK SB2C 400	240	GT	€62.24
561155	POWER BLOCK SBF2C 400	2x 120	GT	€62.51
561156	POWER BLOCK SB 630	500	GT	€103.56
561157	POWER BLOCK SBF 630	500	GT	€103.56

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PANEL ACCESSORIES - Flat Tinned Copper Braid

BRAID IN 25M COILS - FLAT TINNED COPPER

Code	Type	Cross Sect.	Ex Dim.mm	No. Strands	Pitch	Amps	Price/mtr
557200	FTCB 15/3	3mm²	5x1	168	32	30	POA
557210	FTCB 15/5	5mm²	8x1	288	54	45	POA
557220	FTCB 15/8	8mm²	8 x 1.5	456	52	65	POA
557230	FTCB 15/10	10mm²	10 x 1.5	576	52	75	POA
557240	FTCB 15/16	16mm²	15 x 1.5	896	90	120	POA
557250	FTCB 15/20	20mm²	20 x 1.5	1120	90	140	POA
557260	FTCB 15/25	25mm²	25 x 1.5	1404	108	150	POA
557270	FTCB 15/30	30mm²	23 x 2	1692	125	180	POA
557280	FTCB 15/35	35mm²	25 x 2.5	1980	125	200	POA
557290	FTCB 15/40	40mm²	25 x 2.5	2272	145	220	POA
557300	FTCB 15/50	50mm²	28 x 3	2848	145	250	POA
557310	FTCB 15/60	60mm²	30 x 3	3392	145	280	POA
557320	FTCB 15/70	70mm²	30 x 3.5	3968	185	290	POA
557330	FTCB 15/75	75mm²	30 x 4	4256	185	300	POA
557340	FTCB 15/95	95mm²	40 x 4	5376	230	340	POA
557350	FTCB 15/100	100mm²	40 x 4	5664	230	360	POA

TINNED COPPER BRAID - LENGTHS

Code	Type	Cross Sect.	Ex Dim.mm	L mm	J mm	ØD	AMPS	Price/Unit
556630	MBJ 16-150-8	1.5mm	16mm²	150	15	8.5mm	120	POA
556640	MBJ 16-200-8	1.5mm	16mm²	200	15	8.5mm	120	POA
556650	MBJ 16-250-8	1.5mm	16mm²	250	15	8.5mm	120	POA
556940	MBJ 16-500-8	1.5mm	16mm²	500	15	8.5mm	120	POA
556680	MBJ 25-150-10	1.5mm	25mm²	150	23	10.5mm	150	POA
556690	MBJ 25-200-10	1.5mm	25mm²	200	23	10.5mm	150	POA
556700	MBJ 25-250-10	1.5mm	25mm²	250	23	10.5mm	150	POA
556950	MBJ 25-500-10	1.5mm	25mm²	500	23	10.5mm	150	POA
556770	MBJ 35-100-10	2.1mm	35mm²	100	23	10.5mm	197	POA
556780	MBJ 35-150-10	2.1mm	35mm²	150	23	10.5mm	197	POA
556790	MBJ 35-200-10	2.1mm	35mm²	200	23	10.5mm	197	POA
556800	MBJ 35-250-10	2.1mm	35mm²	250	23	10.5mm	197	POA
556970	MBJ 35-500-10	2.1mm	35mm²	500	23	10.5mm	197	POA

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PANEL ACCESSORIES - Insulated Braids
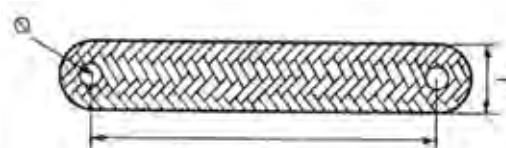
IBSHY INSULATED BRAIDED CONDUCTOR FOR COMPACT CIRCUIT BREAKERS

Suitable for all main 125/160 A electrical devices and specifically molded case circuit breakers

- Resistant to vibration, improving reliability and performance
- Improves assembly flexibility and aesthetics
- Quick and easy installation
- No additional cutting, stripping, crimping and punching needed
- Small wire diameter provides maximum flexibility
- Halogen free solution for applications requiring a low smoke solution
- Conforms to NF EN 45545 obtaining an HL2 classification for chapters R22 and R23
- High working temperature
- ROHS Compliant

IBSHY INSULATED BRAIDED CONDUCTOR FOR COMPACT CIRCUIT BREAKERS

Code	Article No.	Cross Sect.	Length	A	B	C	D	Hole Size 1 HS1	Hole Size 2 HS1	Price
558584	IBSHY32-230	32mm²	230mm	11mm	25mm	3mm	5mm	6.5mm	10.5mm	POA
558586	IBSHY32-330	32mm²	330mm	11mm	25mm	3mm	5mm	6.5mm	10.5mm	POA
558587	IBSHY32-365	32mm²	365mm	11mm	25mm	3mm	5mm	6.5mm	10.5mm	POA
558588	IBSHY32-430	32mm²	430mm	11mm	25mm	3mm	5mm	6.5mm	10.5mm	POA
558589	IBSHY32-500	32mm²	500mm	11mm	25mm	3mm	5mm	6.5mm	10.5mm	POA
558591	IBSHY32-565	32mm²	565mm	11mm	25mm	3mm	5mm	6.5mm	10.5mm	POA
558592	IBSHY32-630	32mm²	630mm	11mm	25mm	3mm	5mm	6.5mm	10.5mm	POA
558593	IBSHY32-700	32mm²	700mm	11mm	25mm	3mm	5mm	6.5mm	10.5mm	POA
558594	IBSHY32-765	32mm²	765mm	11mm	25mm	3mm	5mm	6.5mm	10.5mm	POA
558595	IBSHY32-830	32mm²	830mm	11mm	25mm	3mm	5mm	6.5mm	10.5mm	POA
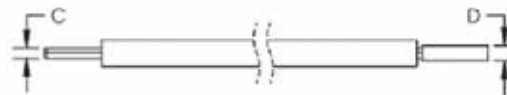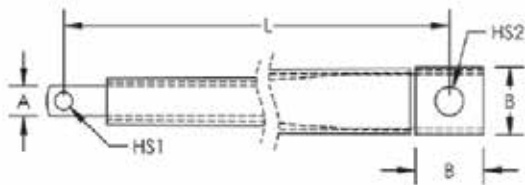
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GROUNDING AND BONDING BRAID, TINNED COPPER WITH HALOGEN FREE & FLAME RETARDANT YELLOW GREEN INSULATION

MBJYG Grounding and Bonding Braids are a reliable and convenient ground solution for applications that require flexibility and durability. Designed with halogen-free and flame retardant Yellow Green insulation, MBJYG braids are made with tinned copper ground braids and solid palms that are ready to install without any additional cutting, stripping, crimping or punching.

MBJYG braids also do not require the addition of tin or crimped lugs and the proprietary manufacturing process helps optimize the electrical contact between each wire and helps eliminate moisture issues in the palms, helping prevent corrosion and extend the useful life of the braid.
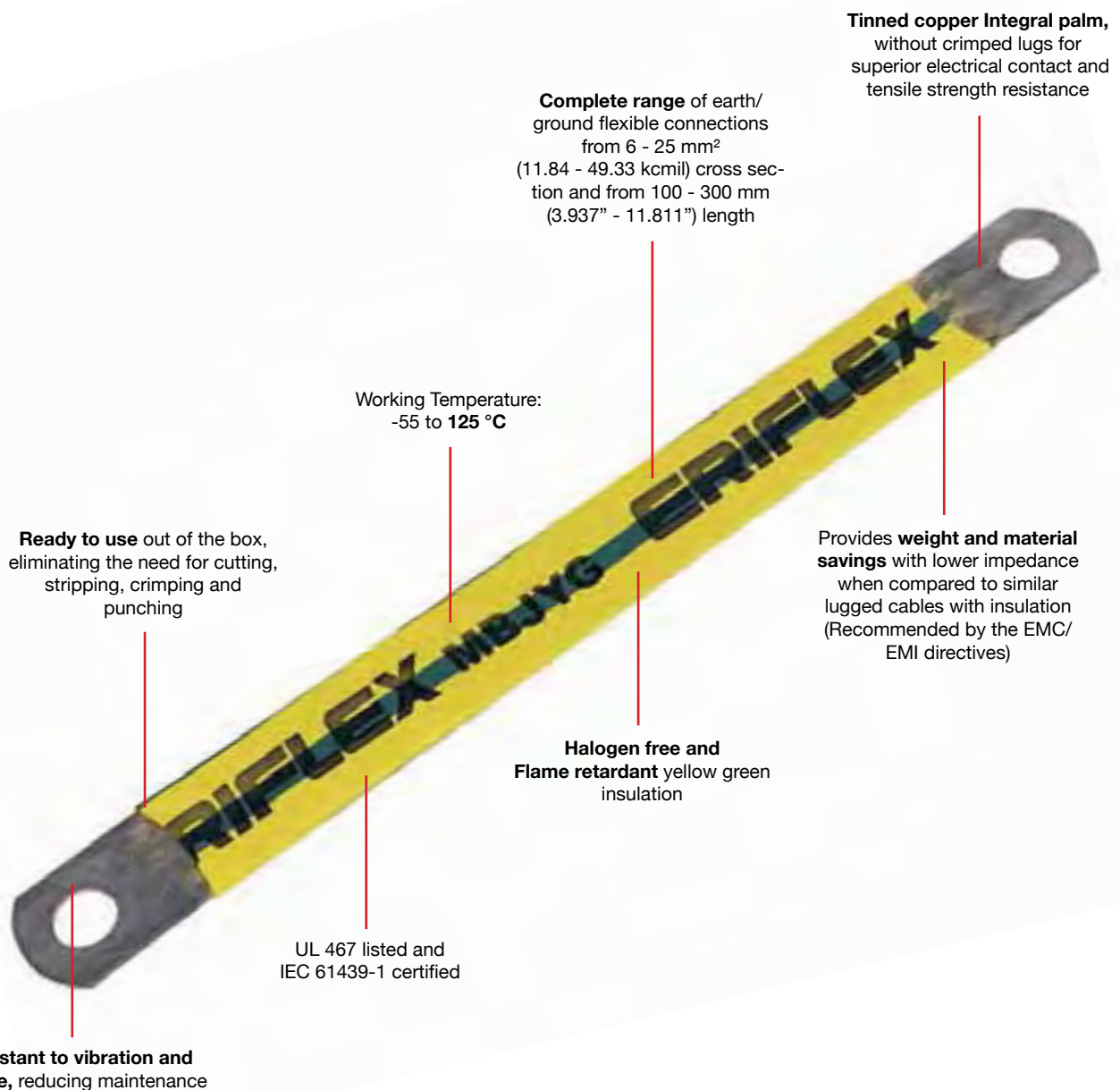
Tinned copper Integral palm, without crimped lugs for superior electrical contact and tensile strength resistance

Complete range of earth/ ground flexible connections from 6 - 25 mm² (11.84 - 49.33 kcmil) cross section and from 100 - 300 mm (3.937" - 11.811") length

Working Temperature: -55 to **125 °C**

Ready to use out of the box, eliminating the need for cutting, stripping, crimping and punching

Provides **weight and material savings** with lower impedance when compared to similar lugged cables with insulation (Recommended by the EMC/ EMI directives)

Halogen free and Flame retardant yellow green insulation

UL 467 listed and IEC 61439-1 certified

Resistant to vibration and fatigue, reducing maintenance

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PANEL ACCESSORIES - Insulated Braids
• Tinned Copper Braids

GROUNDING AND BONDING BRAID, TINNED COPPER WITH HALOGEN FREE
& FLAME RETARDANT YELLOW GREEN INSULATION

Code	Article No.	Current A	Thickness T(mm)	Cross Sect. (mm²)	Length L(mm)	Hole Size HS(mm)	A (mm)	B (mm)	Price
563601	MBJYG6-100 6	40	1,1	6	100	6,5	11	18	POA
563602	MBJYG6-150 6	40	1,1	6	150	6,5	11	18	POA
563603	MBJYG6-200 6	40	1,1	6	200	6,5	11	18	POA
563604	MBJYG6-250 6	40	1,1	6	250	6,5	11	18	POA
563605	MBJYG6-300 6	40	1,1	6	300	6,5	11	18	POA
563606	MBJYG10-100-6	75	1,1	10	100	6,5	11	18	POA
563607	MBJYG10-150-6	75	1,1	10	150	6,5	11	18	POA
563608	MBJYG10-200-6	75	1,1	10	200	6,5	11	18	POA
563609	MBJYG10-250-6	75	1,1	10	250	6,5	11	18	POA
563611	MBJYG10-300-6	75	1,1	10	300	6,5	11	18	POA
563612	MBJYG16-100-8	120	1,5	16	100	8,5	15	20	POA
563613	MBJYG16-150-8	120	1,5	16	150	8,5	15	20	POA
563614	MBJYG16-200-8	120	1,5	16	200	8,5	15	20	POA
563615	MBJYG16-250-8	120	1,5	16	250	8,5	15	20	POA
563616	MBJYG16-300-8	120	1,5	16	300	8,5	15	20	POA
563617	MBJYG25-100-8	150	1,5	25	100	8,5	22	28	POA
563618	MBJYG25-150-8	150	1,5	25	150	8,5	22	28	POA
563619	MBJYG25-200-8	150	1,5	25	200	8,5	22	28	POA
563621	MBJYG25-250-8	150	1,5	25	250	8,5	22	28	POA
563622	MBJYG25-300-8	150	1,5	25	300	8,5	22	28	POA
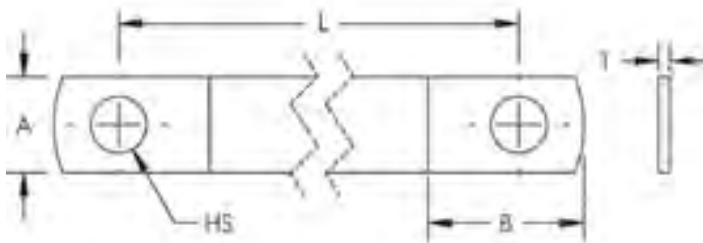
Material: Copper; Polyolefin
Finish: Tinned
Dielectric Strength: 15 kV/mm
Flammability Rating: UL® 224 VW-1
Halogen Free Rating: EN 14582
Nominal Voltage, UL/CSA/IEC: 600 V
Working Temperature: -55 to 125 °C
Complies With: IEC® 60439.1; IEC® 61439.1
Certifications: CE; cULus; RoHS

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PANEL ACCESSORIES - Braided Power Shunts
• Power Shunts

nVent
ERICO

PBC BRAIDED POWER SHUNTS

⚠ *Parallel Configuration.*

Code	Description	Sect. mm²	Single/Double Intensity T30°K	Single/Double Intensity T50°K	A	B	C	L	Price
564000	PBC 100 x 250	100	349 - 600*	462 - 795*	35	40	7,0	250	POA
564050	PBC 100 x 500	100	349 - 600	462 - 795	35	40	7,0	500	POA
564010	PBC 120 x 250	120	385 - 670	511 - 877	35	40	7,5	250	POA
564100	PBC 150 x 250	150	440 - 757	583 - 1003	55	50	8,0	250	POA
564150	PBC 150 x 500	150	440 - 757	583 - 1003	55	50	8,0	500	POA
564200	PBC 200 x 250	200	550 - 946	729 - 1253	55	50	9,0	250	POA
564250	PBC 200 x 500	200	550 - 946	729 - 1253	55	50	9,0	500	POA
564300	PBC 250 x 300	250	651 - 1120	863 - 1484	85	50	10,5	300	POA
564400	PBC 300 x 400	300	716 - 1180	948 - 1565	85	60	11,0	400	POA
564500	PBC 400 x 400	400	853 - 1360	1131 - 1808	85	80	11,0	400	POA
564600	PBC 500 x 400	500	917 - 1561	1216 - 1944	105	100	11,0	400	POA
564700	PBC 600 x 450	600	1101 - 1762	1459 - 2334	105	100	12,0	450	POA
564800	PBC 800 x 450	800	1376 - 2202	1823 - 2917	105	100	15,0	450	POA
564900	PBC 1000 x 450	1000	1651 - 2642	2188 - 3500	105	100	18,0	450	POA
564030	PBC 1200 x 500	1200	1982 - 3170	2626 - 4208	105	120	17,5	500	POA

· Undrilled palms to customer's specific designs, fitted by power press
· Extra-flexible power connections (expansion rings, busbar…)
· Tinned electrolytic copper strand Ø 0.15mm
· When used in parallel, the 2 shunts must be spaced with a minimum distance equal to the thickness of the shunt to allow air cooling.

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PANEL ACCESSORIES - Compact Modular Power Supplies

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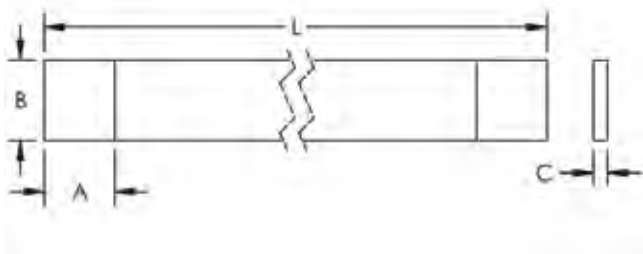
COMPACT MODULAR POWER SUPPLIES

Power supplies are used in virtually all industrial control systems and we have a convenient solution for these applications. The compact design of our primary switched power supply makes them ideal for control of output voltages and current ranges. Units are fully enclosed and designed for rapid installation, both mechanically via din rail mounting, and electrically by connections to removable terminals.

In order to ensure overall system reliability, these power supplies are available with built-in features to ease connection in redundant supply schemes. Versions of the power supplies are available with integral paralleling diodes and failure alarms. All power supplies are designed and 100% tested to ensure reliable operation.

SINGLE PHASE SWITCHING POWER SUPPLY SELECTION GUIDE

Code	H x W x D	Output Voltage	Output Current	Input Voltage	Price
CS 7	80 x 35 x 130mm	12VDC	1A	90-264 Vac/110-370Vdc	€83.98
CSD 15C	90 x 35 x 62mm	24VDC	0.6A	90-264 Vac/110-300Vdc	€62.81
CSD 30C	90 x 71 x 62mm	24VDC	1.2A	90-264 Vac/110-300Vdc	€62.44
CSD 50C	90 x 71 x 62mm	24VDC	2A	90-264 Vac/110-300Vdc	€68.28
CSD 70C	90 x 71 x 62mm	24VDC	3A	90-264 Vac/110-300Vdc	€87.24
CSF 85C	115 x 39 x 128mm	24VDC	3.5A	90-264 Vac/110-300Vdc	€114.91
CSF 120C	115 x 39 x 128mm	24VDC	5A	120-240 Vac/110-370Vdc	€130.20
CSF 240C	118 x 64 x 140mm	24VDC	10A	90-264 Vac/110-300Vdc	€240.39
CSF 500C	127 x 80 x 139mm	24VDC	21A	120-240Vac/300-345Vdc	€397.57

THREE PHASE SWITCHING POWER SUPPLY SELECTION GUIDE

ⓘ *All above power supplies subject to continuous design and spec. modifications, check with our sales department.*

Code	H x W x D	Output Voltage	Output Current	Input Voltage	Price
CSG 06	130 x 90 x 90 mm	24VDC	6A	340-550Vac/507-180Vdc	€245.95
CSG 10	130 x 90 x 90 mm	24VDC	10A	340-550Vac/507-180Vdc	€178.46
CSG 20	130 x 220 x 90 mm	24VDC	20A	340-550Vac/507-180Vdc	€230.95

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REG FARRELL ENGINEERING LTD

PANEL ACCESSORIES - Analog/Digital Meters

A.C. AMMETERS 90° SCALE

AMPS		RQ 48E	RQ 72E	RQ 96E
1-1.5-2.5-4-5A	Direct	€13.52	€13.00	€13.00
6-10-15-25-40-60A	Direct	€13.52	€13.00	€13.00
80-100A	Direct	€13.52	€13.00	€13.00
FOR C.T. 1.-5 A/SEC		€13.52	€13.00	€13.00

D.C. AMMETERS 90° SCALE

AMPS		RQ 72M	RQ 96M
50-250μA		€40.04	€45.75
300-600μA		€40.04	€45.75
1-600mA		€40.04	€45.75
1-1.5-2.5-4-6A	Direct	€29.12	€40.56
10-15-25-40-50-60A	Direct	€29.12	€40.56
On Shunt		€29.12	€40.56

A.C. VOLTMETERS 90° SCALE

VOLTS		RQ 48E	RQ 72E	RQ 96E
40-60-100-150-250-300 V		€15.08	€15.18	€21.84
400-500-600 V		€15.08	€15.18	€21.84
ON V.T. 100-110 V SEC	Direct	€15.08	€15.18	€21.84

D.C. VOLTMETERS 90° SCALE

ⓘ *Voltmeters in range 600V-10kV use potentiometer voltage divider.*

VOLTS	RQ 72M	RQ 96M
60-600mV	€29.12	€45.76
1-600V	€29.12	€45.76

FREQUENCY METERS 90° SCALE

FREQUENCY/HERTZ	RQ 72FI	RQ 96FI
45÷55/55÷65/45÷65Hz	€33.28	€69.12

HOUR RUN METER

Description	RQ 480
100V-220V±15%(50-60Hz)	€15.08
24V-380V±15%(50Hz)	€15.08
12÷80DC	€39.00
48÷110 VC.C	€15.08

DIGITAL (A.C. VOLTAGE CURRENT)

A.C. Voltage/Current	DG3G06C1	Price
INPUT 5amp - 500V Scale 0-8000amp Selectable or 500volt	72 x 36	€97.66

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PANEL ACCESSORIES - Multifunction Meters

EASYCLICK - SMART X96-1

FOR PRICES SEE PAGE 137

A carefully designed new concept that reduces installation time of traditionally wired power meters and current transformers. The "Easy Click" system also reduces the risk of wiring errors and offers higher accuracy due to the class 0.5 Current Transformers and class 0.5 Power Meter. This is the only Plug & Play metering system that offers an overall Class 1 accuracy.

We have utilized low powered secondary outputs on our range of Current Transformers which allows the use of RJ12 connections between Current Transformers and Power Meters. The Power Meters also have a voltage output which allows you to connect up to 32 Meters from one common fused supply. "Easy Click" has been tested and MID certified.

Meters with Multi Circuit capabilities
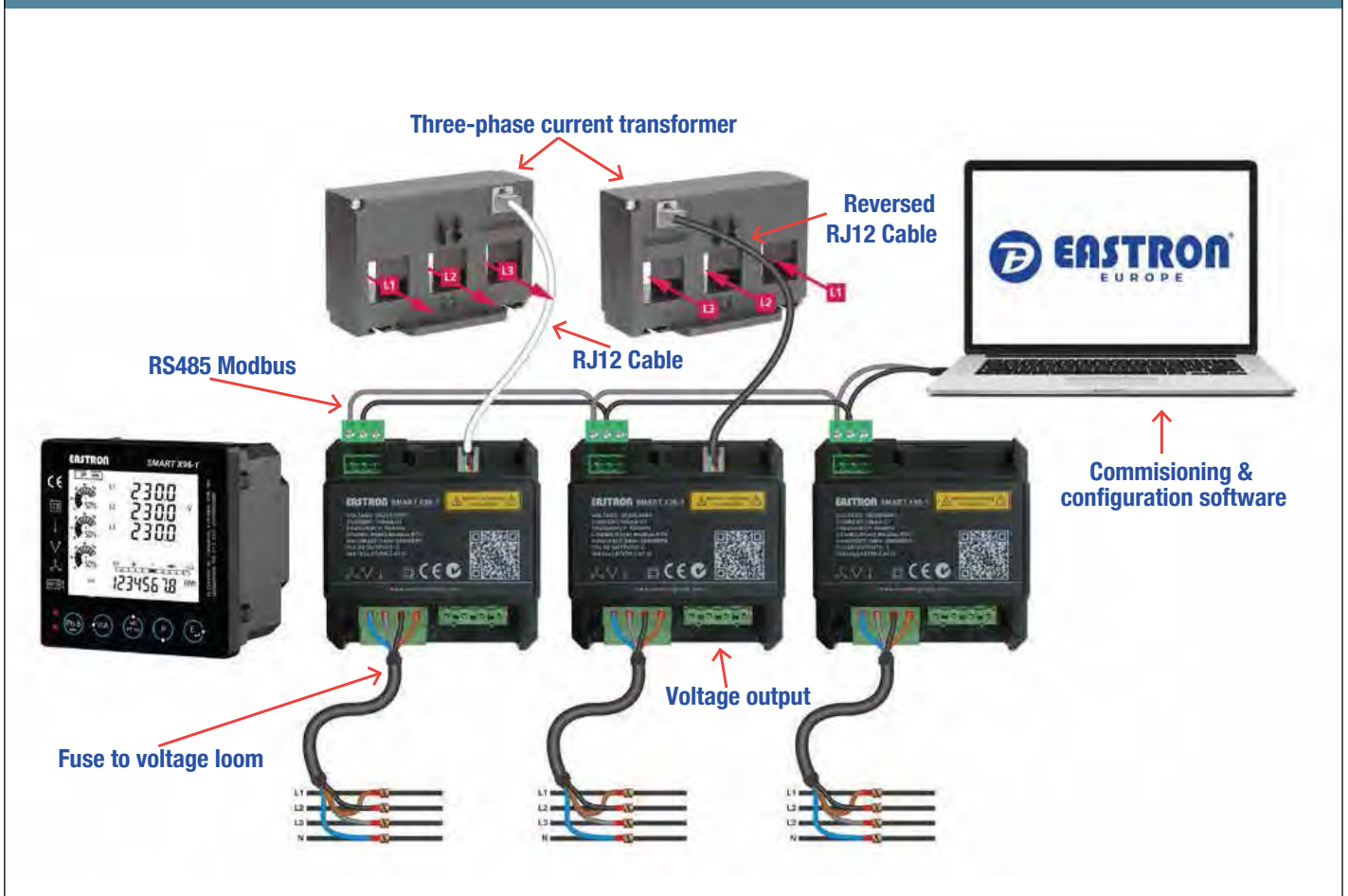
Three-phase current transformer

Reversed RJ12 Cable

RJ12 Cable

RS485 Modbus

Commisioning & configuration software

Voltage output

Fuse to voltage loom

3 year warranty offered on all products.

Eastron Europe launch a new website showcasing the full range of metering solutions - Available from RFE **www.eastroneurope.com**
"A professional Energy Metering Solution Provider"

Multi Click Solution-MCS-D40/50/60 Display & Control Module

FOR PRICES SEE PAGE 137

(MODULAR DESIGN - IDEAL FOR RETROFIT APPLICATIONS)

• Provides centralised data of the MCS-I (current) and MCS-U (voltage) modules
• Works as a data concentrator with 1G memory
• Equipped with an Ethernet port, MCS-D50/60 work as a gateway
• It is the control module to set parameters on MCS-I and MCS-U modules

Multi Click Solution
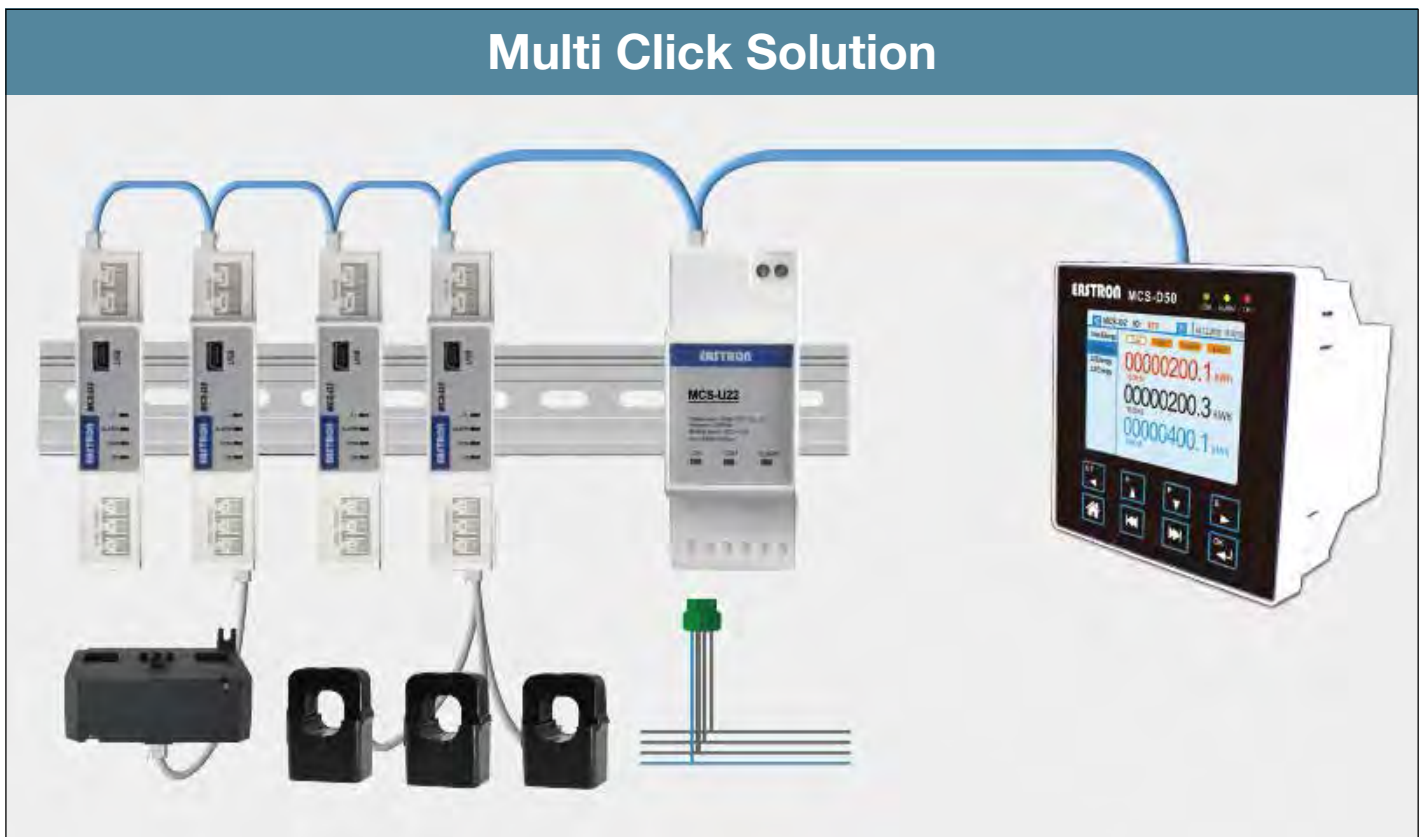
Multi-Click is an intelligent measuring and monitoring solution for power management and distribution. It has been designed and engineered to accommodate new and existing installations. This solution offers centralized measurement data on one display. As the current (A) measurement device (MSC-I) is a 1 module DIN rail mounted enclosure, it reduces the space typically used in a traditional board or panel. The system uses pluggable input and output RJ45 connectors which enables flexibility as well as speed of installation, reducing the labour cost dramatically.

It is a modular based system which allows up to 32 x 3 phase current circuits and 96 x 1 phase current circuits to be measured and monitored. The entire system shares one voltage reference and one common display module. No auxiliary power supply is required.

3 year warranty offered on all products.

Eastron Europe launch a new website showcasing the full range of metering solutions - Available from RFE **www.eastroneurope.com**
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PANEL ACCESSORIES - Multifunction Meters

EASY CLICK & MULTICLICK MULTIFUNCTION METERS

Code	Description	Price
SDM630MCT-RJ	RJ12 100mA CT Operated Single/Three Phase Multifunction Dinrail Meter Modbus & Pulse EASYCLICK	€137.70
SDM630MCT-2L	RJ12 100mA CT Operated Three Phase Multifunction Dinrail Meter Dual Load Modbus EASYCLICK	€151.20
SDM630MCT-3L	RJ12 100mA CT Operated Three Phase Multifunction Dinrail Meter Tri Load Modbus EASYCLICK	€224.88
SDM630MCT-4L	RJ12 100mA CT Operated Three Phase Multifunction Dinrail Meter Quad Load Modbus EASYCLICK	€250.15
SMART-X96-5MID	MID 96mm² Multifunction Power Meter, Panel Mounted MID Approved Class 0.5s Accuracy 5 amp Easy wire	€159.30
SMART X96-1MID	MID 96mm² Multifunction Power Meter, RJ12 Panel Mounted Class 0.5s Accuracy EASY CLICK	€159.30
SMART X96-1EMID	MID 96mm² Multifunction Power Meter, RJ12 100mA Input Panel Mounted Class 0.5s Accuracy, No THD Max Baud Rate 9600, Single Phase Internal Supply (L1 + N) EASY CLICK	€126.90
X96-C2-1.5	Voltage Input Cable. 4*1mm2 cables,one end with male terminal. 1.5M	€28.35
X96-C2-1.0	Voltage Input Cable. 4*1mm2 cables,one end with male terminal. 1.0M	€16.20
X96-C3-1.0	1.0M Meter to Meter loom 4*1mm2 cables,one end with male terminal and another end with female terminal	€26.92
ESCT 325RJ/100	Three phase CT RJ 25 Fast connect Current Transformer 100amp	€28.90
ESCT 325RJ/125	Three phase CT RJ 25 Fast connect Current Transformer 125amp	€29.50
ESCT 325RJ/160	Three phase CT RJ 25 Fast connect Current Transformer 160amp	€29.50
ESCT 335RJ/100	Three phase CT RJ 35 Fast connect Current Transformer 100amp	€28.50
ESCT 335RJ/125	Three phase CT RJ 35 Fast connect Current Transformer 125amp	€28.50
ESCT 335RJ/150	Three phase CT RJ 35 Fast connect Current Transformer 150amp	€28.90
ESCT 335RJ/200	Three phase CT RJ 35 Fast connect Current Transformer 200amp	€29.50
ESCT 335RJ/250	Three phase CT RJ 35 Fast connect Current Transformer 250amp	€29.90
ESCT 345RJ/400	Three phase CT RJ 45 Fast connect Current Transformer 400amp	€31.50
ESCT 345RJ/630	Three phase CT RJ 45 Fast connect Current Transformer 630amp	€34.50
ESCT 370RJ/800	Three phase CT RJ 70 Fast connect Current Transformer 800amp	€53.50
ESCT 370RJ/1000	Three phase CT RJ 70 Fast connect Current Transformer 1000amp	€55.60
ESCT 370RJ/1200	Three phase CT RJ 70 Fast connect Current Transformer 1200amp	€70.75
ESCT 370RJ/1600	Three phase CT RJ 70 Fast connect Current Transformer 1600amp	€73.50
ESCT-T24100/5A	T24 Split Core Current Transformer 100A/150A/200A/250A/300A Ratios -/5A Secondary 1m Fly lead	€35.10
ESCT-T36100/5	T36 Split Core Current Transformer 100,150,200,300,400,500,600A Ratios, 5A Secondary 1m Fly Lead	€40.50

3 year warranty offered on all products.

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PANEL ACCESSORIES - Multifunction Meters

ENERGY METER (RETROFIT) WITH ROGOWSKI COIL

SMART X96-3F with 3 Rogowski Coil
ESCT-RC16/24/36/40

- Multi-function
- LCD with Backlight
- Bi-directional : IMP & EXP
- 2 Pulse Output
- RS485 Modbus RTU
- 1p2w,3p3w,3p4w
- Max current input 600A
- PT operated

Price: €304.40

SMART X96-3F with 3 Rogowski Coil
ESCT-RC100

- Multi-function
- LCD with Backlight
- Bi-directional : IMP & EXP
- 2 Pulse Output
- RS485 Modbus RTU
- 1p2w,3p3w,3p4w
- Max current input 1000A
- PT operated

Price: €378.00

SMART X96-3F with 3 Rogowski Coil
ESCT-RC150

- Multi-function
- LCD with Backlight
- Bi-directional : IMP & EXP
- 2 Pulse Output
- RS485 Modbus RTU
- 1p2w,3p3w,3p4w
- Max current input 5000A
- PT operated

Price: €413.00

SMART X96-3F with 3 Rogowski Coil
ESCT-RC200

- Multi-function
- LCD with Backlight
- Bi-directional : IMP & EXP
- 2 Pulse Output
- RS485 Modbus RTU
- 1p2w,3p3w,3p4w
- Max current input 20000A
- PT operated

Price: €466.50

3 year warranty offered on all products.

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NEMO 96HDLE NETWORK MONITOR FOR LOW VOLTAGE

Price: €185.12

- 3-phase line 80...500V (phase-phase)
- Connection on dedicated CT
- Programmable external CT and VT ratio
- Active energy class 0,5
- Pulse output
- RS485 communication
- Phase sequence correction, diagnostic
- 96x96mm

**Expansion modules & accessories are available to complete additional
  functionalities & features for the NEMO96HD/HDLe**

**For Technical support please contact a member of our sales team,
they will be happy to answer any questions you have.**

**We stock a comprehensive range of Multi-Function Meters
Solutions for electrical measurement, industrial automation & energy management.**

RFE (REG FARRELL ENGINEERING LIMITED)
Unit 19, Oak Road Business Park, Western Ind Est, Dublin12.
Tel: 01 - 465 9010 | Fax: 01- 465 9011 | Web: www.rfe.ie | E-mail: sales@rfe.ie

RFE
*REG FARRELL
ENGINEERING LTD*

NEMO D4E MULTIFUNCTION METER FOR LOW-VOLTAGE NETWORKS, 4 MODULE

The simple solution for DIN rail measurement

To meet the new requirements for electrical measuring the new Nemo D4e multifunctional is the simple solution for DIN rail measurement. Backlit display with 4-line is one of the characteristics of this new meter. Pulse output as standard, on-board RS485 communication complete the instrument's features

- Multifunction
- Display 4 lines
- Pulse output S0
- RS485 Communication

Technical Specifications

Price: €171.60

Line Type:	Three Phase 50Hz...460V (phase-phase)
	Single Phase 50Hz...290V
Input:	From /5A CT
	Direct Voltage 460V
	Nominal Frequency 50 Hz
Aux supply:	Alternate Current: 230 V
Precision Class:	Active Energy Precision (EN/IEC 61557-12): class 1
	Reactive Energy Precision (EN/IEC 61557-12): class 1
Output:	Pulse SO
	RS485 with protocol: Modbus

CONTO D6 ENERGY METER FOR LOW TENSION, 6 MODULE DIRECT 125A

Energy Meter for low tension, 6 module

- Energy meter 125A direct
- Multi-Measurement
- 3 rows display
- 2 tariff
- Pulse output S0 programmable
- RS485 communication

Technical Specifications

Price €305.76

Line Type:	Three-phase with neutral
Input:	Direct 125A
	Direct 3x230/400 +-15%
	Rated Frequency 50 Hz
Aux supply:	Self powered
Precision class:	Active Energy (EN/IEC 62053-21): class 1 Reactive Energy
	(EN/IEC 62053-23): class 2
Output:	Pulse SO
	RS485 with protocol: Modbus

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NEMO 96 EA (NETWORK ANALYSER)

POWER QUALITY ANALYSER
for low and medium voltage networks, 96x96mm

• Multifunction
• 4 lines display
• Harmonics up to the 40th order
• Pulse output S0
• RS485 communication
• Surge
• Network holes
• Network interruptions
• Rapid variations of tensions
• Instability
• Built-in memory (8Mb)
• RTC (Real time clock)
• Expansion modules

The continuous evolution of the electricity grid monitoring systems has consequently changed the market demand for measuring instruments. To meet the new requirements for the measurement of electrical measurements, the multifunction Nemo 96 EA, 96x96 recessed solution for network quality control. Large backlit display with 4-line display, overvoltage, mains holes, network interruptions, rapid variations in voltage and instability are some of the features of the new meter. RS485 communication* and the possibility to add further modules complete the equipment's features. *through the IF96001 communication module supplied*.

NEMO SX

NEMO SX is an autonomous and integrated system, thanks to the type of automatic connection the Nemo SX simplifies the assembly phases and does not require modifications in the existing panels. Its mechanical characteristics allow it to be used with a wide range of protection devices and in all distribution panels and cabinets with DIN35 profiles.

The supervision of the system is ultimately achieved by using any device PC, tablet or smartphone, using the software installed or the internet browser.

MIDAs Evo

Multi Instrument Data Acquisition Software
MIDAS Evo is the solution for those looking for a complete system for energy monitoring of the systems where there are installed Nemo models. The system is fully configurable, in fact, you can view in real time all the measurements read by the instruments, perform historical reporting of daily, monthly and annual rates preset by the user and alerts you by email to be always at the correct operating current of own plant

• Reports & Graphs
• Schedule and Tariff levels
• Software and alarms via email
• Web Service Server

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REG FARRELL ENGINEERING LTD

PANEL ACCESSORIES
• Residual Current Device • Toroidal Current Transformer
• Open Core Current Transformers • Transducers

IME

EARTH LEAKAGE RELAY

Code	Auxiliary	Price
RDIAF13	230V with Harmonic Filter	€114.40
RDIEP13	230V with Harmonic Filter & Alarm	€157.04

TOROIDAL CURRENT TRANSFORMER

Code	Passing Cable	Working Current	Price
TDG A2	28mm	80A	€34.32
TDG B4	35mm	150A	€37.65
TDG C4	80mm	300A	€51.17
TDG D4	110mm	600A	€58.86
TDG E4	140mm	1200A	€111.28

OPEN CORE TOROIDAL CURRENT TRANSFORMER

Code	Passing Cable	Working Current	Price
TDA A4	110mm	600A	€180.02
TDA B4	150mm	1200A	€232.65
TDA C2	300mm	2000A	€538.72

AC TRANSFORMER WITH BUILT-IN TRANSDUCER

Code	Price
TTIB	€120.74

MODULAR KW/HR METER

⚠ **Current Transformer required*

Code	Description	Price
CE20195A2	1 Phase 2 MOD Kwh meter 63A Whole Current	€85.80
CE4DT14A2	3 Phase 4 MOD Kwh meter** CT's	€171.606
CE4DT06A2	3 Phase 4 MOD whole current meter 63A	€205.92
CE6DT1252	3 Phase 6 MOD Whole Current Kwh Meter125A	€305.76

2 MOD TRANSDUCERS

Code	Description	Auxiliary	Input	Price
TM3U370	Voltage Transducer	230VAC	0-250V	€125.84
TM3U390	Voltage Transducer	230VAC	0-400V	€125.84
TM3F330	Current Transducer	230VAC	0-5A	€125.84

Output
• 0.. 5/0. ...10/0. 20/4-20 mA
• 0.. 5/0. ...10/2.... 10V selectable

5A			
✳ 100-115V	✚ 500-600V	115V(I) E/ & 230V(H)	
✳ 230-400V	0÷5mA	47÷63Hz(<4VA)	
✳ 440V	0÷10mA	SELF SUPPLIED	
	◆ 4÷20mA	★ √ 3	

PANEL ACCESSORIES - Low Voltage Current Transformers (CT's)
• Current Transformers for Cables & Bar

CT with primary winding (Primary currents: 5...600A)

CT with cable/ passing bar (Primary currents: 40...8000A)

Open core CT (Primary currents: 60...5000A)

CURRENT TRANSFORMERS FOR CABLE AND BAR

	TA221	TA327	TA432	TAI500	TA540
Cable Ø	Ø21	Ø27	Ø32		Ø40
Window	20.5 x 10.5	25.5 x 15.5 32.5 x 10.5	25.5 x 25.5 32.5 x 20.5 40.5 x 10.5	51x12.5	40.5 x 20.5 50.5 x 12.5
50 - 60 - 80 A	€13.45				
100 -120A	€13.45		€16.16		
150 A	€13.45	€14.76			
200 A		€14.76	€16.16		
250 A		€16.16			
300 A		€17.47	€20.13		
400 A		€17.47	€20.13	€23.51	€20.13
500 A				€25.82	
600 A		€18.79	€22.83	€25.82	€22.83
800 -1000 A			€28.14	€26.85	€26.85

CURRENT TRANSFORMERS FOR CABLE AND BAR

ⓘ *Technical Specification for each product can be downloaded from our website www.rfe.ie*

	TAS 64	TAS 80	TAS 81	TAS 84
Window	64x11	82x32	81x11	34x84
Bar	63x10 2x50x10	2x80x10 3x80x6	80x10 2x63x10	2x80x10 3x80x5
150 A				€40.04
200 A	€17.47	€37.75		€40.04
250 A	€17.47	€37.75		€40.04
300 A	€17.47	€37.75		€40.04
400 A	€18.60	€43.16		€40.04
500 - 600 A	€21.70	€43.16	€20.28	€40.04
800 - 1000 A	€21.70	€48.88	€24.13	€26.42
1200 - 1600 A	€26.05	€62.92	€40.46	€30.37
2000 - 2500 A		€62.92	€40.46	€30.37

PANEL ACCESSORIES - Low Voltage Current Transformers (CT's)
• Current Transformers for Cables & Bar • Wound Primary CT • Split Core Current Transformer (Also Available)

IME

CURRENT TRANSFORMERS FOR CABLE AND BAR
ⓘ *Technical Specification for each product can be downloaded from our website www.rfe.ie*

	TAS 125/P		TAS127	TAU 8/81P		TAU 9/91P		TAU10/101P		TAU11/111P	
Window Bar	127x54		38x127	55x165		55x165		120x125		120x165	
	3x125x10		2x125x10	3x160x10		3x160x10		6x125x10		6x160x10	
	3x100x10		2x100x10	2x160x16 8		2x160x16 8		3x125x20		3x160x20	
	125	125 P	127	8	81 P	9	91 P	10	101P	11	111P
400 - 500 A	€75.40	€143.52	€43.68								
600 A	€75.40	€143.52	€43.68								
800 A	€75.40	€143.52	€43.68								
1000 A	€75.40	€143.52	€43.68	POA	POA	POA	POA	POA	POA	POA	POA
1200-1500 A	€75.40	€143.52	€43.68	POA	POA	POA	POA	POA	POA	POA	POA
2000-2500 A	€75.40	€143.52	€53.04	POA	POA	POA	POA	POA	POA	POA	POA
3000-4000 A	€100.88	€165.36	€53.04	POA	POA	POA	POA	POA	POA	POA	POA
5000-6000 A						POA	POA	POA	POA	POA	POA
8000 A									POA		
10000 A								POA	POA		

PRIMARY WOUND C.T'S

AMPS	TAQ2
5-10-15-20-25A	€28.97
30-40-50-60A	€28.97
80-100-120A	€28.97
150-200-250A	€28.97
300A	€28.97

Measurement class
Classes 0.5/1 recommended for measuring power.
electricity and cosφ
Class 3 to be used for current measures on ammeters only.

Performance (VA)
This represents the maximum load that can be connected to the secondary terminals of the CT.
The load consists of the self consumption of the measurement instrument + adsorption of the cables connecting the CT and the instrument. This latter depends on the length and cross-section of the cable. For the functioning of a certain measurements class, the maximum load must always be lower or equal to the performance / rated class of the CT.

The following is a table for calculating the absorption of the cables connecting the CT and the instrument

Power absorbed (VA) by the cables connecting the CT and the instrument		
cross section mm² copper	*VA per meter of bipolar cable at 20°C	
	secondary 5A	secondary 1A
1	1	0.04
1.5	0.685	0.0274
2.5	0.41	0.0164
4	0.254	0.0102
6	0.169	0.0068
10	0.0975	0.0039
16	0.062	0.0025

* The VA absorbed by the connection cables rises 4% for every 10% variation in the temperature.

CT/5A or CT/1A?
From the table shown above, it can be seen that using the same cross section the CT/1A absorbs 25 times less than the CT/5A because of the very long sections (≥20m). You are advised to choose a CT/1A so as to reduce the section and relative cost of the cables as well as ensuring more precise reading.

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ITALFARAD LOW VOLTAGE POWER FACTOR CORRECTION UNITS

Industrial plants with inductive loads that vary greatly throughout normal everyday operation will require automatic P.F. equipment in order to connect the necessary capacitive power to correct the issue of "Power Factor".

WHY SHOULD POWER FACTOR BE IMPROVED?

Reduced utility charges

Thermal capacity considerations force the Utilities to overbuild its distribution system in order to serve a facility with low power factor. The Utilities require the customer to install capacitors for reducing the reactive energy.

Increased system capacity

The thermal capacity of generators, transformers and cables limit the kVA that can be supplied by the system. Reducing the KVAR demand from existing load by installing capacitors, allows additional load to be added to the system.

Improved voltage

High demand of reactive power increases the voltage drops across transformers, cables and other system components. The result is a decreased nominal voltage. The voltage drops can be limited by increasing the power factor.

Reduced losses

Since current is reduced in direct proportion to the increase in power factor, the resistive losses, in the circuit, are inversely proportional to the power factor. The increase of power factor allows a losses reduction with substantial benefits for the system.

SELECT YOUR SOLUTION

Standard PFC equipment (XS Series)

Suitable equipment for installations with low harmonic pollution and without risk of harmonic resonance.

Detuned PFC equipment (A Series)

Suitable equipment for all the installations, even with high harmonic pollution.

Send us your Utility Bills and we will calculate what Power Factor Correction equipment is required

AUTOMATIC POWER FACTOR CORRECTION
• Regulators PQA (Rental)

REGULATORS

The PFCevo automatic power factor control unit has been designed to offer state-of-the-art functions for power factor compensation applications. Built with dedicated components and extremely compact, the PFCevo combines the modern design of the front panel with practical installation and the possibility of expansion from the rear, where one expansion module can be slotted. The LCD screen provides a clear and intuitive interface to the user.

• Automatic power factor controller.
• Flush-mount, standard 96x96mm housing.
• Backlit LCD screen.
• 5 relays, expandable to 7 max.
• 4 navigation keys for function and settings.
• Alarm messages in 6 languages.
• Expansion bus modules:RS485, USB communications interface. Additional relay outputs.
• High accuracy TRMS measurements.
• Wide selection of electrical measures, including voltage and current THD with harmonic analysis up to 15th order.
• Voltage input separated from power supply, suitable for VT connection in medium voltage applications.
• Wide-range power supply (100-440VAC).
• Front optical programming interface: galvanically isolated, high speed, waterproof, USB dongle compatible.
• 2-level password protection for settings.
• Backup copy of original commissioning settings.
• Built-in temperature sensor.

RENTAL SCHEME: Power Quality Analyzer
For measuring and recording Mains Parameters in Compliance with EN50160

The **PQA824** provides a solution, with an innovative approach to meet the needs of professional technical departments and testers as regards measuring and recording generic single-phase and three-phase electric mains parameters, further to solving typical problems of the industrial sector (mains quality, power supply switching, PC network faults, non-linear circuit analysis, system correction, motor starting, etc.). Models are provided with a wide TFT graphic color display (320x240 pxl) with "touch screen". The user interface has identification icons which provide a simple and intuitive selection method of internal parameters. Each instrument allows displaying the parameters in multiple numeric and graphic modes for an easy harmonic analysis. The graphic function "Vector diagram" also allows immediately evaluating the reciprocal phase displacement between the input voltage and current signals, thus defining the nature of loads. The high-capacity internal memory of each model, approx. 15Mbytes, allows saving the data of all recordings for a high number of consecutive days (approx. 1 month with 251 quantities selected and integration period of 15 minutes), but the memory of each instrument is extensible, at all times, by inserting external Compact Flash memories and also by transferring data onto USB memory sticks for a practical management of the saved data.

Send us your Utility Bills and we will calculate what
Power Factor Correction equipment is required

AUTOMATIC POWER FACTOR CORRECTION
• Powerfactor Correction Units

POWERFACTOR CORRECTION UNITS "XS" SERIES 415 VOLT THDI<50%

Type	Steps	Steps Size [Kvar]	Load-Break Switch A	PFC CTR.	CAB. Type W x D x H	Weight Kg	Power Ue = 415V [Kvar]	Trade Price
PFS/XS 16,5	7	2.4-4.8-9.6	63	PFC96evo	460x215x480	14	16.5	POA
PFS/XS 19	4	4.8-4.8-9.6	63	PFC96evo	460x215x480	15	19	POA
PFS/XS 24	5	4.8-9.6-9.6	63	PFC96evo	460x215x480	16	24	POA
PFS/XS 29	6	4.8-4.8-9.6-9.6	80	PFC96evo	610x215x480	23	29	POA
PFS/XS 38,5	8	4.8-4.8-9.6-19.2	100	PFC96evo	610x215x480	27	38.5	POA
PFS/XS 48	5	9.6-9.6-9.6-19.2	100	PFC96evo	610x215x480	31	48	POA
PFM/XS 68	14	4.8-9.6-14.4-19.2-19.2	125	PFC96evo	420x380x920	47	68	POA
PFM/XS 82	17	4.8-9.6-14.4-19.2-33.6	250	PFC96evo	420x380x920	51	82	POA
PFM/XS 97	10	9.6-19.2-28.8-38.4	250	PFC96evo	420x380x920	54	97	POA
PFM/XS 117	12	9.6-19.2-38.4-48	250	PFC96evo	420x380x1140	60	117	POA
PFM/XS 146	15	9.6-19.2-38.4-76.8	400	PFC96evo	420x380x1140	69	146	POA
PFM/XS 165	9	19.2-38.4-38.4-67.2	400	PFC96evo	420x380x1360	78	165	POA
PFM/XS 194	10	19.2-38.4-57.6-76.8	400	PFC96evo	420x380x1360	88	194	POA
PFL/XS 242	11	24-24-48-48-48-48	630	PFC144evo	610x610x1760	260	242	POA
PFL/XS 291	10	28.8-28.8-57.6-57.6-57.6-57.6	630	PFC144evo	610x610x1760	280	291	POA
PFL/XS 339	10	33.6-33.6-67.2-67.2-67.2-67.2	800	PFC144evo	610x610x1960	320	339	POA
PFL/XS 388	10	38.4-38.4-76.8-76.8-76.8-76.8	800	PFC144evo	610x610x1960	340	388	POA
PFL/XS 436	10	43.2-43.2-86.4-86.4-86.4-86.4	1250	PFC144evo	610x610x2160	380	436	POA
PFL/XS 485	10	48-48-96-96-96-96	1250	PFC144evo	610x610x2160	400	485	POA
PFL/XS 533	10	52.8-52.8-105.6-105.6-105.6-105.6	1250	PFC144evo	610x610x2360	440	533	POA
PFL/XS 582	10	57.6-57.6-115.2-115.2-115.2-115.2	1250	PFC144evo	610x610x2360	460	582	POA
PFL/XS 678	10	67.2-67.2-134.4-134.4-134.4-134.4	2x800	PFC144evo	1200x610x1960	640	678	POA
PFL/XS 775	10	76.8-76.8-153.6-153.6-153.6-153.6	2x800	PFC144evo	1200x610x1960	680	775	POA
PFL/XS 872	10	86.4-86.4-172.8-172.8-172.8-172.8	2x1250	PFC144evo	1200x610x2160	730	872	POA
PFL/XS 969	10	96-96-192-192-192-192	2x1250	PFC144evo	1200x610x2160	780	969	POA
PFL/XS 1066	10	105.6-105.6-211.2-211.2-211.2-211.2	2x1250	PFC144evo	1200x610x2360	830	1066	POA
PFL/XS 1163	10	115.2-115.2-230.4-230.4-230.4-230.4	2x1250	PFC144evo	1200x610x2360	880	1163	POA

POWERFACTOR CORRECTION UNITS "A" (DETUNED) SERIES 415 VOLT THDI<70%

Type	Steps	Steps Size [Kvar]	Load-Break Switch A	PFC CTR.	CAB. Type W x D x H	Weight Kg	Power Ue = 415V [Kvar]	Trade Price
PFM/A 22	8	2.7-2.7-5.4-10.8	125	PFC96evo	420x380x920	47	22	POA
PFM/A 33	6	5.4-5.4-10.8-10.8	125	PFC96evo	420x380x920	57	33	POA
PFM/A 43	8	5.4-5.4-10.8-21.6	125	PFC96evo	420x380x1140	74	43	POA
PFM/A 54	10	5.4-5.4-10.8-10.8-21.6	250	PFC96evo	420x380x1140	78	54	POA
PFM/A 65	6	10.8-10.8-21.6-21.6	250	PFC96evo	420x380x1140	100	65	POA
PFM/A 75	7	10.8-21.6-21.6-21.6	250	PFC96evo	420x380x1360	112	75	POA
PFM/A 86	8	10.8-10.8-21.6-21.6-21.6	250	PFC96evo	420x380x1360	126	86	POA
PFL/A 118	11	10.8-21.6-43.2-43.2	250	PFC144evo	610x610x1760	240	118	POA
PFL/A 161	15	10.8-21.6-43.2-43.2-43.2	400	PFC144evo	610x610x1760	280	161	POA
PFL/A 194	9	21.6-43.2-43.2-86.4	400	PFC144evo	610x610x1760	300	194	POA
PFL/A 237	11	21.6-43.2-86.4-86.4	630	PFC144evo	610x610x1760	325	237	POA
PFL/A 280	13	21.6-43.2-43.2-86.4-86.4	630	PFC144evo	610x610x1960	365	280	POA
PFL/A 323	15	21.6-43.2-86.4-86.4-86.4	800	PFC144evo	610x610x1960	385	323	POA
PFL/A 365	17	21.6-43.2-43.2-86.4-86.4-86.4	800	PFC144evo	610x610x2160	415	365	POA
PFL/A 409	19	21.6-43.2-86.4-86.4-86.4-86.4	1250	PFC144evo	610x610x2160	445	409	POA
PFL/A 452	21	21.6-43.2-43.2-86.4-86.4-172.8	1250	PFC144evo	610x610x2360	475	452	POA
PFL/A 495	23	21.6-43.2-86.4-86.4-86.4-172.8	1250	PFC144evo	610x610x2360	505	495	POA
PFL/A 538	25	21.6-43.2-43.2-86.4-172.8-172.8	2x630	PFC144evo	1220x610x1960	775	538	POA
PFL/A 603	7	86.4-172.8-172.8-172.8	2x800	PFC144evo	1220x610x1960	800	603	POA
PFL/A 689	8	86.4-86.4-172.8-172.8-172.8	2x800	PFC144evo	1220x610x1960	860	689	POA
PFL/A 775	9	86.4-172.8-172.8-172.8-172.8	2x800	PFC144evo	1220x610x2160	920	775	POA
PFL/A 861	10	86.4-86.4-172.8-172.8-172.8-172.8	2x800	PFC144evo	1220x610x2160	980	861	POA
PFL/A 947	11	86.4-172.8-172.8-172.8-172.8-172.8	2x1250	PFC144evo	1220x610x2360	1040	947	POA
PFL/A 1033	12	86.4-172.8-172.8-172.8-172.8-259.2	2x1250	PFC144evo	1220x610x2360	1100	1033	POA

**Please note: Price on Application, talk to our technical sales team
and find out how to avoid wattless charges on your bill**

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REG FARRELL ENGINEERING LTD

AUTOMATIC POWER FACTOR CORRECTION
• Powerfactor Correction Units

ITALFARAD

POWERFACTOR CORRECTION UNITS "S" SERIES 415 VOLT THDI<35%

Type	Steps	Steps Size [Kvar]	Load-Break Switch A	PFC CTR.	CAB. Type W x D x H	Weight Kg	Power Ue = 415V [Kvar]	Trade Price
PFS/S 11	7	1,6-3,2-6,4	63	PFC96evo	460x215x480	12	11	POA
PFS/S 16	5	3,2-6,4-6,4	63	PFC96evo	460x215x480	13	16	POA
PFS/S 22	7	3,2-6,4-12,8	63	PFC96evo	460x215x480	14	22	POA
PFS/S 25	4	6,4-6,4-12,8	63	PFC96evo	460x215x480	15	25	POA
PFS/S 30	19	1,6-3,2-6,4-6,4-12,8	80	PFC96evo	610x215x480	22	30	POA
PFS/S 32	5	6,4-12,8-12,8	100	PFC96evo	460x215x480	16	32	POA
PFS/S 38	6	6,4-6,4-12,8-12,8	100	PFC96evo	610x215x480	23	38	POA
PFS/S 45	7	6,4-12,8-12,8-12,8	100	PFC96evo	610x215x480	24	45	POA
PFS/S 51	8	6,4-6,4-12,8-25,6	100	PFC96evo	610x215x480	27	51	POA
PFS/S 58	9	6,4-12,8-12,8-25,6	125	PFC96evo	610x215x480	29	58	POA
PFS/S 65	5	12,8-12,8-12,8-25,6	160	PFC96evo	610x215x480	31	65	POA
PFM/S 91	14	6,4-12,8-19,2-25,6-25,6	250	PFC96evo	420x380x920	47	91	POA
PFM/S 110	17	6,4-12,8-19,2-25,6-44,8	400	PFC96evo	420x380x920	51	110	POA
PFM/S 130	10	12,8-25,6-38,4-51,2	400	PFC96evo	420x380x920	54	130	POA
PFM/S 155	12	12,8-25,6-51,2-64	400	PFC96evo	420x380x1140	60	155	POA
PFM/S 168	13	12,8-25,6-51,2-76,8	400	PFC96evo	420x380x1140	65	168	POA
PFM/S 194	15	12,8-25,6-51,2-102,4	400	PFC96evo	420x380x1140	69	194	POA
PFM/S 220	9	25,6-51,2-51,2-89,6	500	PFC144evo	420x380x1360	74	220	POA
PFL/S 258	10	25,6-25,6-51,2-51,2-51,2-51,2	630	PFC144evo	610x610x1760	260	258	POA
PFL/S 322	10	32-32-64-64-64-64	800	PFC144evo	610x610x1760	280	322	POA
PFL/S 388	10	38,4-38,4-76,8-76,8-76,8-76,8	800	PFC144evo	610x610x1760	300	388	POA
PFL/S 452	10	44,8-44,8-89,6-89,6-89,6-89,6	1250	PFC144evo	610x610x1960	320	452	POA
PFL/S 517	10	51,2-51,2-102,4-102,4-102,4-102,4	1250	PFC144evo	610x610x1960	340	517	POA
PFL/S 582	10	57,6-57,6-115,2-115,2-115,2-115,2	1250	PFC144evo	610x610x2160	380	582	POA
PFL/S 646	10	64-64-128-128-128-128	2x800	PFC144evo	1200x610x1760	552	646	POA
PFL/S 711	10	70,4-70,4-140,8-140,8-140,8-140,8	2x800	PFC144evo	1200x610x1760	574	711	POA
PFL/S 775	10	76,8-76,8-153,6-153,6-153,6-153,6	2x800	PFC144evo	1200x610x1760	600	775	POA
PFL/S 840	10	83,2-83,2-166,4-166,4-166,4-166,4	2x1250	PFC144evo	1200x610x1960	620	840	POA
PFL/S 904	10	89,6-89,6-179,2-179,2-179,2-179,2	2x1250	PFC144evo	1200x610x1960	640	904	POA
PFL/S 969	10	96-96-192-192-192-192	2x1250	PFC144evo	1200x610x1960	660	969	POA
PFL/S 1033	10	102,4-102,4-204,8-204,8-204,8-204,8	2x1250	PFC144evo	1200x610x1960	680	1033	POA
PFL/S 1098	10	108,8-108,8-217,6-217,6-217,6-217,6	2x1250	PFC144evo	1200x610x2160	700	1098	POA
PFL/S 1163	10	115,2-115,2-230,4-230,4-230,4-230,4	2x1250	PFC144evo	1200x610x2160	720	1163	POA

Please note: Price on Application, talk to our technical sales team and find out how to avoid wattless charges on your bill

CAPACITORS - Motor Run + Motor Start Capacitors

MOTOR RUN CAPACITORS RPN-2

ⓘ *Equipped with simple 6.3mm faston terminals. PLASTIC CAPS (ALL Ø'S)*

Code	UF	DIA.Ø	Height	Price
1MF	1	*28	56	€4.20
1.5MF	1.5	*28	56	€4.63
2MF	2	*28	56	€4.85
2.5MF	2.5	*28	56	€5.17
3.15MF	3.15	*28	56	€5.71
4MF	4	*28	56	€6.03
5MF	5	*28	56	€6.46
6.3MF	6.3	32	56	€6.76
7MF	7	30	56	€7.32
8MF	8	32	56	€7.86
10MF	10	36	58	€8.51
12.5MF	12.5	36	70	€9.58
14MF	14	36	70	€10.02
15MF	15	36	70	€10.98
16MF	16	36	70	€11.63
18MF	18	40	68	€12.27
20MF	20	40	68	€13.14
25MF	25	40	93	€14.42
30MF	30	40	93	€17.00
35MF	35	45	93	€19.27
40MF	40	45	93	€20.46
45MF	45	50	93	€21.75
50MF	50	50	93	€24.76
55MF	55	50	93	€24.76
60MF	60	50	118	€25.19
70MF	70	50	118	€25.83
80MF	80	55	122	€26.92
90MF	90	55	122	€27.45
100MF	100	60	122	€28.31

MOTOR START CAPACITORS

Code	UF	V	DIA.Ø	Height	Price
40/50MF	40-50	330	46	85	€10.44
50/63MF	50-63	330	46	85	€10.87
63/80MF	63-80	330	46	85	€11.51
80/100MF	80-100	330	46	85	€12.49
100/125MF	100-125	330	46	85	€13.34
125/160MF	125-160	330	46	85	€13.67
160/200MF	160-200	330	46	85	€15.82
200/250MF	200-250	330	46	85	€17.54
250/315MF	250-315	330	46	85	€18.41
315/400MF	315-400	250	46	85	€18.83
400/500MF	400-500	250	46	85	€19.35

CAPACITORS - 3Phase Power Factor Capacitors
• Automatic Power Factor Correction Equipment

ITALFARAD

3PHASE POWER FACTOR CAPACITORS

Code	Power Kvar	Voltage	Dmm	Hmm	Price
TCC2	2	440	55	165	€42.64
TCC3	3	440	65	205	€46.28
TCC4	4	440	65	205	€49.82
TCC5	5	440	65	205	€71.14
TCC7.5	7.5	440	75	247	€64.06
TCC10	10	440	85	247	€75.92
TCC12.5	12.5	440	85	285	€84.24
TCC15	15	440	85	360	€88.92
TCC20	20	440	85	360	€107.95
TCC25	25	440	100	360	€120.12
TCC30	30	440	100	360	€140.57
TCC40	40	450	136	285	€177.84

WHY SHOULD POWER FACTOR BE IMPROVED

REDUCED UTILITY CHARGES

Thermal capacity considerations force the Utilities to overbuild its distribution system in order to serve a facility with low power factor. The Utilities force the customer to install capacitors for reducing the reactive energy.

INCREASED SYSTEM CAPACITY

The thermal capacity of generators, transformers and cables limit the kVA that can be supplied by the system. Reducing the KVAR demand from existing load by installing capacitors, allows additional load to be added to the system.

IMPROVED VOLTAGE

High demand of reactive power increases the voltage drops across transformers, cables and other system components. The result is a decreased utilization voltage.
The voltage drops can be limited by increasing the power factor.

REDUCED LOSSES

Since current is reduced in direct proportion to the increase in power factor, the resistive losses, in the circuit, are inversely proportional to the power factor. The increase of power factor allows a losses reduction with substantial benefits for the system.

TO DISCUSS YOUR REQUIREMENTS PLEASE CONTACT
AN EXPERIENCED MEMBER OF SALES TEAM TODAY.

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REGULATORS - Automatic Power Factor Control Units

POWERFACTOR CORRECTION ELECTRONIC REGULATOR

Code	Description	Price
PFC96EVO	5 steps expandable up-to 7 PF Regulator	€180.80
PFC144EVO	8 steps expandable to 10/12 PF Regulator (see next page)	€310.65

PFC96EVO

The PFCevo automatic power factor control unit has been designed to offer state-of-the-art functions for power factor compensation applications. Built with dedicated components and extremely compact, the PFCevo combines the modern design of the front panel with practical installation and the possibility of expansion from the rear, where one expansion module can be slotted. The LCD screen provides a clear and intuitive interface to the user.

- Automatic power factor controller.
- Flush-mount, standard 96x96mm housing.
- Backlit LCD screen.
- 5 relays, expandable to 7 max.
- 4 navigation keys for function and settings.
- Alarm messages in 6 languages.
- Expansion bus modules:RS485, USB communications interface. Additional relay outputs.
- High accuracy TRMS measurements.
- Wide selection of electrical measures, including voltage and current THD with harmonic analysis up to 15th order.
- Voltage input separated from power supply, suitable for VT connection in medium voltage applications.
- Wide-range power supply (100-440VAC).
- Front optical programming interface: galvanically isolated, high speed, waterproof, USB dongle compatible.
- 2-level password protection for settings.
- Backup copy of original commissioning settings.
- Built-in temperature sensor.

PFC96EVO - TECHNICAL CHARACTERISTICS

Supply	
Rated voltage: 100÷440 Vac 45÷66 Hz – 110÷250 Vdc	
Power consumption/dissipation: -2,5 W – 7,0 VA – 110÷250 Vdc	
Immunity time for microbreakings: <25 mS	

Voltage inputs	
Maximum rated voltage: 600 Vac – 45÷66 Hz 110÷250 Vdc	
Measuring method: TRMS	
Wiring mode: Single-phase, two-phase, three-phase with or without neutral or balanced three-phase system	

Current inputs	
Rated current: 1A or 5A	
Measuring method: True RMS	
Overload capacity: +20% Ie	
Power consumption: <0,6VA	

Relay output: out 1-4	
Contact type: 4x1 NO + common contact	
Rated current: AC1-5A 250 Vac AC15-1,5A 440 Vac	
Maximum current at contact common: 10A	

Relay output: out 5	
Contact type: 1 changeover	
Rated current: AC1-5A 250Vac AC15-1,5A 440Vac (only NO)	

Insulation voltage	
Rated insulation voltage: 600 Vac	
Rated impulse withstand voltage Uimp: 9,5 KV (only NO)	

Ambient operating conditions	
Operating temperature: -20°C +60°C	
Storage temperature: -30°C +80°C	

Connections	
Terminal type: Plug-in / removable	
Cable cross section (min…max): 0,2…2,5 mm2 (24÷12 AWG)	

Case	
Version: Flush mount	
Material: Polycarbonate	
Protection degree: IP54 on front – IP20 terminals	
Peso: 350 g	

Certifications	
Standards: IEC/EN 61010-1, IEC/EN 61000-6-2 IEC/EN 61000-6-4 UL508 e CSA C22.2-N	

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REGULATORS - Automatic Power Factor Control Units

REGULATOR PFC144EVO

The PFCevo automatic power factor control unit has been designed to offer state-of-the-art functions for power factor compensation applications. Built with dedicated components and extremely compact, the PFCevo combines the modern design of the front panel with practical installation and the possibility of expansion from the rear, where one expansion module can be slotted. The LCD screen provides a clear and intuitive interface to the user.

- Flush-mount, standard 144x144mm housing.
- Backlit LCD screen.
- 8 relays, expandable to 12 max.
- 5 navigation keys for function and settings.
- Alarm messages in 6 languages.
- Expansion bus modules: RS485, USB communications interface. Additional relay outputs.
- High accuracy TRMS measurements
- Wide selection of electrical measures, including voltage and current THD with harmonic analysis up to 15th order.
- Voltage input separated from power supply, suitable for VT connection in medium voltage applications.
- Wide-range power supply (100-440VAC).
- Front optical programming interface: galvanically isolated, high speed, waterproof, USB dongle compatible.
- 2-level password protection for settings
- Backup copy of original commissioning settings.
- Built-in temperature sensor.

PFC144EVO - TECHNICAL CHARACTERISTICS

Supply	
Rated voltage: 100÷440 Vac 45÷66 Hz – 110÷250 Vdc	
Power consumption/dissipation: -2,5 W – 7,0 VA	
Immunity time for microbreakings: <25 mS	
Voltage inputs	
Maximum rated voltage: 600 Vac 45÷66 Hz	
Measuring method: True RMS	
Wiring mode: Single-phase, two-phase, three-phase with or without neutral or balanced three-phase system	
Current inputs	
Rated current: 1A or 5A	
Measuring method: True RMS	
Overload capacity: +20% Ie	
Power consumption: <0,6VA	
Relay output: out 1-7	
Contact type: 7x1 NO + contact common	
Rated current: AC1-5A 250 Vac AC15-1,5A 440 Vac	
Maximum current at contact common: 10A	

Relay output: out 8	
Contact type: 1 changeover	
Rated current: AC1-5A 250Vac AC15-1,5A 440Vac	
Insulation voltage	
Rated insulation voltage: 600 Vac	
Rated impulse withstand voltage Uimp: 9,5 KV	
Ambient operating conditions	
Operating temperature: -20°C +60°C	
Storage temperature: -30°C +80°C	
Connections	
Terminal type: Plug-in / removable	
Cable cross section (min…max): 0,2…2,5 mm2 (24÷12 AWG)	
Case	
Version: Flush mount	
Material: Polycarbonate	
Protection degree: IP65 on front with gasket – IP20 terminals	
Peso: 640 g	
Certifications	
Standards: IEC/EN 61010-1, IEC/EN 61000-6-2 IEC/EN 61000-6-4 UL508 e CSA C22.2-N°14	

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legrand

CABLE TRAY

PVC Cable Trays for large cable installations in industrial facilities, hospitals, airports, shopping centres, households etc. Very high resistance to most commonly used chemical and aggressive agents and virtually maintenance free. Cut and damaged edges do not corrode in adverse atmospheric conditions.

PERFORATED CABLE TRAYS (Standard Length 3m)

Code	Dimensions W x H	Price/M
Q45502	100 x 50	€10.35
Q45503	150 x 50	€13.02
Q45702	100 x 75	€11.79
Q45703	150 x 75	€15.30
Q45504	200 x 50	€15.81
Q45505	300 x 50	€24.34
Q45104	200 x 100	€27.14
Q45105	300 x 100	€35.85

TRUNKING (2 Mtr Lengths)

Code	A	B	Price/M
SC 12-50	12	50	€6.33
SC 18-75	18	75	€10.82
SC 20-92	20	92	€16.04

COVERS (Standard Length 3m)

Code	Dimensions W	Price/M
Q45002	100	€6.81
Q45003	150	€9.13
Q45004	200	€11.70
Q45005	300	€15.44

COUPLERS

Code	Height	Length	Price/M
Q45400L	50	275	€2.65
Q45800L	75	275	€2.79
Q45400	50	300	€3.06
Q45902	100	450	€19.15

CABLE TRAY ACCESSORIES
Available on Request.

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CABLE ENTRY SYSTEMS EMC CABLE SHIELDING
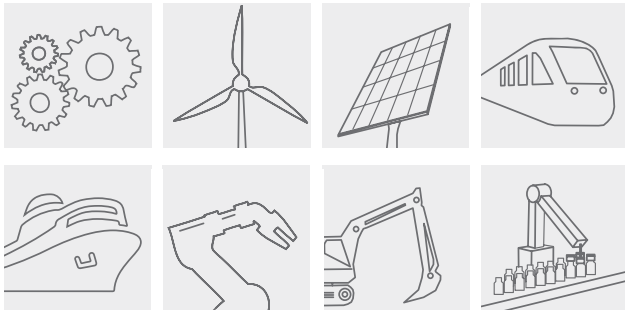
INDUSTRIES

• Mechanical / Electrical
• Wind Turbines / Energy
• Solar / Photovoltaics
• Railway
• Food / Beverage / Pharma
• Automation / Robotics

Cable entry systems & cable glands
for pre-terminated cables

Cable entry plates
for cables without connectors

Strain relief
& cable management
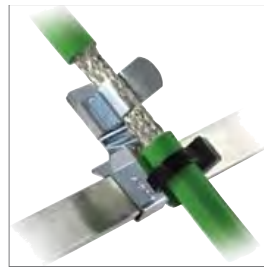
EMC cable clamps
EMI shielding & earthing components

CONFiX
Cable conduit system

Enclosure accessories

ATEX cable entry
for use in hazardous areas

icotek TOOLS
Hand hydraulic punch driver & knockout punches

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CABLE MANAGEMENT AND SYSTEMS

icotek

CABLE ENTRY SYSTEMS & CABLE GLANDS FOR PRE-TERMINATED CABLES

The patented cable entry systems enables the user to enter, seal and provide strain relief for pre-terminated and standard cables. The split system of the metric cable glands KVT and QVT enables a tool-free, quick and easy assembly which is great for retrofitting and maintenance.

The key feature of icotek's patented systems is the split frame and split grommets which provide quick, convenient and cost effective routeing of pre-terminated and standard cables. The split frame and split grommets alleviate the need to cut and rewire pre-terminated cables. Therefore, cable warranties are unaffected. Cables, pipes and conduits with various diameters can be routed due to large variety of split grommets. When assembled correctly, the split grommets are held tightly within the frame. Correctly sizing the grommet to the cable diameter ensures a high degree of protection (up to IP65 / NEMA 4X) and provides strain relief.

Advantages
- Certified protection class up to IP65 / NEMA 4X
- Warranty of pre-terminated cables remains
- Quick and easy assembly
- Retrofitting and maintenance can be carried out easily and quickly
- High packing density, wide variety
- Suitable for industrial standard and metric cut-outs
- Strain relief according to EN 62444
- Vibration proof

Split grommets

CABLE ENTRY PLATES FOR CABLES WITHOUT CONNECTORS

With the membrane based cable entry plates standard cables with diameters from 1.5 to 22 mm can be quickly routed into control cabinets, panels or machines and be sealed with protection class up to IP68 / NEMA 4X. In comparison to traditional solutions such as standard cable glands the packing density is greatly increased. This combined with a reduction of required space make the icotek solution a great choice.

For routeing supply lines with diameters of up to 115 mm icotek offers innovative pyramid shaped cable entry grommets which are perfectly flexible for feeding rigid supply cables at angles with very little effort.

Advantages
- Space saving shape
- Certified protection class up to IP68 / NEMA 4X Rugged design
- Very high strain relief
- High packing density
- Assembly within seconds
- Suitable for standard and metric cut-outs
- Hygienic design - flat and smooth surface
- Halogen free, silicone free

Membrane on front

Conical shape on back provides additional sealing and strain relief

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STRAIN RELIEF & CABLE MANAGEMENT

Whenever cables, wires, hoses or conduits with diameters up to 20 mm have to be fixed, routed or strain relieved the icotek strain relief plates are used. With just one component you can route and strain relieve up to 12 of these lines, in static or dynamic applications.

Fixation of the cables is achieved by using standard cable ties. The undercut on the comb shaped profile provides secure strain relief according to EN 62444.

Compared to conventional metal or plastic cable clamps the icotek strain relief plates are a much more flexible and cost-effective solution. Because of the different variations of mounting rail and screw type assemblies, the system can be used for organising and securing cables e.g. in machines, switch cabinets, control panels or dynamic drag chains.

Advantages
- Simple assembly
- Cost-effective
- High packing density
- Vibration proof
- Universal usage

Increased packing density due to distance bushings

Also available with inlay bushing in brass / aluminum

EMC CABLE CLAMPS - EMI SHIELDING & EARTHING COMPONENTS

For process measurement and control equipment, an increasingly higher level of protection against failure is required. EMI shielding and earthing is very important. The area where the cable shield is connected to the earth is a critical point. It is very important that the connection has a low resistance. The EMC cable clamps offers a large contact area to the cable shield (see figure A). In comparison to conventional shielding brackets up to 50% higher contact area can be achieved when using the SKL line (see figure B). The specified clamping range can be exceeded up to 10%.

SKL shield clamps are available for several mounting types i.e. screwing them on metal plates or mounting them on DIN rails or bus bars. Properly sized and used in conjunction with cable ties, many EMC cable shielding products provide strain relief in accordance with EN 62444.

Advantages
- Optimal contact of cable shielding
- Permanent and continuous spring pressure on the cable shield, adjustment of spring load not necessary
- Large variety of assembly methods
- Many types with integrated strain relief
- Vibration proof, maintenance free
- Simple and mostly tool-free assembly
- High packing density possible

Standard solution:

icotek solution:

Fig. A: Conventional systems

Fig. B: SKL-line 50% larger contact area

CONFIX CABLE CONDUIT SYSTEM

IP54 | RoHS compliant | Made in Germany

The 90° angled conduit fitting CONFiX FWS is perfect for installation of parallel corrugated cable protection conduits, e.g. in machines, control panels or control cabinets. The liftable cover is tightly fixed by a hinge to the mounting box. Therefore, the system is very easy to handle. Corrugated conduits CONFiX WS for cable routing are used where cables have to be protected from mechanical damage or certain weather conditions. In addition, icotek offers split corrugated conduits CONFiX WST for routing pre-terminated cables and corresponding conduit clips CONFiX SH.

ENCLOSURE ACCESSORIES

c(UL)us | up to IP64 | up to NEMA 12 | HL3 EN 45545-2 | RoHS compliant | Made in Germany

For assembly of cable entry systems and EMC products icotek offers many useful accessories as well as helpful cable management components. Flanged plates with cut outs e.g. for enclosures as well as base plates for switch cabinets make work much easier by far. 10 x 3 mm bus bars and many more clever solutions like cable ties with hook-and-loop fastener that can be opened and closed numerous times as well as suitable holders and more round up our portfolio.

ATEX CABLE ENTRY

⟨Ex⟩ | c(UL)us | up to IP68 | up to NEMA 4X | GL | HL3 EN 45545-2 | ECOLAB certified | RoHS compliant | Made in Germany

For use in potentially explosive atmospheres, icotek offers a wide range of cable entry systems for zones G (gas) and D (dust) in equipment group II, category 2 + 3, certified to the ATEX directive. The icotek cable entry systems comply with the EU Directive 94/9/EC (ATEX) for equipment and protective systems intended for use in potentially explosive atmospheres of zones 1, 2, 21 and 22.

ICOTEK TOOLS - PUNCH DRIVER & KNOCKOUT PUNCHES

icotek now offers a small-sized hand hydraulic punch driver without hose which allows quick and easy punching of rectangular, square or round holes into stainless steel, mild steel, aluminium and plastics. The holes fit exactly the cut-out dimensions of most icotek cable entry systems. When you have to punch several holes, this hand hydraulic punch driver is much faster than manual wrench-style punches. Additionally, icotek offers round knockout punches for cut-outs, M16 - M63 as well as rectangular and square punches and dies, for cut-out sizes of 10 16 and 24 multi-pin industrial connectors and for cut-outs 46 x 46 mm and 46 x 112 mm.

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INSTALLATION EQUIPMENT - Street Lighting
• Fuse Units • Isolator Units • Extension Boxes
• LED Lamp/Gear Tray (Specifically Designed for Street Lighting)

STREET LIGHTING CUT OUTS

Description	Price
F72 Fuse Unit Cut Out	€33.49
F144 CUT OUT	€25.58
IP 4 Earth Plate F 144	€13.87
F344-3 Phase Adaptor Box	€14.04
EP 5/25 Earth Plate	€15.81
LST Fuse 6-25A	€2.29
F244DL 2 Pole Cut Out C.W Earth Block	€51.39

LED LAMPS - LED RETROFIT LAMP (PRICE AVAILABLE ON APPLICATION)

Description

CE0038 38/100Watt c/w driver Specifically designed for Street Lighting
RF036 Lamp - 36Watt - Designed for Street Lighting *No Driver*

• Providing instant energy savings up to 60%
• 7 Year Warranty
• Direct replacement for 70W SON & Metal halide lamps

RETROFIT LED GEAR TRAYS

Retrofit Gear Trays are designed to fit in a wide range of street light Heads.
Contact a member of our technical sales team to discuss your requirements.

Product	Description	Price
119W LED Gear Tray	119watt LED Gear Tray to fit 300mm square plate – output 14147 lumens	POA
24W LED Gear Tray	24watt LED Gear Tray to fit URBIS Albany Post Top Lantern – 70watt SON Equlv	POA
48W LED Gear Tray	48watt LED Gear Tray to fit URBIS Albany Post Top Lantern – 100watt SON Equlv	POA
48W LED Gear Tray 150	48watt LED Gear Tray to fit URBIS Albany Post Top Lantern – 150watt SON Equlv	POA
72W LED Gear Tray	72watt LED Gear Tray to fit 200mm square plate – output 10508 lumens	POA

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INSTALLATION EQUIPMENT - Cable Joint Kits

• Cable Jointing

globalresins ltd

CABLE JOINTING KITS - STRAIGHT / BRANCH

• Easy to install, click together moulds
• Fully insulated mechanical connectors up to 50mm²
• Other mechanical connectors up to 400mm²
• Complete range of joints from 0.75-400mm²
• Available on both straight and branch formats
• Suitable for single and multi-core polymeric cables both stranded and
  solid copper/aluminum connectors
• Suitable for Armoured (SWA) & Unarmoured Cables
• Performance tested to BS6910/HD623 - Full test report available on request

CABLES

Cable Size (mm) Based on 4 Core Cables

	0.75	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	240	300	400	Cable Ø
S4	■	■	■	■														6-15mm
S10				■	■	■												8-20mm
S25					■	■	■	■										13-25mm
S50								■	■	■								18-30mm
S120										■	■	■	■					24-45mm
S240														■	■			45-60mm
S400															■	■	■	50-100mm

STRAIGHT JOINTING KITS

Cable Size mm²	Code	Basic Joint Kit	C/W Earth	Earth Kit	Price	Connector Code	Connector
0.75-4	S4	€9.39		ES4	€2.57		N/A
4-10	S10	€15.35		ES10	€3.40	SC10	€5.91
10-25	S25	€19.91		ES25	€3.92	SC25	€6.45
25-50	S50	€33.51		ES50	€6.05	SC50	€13.43
50-120	S120	€61.68		ES120	€14.60	SC120BC	€5.76
120-240	S240	€270.94					
240-400	S400	€380.09					

BRANCH JOINTING KITS

Cable Size mm²	Code	Basic Joint Kit	C/W Earth	Earth Code	Earth Kit
0.75-4	SB4	€16.76		ESB4	€3.48
4-10	SB10	€20.13		ESB10	€3.69
10-25	SB25	€34.86		ESB25	€5.56
25-50	SB50	€82.73		ESB50	€9.08
50-120	SB120	€223.58		ESB120	€20.17
120-240	SB240	€424.78			
240-400	SB400	€514.23			

RESIN PACKS

Ref Pack	Volume	Price
Resin Pk 1	0.075 ltr	€4.99
Resin Pk 2	0.30 ltr	€7.49
Resin Pk 3	0.55 ltr	€11.44
Resin Pk 4	0.85 ltr	€15.39
Resin Pk 5	2.00 ltr	€30.16
Resin Pk 6	3.00 ltr	€42.64

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RFE
REG FARRELL ENGINEERING LTD

ECONOMY LVI-0 RESIN JOINTS

A no nonsense resin joint replacing our BK joints. Comprising of a two part shell and our standard close mix two part resin bag. Rated up to and including 0.6/1kV. Ideal for general purpose street lighting and service cable jointing.

STANDARD LVI-1 RESIN JOINTS

Utilising our new one part mould construction and fully integrated resin system Features top seal and fixing clips and range taking foam seals. Rated up to and including 1.9/3.3kV Ideal for general purpose street lighting and service cable jointing.

PREMIUM LVI-2 RESIN JOINTS

Premium 2 part resin. Features top seal and fixing clips and range taking foam seals.
Rated up to and including 1.9/3.3kV.

HAZARDOUS AREA LVI-3 RESIN JOINTS

Demonstrating superior performance using highly modified polyurethane resin both the joint shell and resin are flame retardant, hydrocarbon resistant and halogen free. Designed for specialist applications where hydrocarbons are present.

Scotchcast Branch, LV, Pilot and Telecom Joints also available.

LV INLINE COLD SHRINK TUBES

① *Cold Shrink Technology is designed to make cable joint as simple as possible. Our cold shrink range is an effective alternative to traditional resin based methods and can be used indoor, outdoor, overhead, or in cable trays.*

Code	Diameter Range	Price
8423-6	7.8mm/14.3mm Cold Shrink Tube 152mm	€13.01
8425-8	10.2mm/20.8mm Cold Shrink Tube 203mm	€13.74
8426-11	13mm/25.4mm Cold Shrink Tube 279mm	€19.36
8426-9	13mm/25.4mm Cold Shrink Tube 229mm	€24.61
8427-6	17.5mm/33mm Cold Shrink Tube 152mm	€13.25
8427-12	17.5mm/33mm Cold Shrink Tube 305mm	€25.69
8427-16	17.5mm/33mm Cold Shrink Tube 406mm	€34.51
8428-6	24mm/49.3mm Cold Shrink Tube 152mm	€17.54
8428-12	24mm/49.3mm Cold Shrink Tube 305mm	€31.40
8428-18	24mm/49.3mm Cold Shrink Tube 609mm	€48.94
8429-6	32.2mm/67.8mm Cold Shrink Tube 152mm	€17.22
8429-9	32.2mm/67.8mm Cold Shrink Tube 229mm	€27.04
8429-18	32.2mm/67.8mm Cold Shrink Tube 457mm	€57.56
8430-9	42.6mm/93.7mm Cold Shrink Tube 229mm	€40.37
8430-18	42.6mm/93.7mm Cold Shrink Tube 457mm	€85.55

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HEAT SHRINK TUBING PRODUCTS

Provides long-term reliable performance and excellent mechanical and environment protection of moderate heat automatically. Easy to install, 3M Heat Shrink comes ready to use and with the application moulds to a skin tight fit - even over irregular shapes. Our heat shrink features precise shrink ratio and recovery and superior split and crack resistance.

GTI HEAT SHRINK MULTI PACKS 250MM LENGTHS

Code	Pack Contents	Price
Multi62Q15	3 x Grey, Black, Earth, Blue, Brown	€17.60
Multi93Q15	3 x Grey, Black, Earth, Blue, Brown	€18.93
Multi186Q15	3 x Grey, Black, Earth, Blue, Brown	€25.48
Multi248Q10	2 x Grey, Black, Earth, Blue, Brown	€25.80
Multi3913Q10	2 x Grey, Black, Earth, Blue, Brown	€33.70
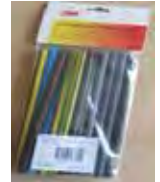
MEDIUM WALL HEAT SHRINK TUBING

Code	Size mm	Price
MDTA123	Heat Shrink Adhesive Lined 12mm / 3mm	€7.51
MDTA196	Heat Shrink Adhesive Lined 19mm / 6mm	€9.14
MDTA278	Heat Shrink Adhesive Lined 27mm / 8mm	€9.84
MDTA327.5	Heat Shrink Adhesive Lined 32mm / 7.5mm	€10.88
MDTA3812	Heat Shrink Adhesive Lined 38mm / 12mm	€14.33
MDTA5018	Heat Shrink Adhesive Lined 50mm / 18mm	€20.06
MDTA7026	Heat Shrink Adhesive Lined 70mm / 26mm	€30.52
MDTA120	Heat Shrink Adhesive Lined 120mm / 40mm	€44.82

HEAVY DUTY HEAT SHRINK (BLACK)

Product	Size mm	Price
HDTA12-BK	12mm /3mm	€13.76
HDTA19-BK	19mm /6mm	€15.19
HDTA30-BK	30mm/8mm	€18.60
HDTA38-BK	38mm /12mm	€22.78
HDTA48-BK	48mm/15mm	€24.72

HEAVY DUTY HEATSHRINK (BLACK) WRAPAROUND

Product	Size mm	Price
HDCW351025	HDCW 35/10-250	€27.90
HDCW55152	HDCW 55/15-250	€57.87
HDCW55155	HDCW 55/15-500	€46.46
HDCW80251.2	HDCW 80/25-1000	€78.00
HDCW80255	HDCW 80/25-500	€62.31
HDCW802575	HDCW 80/25-750	€92.78
HDCW1404050	HDCW 140/40-500	€POA

HEAT SHRINK KIT(GPS) FOR SUBMERSIBLE JOINT KITS

Code	Size	Price
GPS1-H	4 x 2.5mm	€7.25

GTI - GENERAL PURPOSE THIN WALL INSULATION POLYOLEFIN

Code	Size mm (1 Mtr)	Box Qty	Price /EA
GT0031BE	Polyolefin Heat Shrink 3mm/1mm Blue	20	€3.90
GT0031BK	Polyolefin Heat Shrink 3mm/1mm Black	20	€3.90
GT0031BN	Polyolefin Heat Shrink 3mm/1mm Brown	20	€3.90
GT0031CL	Polyolefin Heat Shrink 3mm/1mm CLEAR	20	€3.90
GT0031GY	Polyolefin Heat Shrink 3mm/1mm Grey	20	€3.90
GT0031GYS	Polyolefin Heat Shrink 3mm/1mm G/Y Strip	20	€3.90
GT0031RD	Polyolefin Heat Shrink 3mm/1mm Red	20	€3.90
GT0031YW	Polyolefin Heat Shrink 3mm/1mm Yellow	20	€3.90
GT0062BK	Polyolefin Heat Shrink 6mm/2mm Black	20	€4.00
GT0062CL	Polyolefin Heat Shrink 6mm/2mm CLEAR	20	€4.00
GT0062GYS	Polyolefin Heat Shrink 6mm/2mm G/Y Strip	20	€4.00
GT0062RD	Polyolefin Heat Shrink 6mm/2mm Red	20	€4.00
GT0093BE	Polyolefin Heat Shrink 9mm/3mm Blue	20	€4.00
GT0093BK	Polyolefin Heat Shrink 9mm/3mm Black	20	€4.00
GT0093BR	Polyolefin Heat Shrink 9mm/3mm Brown	20	€4.00
GT0093CL	Polyolefin Heat Shrink 9mm/3mm CLEAR	20	€4.00
GT0093GY	Polyolefin Heat Shrink 9mm/3mm Grey	20	€4.00
GT0093GYS	Polyolefin Heat Shrink 9mm/3mm G/Y Strip	20	€4.00
GT0093RD	Polyolefin Heat Shrink 9mm/3mm Red	20	€4.00
GT0093WH	Polyolefin Heat Shrink 9mm/3mm white	20	€4.00
GT0093YW	Polyolefin Heat Shrink 9mm/3mm Yellow	20	€4.00
GT0186BE	Polyolefin Heat Shrink 18mm/6mm Blue	10	€4.48
GT0186BK	Polyolefin Heat Shrink 18mm/6mm Black	10	€4.48
GT0186BN	Polyolefin Heat Shrink 18mm/6mm Brown	10	€4.48
GT0186CL	Polyolefin Heat Shrink 18mm/6mm CLEAR	10	€4.48
GT0186GY	Polyolefin Heat Shrink 18mm/6mm Grey	10	€4.48
GT0186GYS	Polyolefin Heat Shrink 18mm/6mm G/Y Strip	10	€4.48
GT0186RD	Polyolefin Heat Shrink 18mm/6mm Red	10	€4.48
GT0186WT	Polyolefin Heat Shrink 18mm/6mm... White	10	€4.48
GT0186YW	Polyolefin Heat Shrink 18mm/6mm Yellow	10	€4.48
GT0248BE	Polyolefin Heat Shrink 24mm/8mm Blue	5	€6.44
GT0248BK	Polyolefin Heat Shrink 24mm/8mm Black	5	€6.44
GT0248BN	Polyolefin Heat Shrink 24mm/8mm Brown	5	€6.44
GT0248CL	Polyolefin Heat Shrink 24mm/8mm CLEAR	5	€6.44
GT0248GYS	Polyolefin Heat Shrink 24mm/8mm G/Y Strip	5	€6.44
GT0248RD	Polyolefin Heat Shrink 24mm/8mm Red	5	€6.44
GT0248WH	Polyolefin Heat Shrink 24mm/8mm white	5	€6.44
GT0248YW	Polyolefin Heat Shrink 24mm/8mm Yellow	5	€6.44
GT3913BE	Polyolefin Heat Shrink 39mm/13mm Blue	2	€11.53
GT3913BK	Polyolefin Heat Shrink 39mm/13mm Black	2	€11.53
GT3913BN	Polyolefin Heat Shrink 39mm/13mm Brown	2	€11.53
GT3913GY	Polyolefin Heat Shrink 39mm/13mm	2	€11.53
GT3913GYS	Polyolefin Heat Shrink 39mm/13mm G/Y Strip	2	€11.53
GT3913RD	Polyolefin Heat Shrink 39mm/13mm Red	2	€11.53
GT3913YW	Polyolefin Heat Shrink 39mm/13mm Yellow	2	€11.53
GT3913CL	Polyolefin Heat Shrink 39mm/13mm CLEAR	2	€11.53

HEAT SHRINK DISPLAY UNITS AVAILABLE TO LOCATE IN YOUR STORE.

CONTACT YOUR REGIONAL SALES REPRESENTATIVE:

STEPHEN FOX @ 087 2787097

SEAN BEHAN @ 087 2228107

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PVC ELECTRICAL INSULATION TAPES (GENERAL PURPOSE) (pack qty 10)

Code	Description	Price
T1500BE	Temflex 1500 Tape 19mm x 20m Blue	€1.19
T1500BK	Temflex 1500 Tape 19mm x 20m Black	€1.19
T1500BR	Temflex 1500 Tape 19mm x 20m Brown	€1.19
T1500GN	Temflex 1500 Tape 19mm x 20m Green	€1.19
T1500GY	Temflex 1500 Tape 19mm x 20m Grey	€1.19
T1500GYS	Temflex 1500 Tape 19mm x 20mGreen/Yellow	€1.19
T1500PL	Temflex 1500 Tape 19mm x 20m Purple	€1.19
T1500RD	Temflex 1500 Tape 19mm x 20m Red	€1.19
T1500WH	Temflex 1500 Tape 19mm x 20m White	€1.19
T1500YW	Temflex 1500 Tape 19mm x 20m Yellow	€1.19
T1500OR	Temflex 1500 Tape 19mm x 20m Orange	€1.19
T1500XOR	Temflex 1500 Tape 19mm x 25mm Orange	€1.19

PVC INSULATION TAPE DISPLAY UNITS AVAILABLE TO LOCATE IN YOUR STORE. CONTACT YOUR REGIONAL SALES REPRESENTATIVE:
STEPHEN FOX @ 087 2787097
SEAN BEHAN @ 087 2228107

PREMIUM TAPES

Code	Description	Price
T33P Super 33+ Black PVC 19m x 20m	Resistant to abrasion, moisture, alkalis and acids. Retardant, UV resistant, Flame Retardant. Electrical insulation for splices up to 600V	€7.98
T8819 Super 88 Black PVC 19m x 20m	All weather, heavy duty, professional use, abrasion resistant, Primary Insulation for splices up to 600V Protective Jacketing	€8.10
T35 Scotch 35 Coloured PVC 19m x 20m	Nine Colours Available, super stretchy, excellent insulating properties	€9.23
T2219 Scotch 22 Black PVC 19m x 33m	Thicker for increased mechanical strength, Bus bar Insulation, Splices up to 600V	€21.93
T2319 Scotch 23 Premium Rubber EPR 19m x 9.15m	Self Amalgamating Tapes, Insulate and splice solid dielectric cables through 69kV Linered, insulating, thermally conductive, self bonding rubber.	€16.54
T6925 Glass Cloth Tape 25m x 33m	Woven insulating glass cloth tape, high temperature resistance. High mechanical strength. Heat stable insulation for furnace and oven controls, motor leads and switches.	€63.51

We offer a wide range of over 30 electrical tapes from General Purpose insulation tape to advanced glass cloth and mastic. All providing exceptional performance and reliability.

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ENGINEERING LTD

INSTALLATION EQUIPMENT - Cable Components
• Canal Roll Self Adhesive • Sprays and Coating • Cable/Wire Pulling Lubricant

3M

SECTION 8

CANAL ROLL SELF ADHESIVE TRUNKING IN A BOX, 5M

A self adhesive Trunking designed to protect domestic cables and prevent them from becoming a tripping hazard

Code	Length	Colour	Price/M
71501 A	5m	White	€15.08

ELECTRICAL RE-ENTERABLE RESIN

Code	Description	Price
8882	For sealing and insulating electrical connection boxes in wet areas, protects against moisture, shock and vibration	€34.40

BUTT WIRE SPLICE CONNECTORS

Product	Description	Price
UY	UY Scotchlok Wire Connectors (PACK OF 100)	€21.93
UY2	UY2 Scotchlok Wire Connectors (PACK OF 100)	€14.26
UR2	UR2 Scotchlok Wire Connectors (PACK OF 100)	€20.72
UB2A	UB2A BX 19-26 AWG Bridge Connector (PACK OF 100)	€35.20

SPRAYS AND COATINGS (PRICES AVAILABLE ON REQUEST)

Description
Preventive action to repairing damage in all electrical and electronic environments

CABLE PULLING LUBRICANT (PRICES AVAILABLE ON REQUEST)

Description
Cable Pulling Lubricant is a translucent white polymer gel, which produces a low coefficient of friction for smooth low-tension wire and cable pulling

GENERAL USE GLOVES

** Cut Resistant Gloves** - These medium-duty gloves have even greater cut, puncture and tear resistance. They are excellent for jobs requiring dexterity when handling sharp items. The ANSI Cut Level 3, EN388 Cut Level 5 gloves are nitrile foam coated and washable.

Product	Length	Price
GLOVES CRL3 L	3M cut resistant comfort grip gloves L	€29.27
GLOVES CRL3 XL	3M cut resistant comfort grip gloves XL	€29.27
GLOVES GUL	3M comfort grip gloves L general use	€5.86
GLOVES GUXL	3M comfort grip gloves XL general use	€5.86

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INSTALLATION EQUIPMENT - Cable Glands

HILPRESS

IP67 PG CABLE GLAND COMPLETE WITH LOCK NUT

⚠ *Grey: Colour (RAL 7035) Material Polyamide Temp 20c° up to 70c° Other sizes and Colours available upon request.*

Code	AG mm	GL mm	H mm	Box Qty	Price / EA
BF07 H	PG 7	8	30	100	€0.22
BF09 H	PG 9	8	34	100	€0.29
BF011 H	PG 11	9	36	100	€0.33
BF013 H	PG 13.5	9	37	100	€0.41
BF016 H	PG 16	10	40	100	€0.50
BF021 H	PG 21	10	45	50	€0.76
BF029 H	PG 29	12	52	24	€1.31
BF036 H	PG 36	15	63	12	€2.24

IP67 METRIC CABLE GLAND COMPLETE WITH LOCK NUT

⚠ *Grey: Colour (RAL 7035) Material Polyamide Temp 20c° up to 80c° Other sizes and Colours available upon request.*

Code	AG mm	GL mm	H mm	Box Qty	Price / EA
BF020 HM	M20 x 1.5	9	37	100	€0.41
BF025 HM	M25 x 1.5	10	45	50	€0.67
BF032 HM	M32 x 1.5	11	45	24	€1.37
BF040 HM	M40 x 1.5	18	61	12	€2.49
BF050 HM	M50 x 1.5	18	67	6	€2.93
BF063 HM	M63 x 1.5	19	74	4	€3.70
EAG63L	M63 x 1.9	42	50	10	€5.32

INSTALLATION EQUIPMENT - Industrial Plugs & Sockets
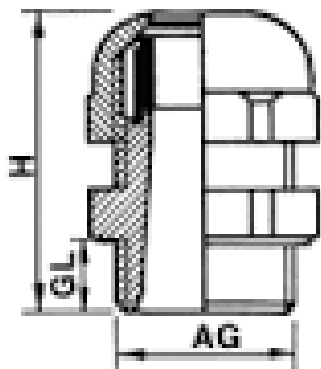
LOW VOLTAGE PLUGS

Poles	Hz	V	AMPS	IP	Model	Price
3P	50	110	16A	IP44	PE1643SV	€6.61
3P	50	250	16A	IP44	PE1663SV	€3.14
3P	50	250	32A	IP44	PE3263SV	€6.47
3P	50	110	16A	IP67	PEW1643SV	€6.61
3P	50	250	16A	IP67	PEW1663SV	€6.05
3P	50	110	32A	IP67	PEW3243SV	€11.50
3P	50	250	32A	IP67	PEW3263SV	€10.16
3P	50	250	63A	IP67	PEW6363SV	€35.99
4P	50	380	16A	IP44	PE1664SV	€3.61
4P	50	380	32A	IP44	PE3264SV	€5.50
4P	50	380	16A	IP67	PEW1664SV	€6.58
4P	50	380	32A	IP67	PEW 3264SV	€11.15
4P	50	380	63A	IP67	PEW6364SV	€37.56
5P	50	380	16A	IP44	PE1665SV	€5.10
5P	50	380	32A	IP44	PE3265SV	€8.09
5P	50	380	16A	IP67	PEW1665SV	€8.56
5P	50	380	32A	IP67	PEW3265SV	€12.12
5P	50	380	63A	IP67	PEW6365SV	€42.00
5P	50	380	125A	IP67	PEW12565SV	€101.25

LOW VOLTAGE SOCKETS WALL MOUNTED

Poles	Hz	V	AMPS	IP	Model	Price
3P	50	110	16A	IP44	PE1643PP	€8.09
3P	50	250	16A	IP44	PE1663PP	€7.39
3P	50	250	32A	IP44	PE3263PP	€11.07
3P	50	110	16A	IP67	PEW1643PP	€14.59
3P	50	250	16A	IP67	PEW1663PP	€13.66
3P	50	110	32A	IP67	PEW3243PP	€20.90
3P	50	250	32A	IP67	PEW3263PP	€19.04
3P	50	250	63A	IP67	PEW6363PP	€66.10
4P	50	380	16A	IP44	PE1664PP	€8.18
4P	50	380	32A	IP44	PE3264PP	€10.13
4P	50	380	16A	IP67	PEW1664PP	€13.95
4P	50	380	32A	IP67	PEW 3264PP	€21.61
4P	50	380	63A	IP67	PEW6364PP	€53.14
5P	50	380	16A	IP44	PE1665PP	€9.58
5P	50	380	32A	IP44	PE3265PP	€13.95
5P	50	380	16A	IP67	PEW1665PP	€18.41
5P	50	380	32A	IP67	PEW3265PP	€21.61
5P	50	380	63A	IP67	PEW6365PP	€74.58
5P	50	380	125A	IP67	PEW12565PP	€236.02

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INSTALLATION EQUIPMENT - Industrial Plugs & Sockets

WALL MOUNTING SOCKET IP44 - 24V

Poles	Hz	V	AMPS	IP	Model	Price
2P	50	24	16A	IP44	PB16002PP	€8.82
3P	50	24	16A	IP44	PB16003PP	€10.16

FLUSH-MOUNTING SOCKETS-OUTLETS - 24V

Poles	Hz	V	AMPS	IP	Model	Price
2P	50	24	16A	IP44	PB16002P1	€6.55
3P	50	24	16A	IP44	PB16003P1	€7.81

COUPLERS - 24V

Poles	Hz	V	AMPS	IP	Model	Price
2P	50	24	16A	IP44	PB16002PV	POA
3P	50	24	16A	IP44	PB16003PV	POA

PLUGS - 24V

Poles	Hz	V	AMPS	IP	Model	Price
2P	50	24	16A	IP44	PB16002SV	€5.60
3P	50	24	16A	IP44	PB16003SV	€7.49

LOW VOLTAGE SOCKETS FLUSH MOUNTED INCLINED

Poles	Hz	V	AMPS	IP	Model	Price
3P	50	110	16A	IP44	PE1643PI	€5.53
3P	50	250	16A	IP44	PE1663PI	€4.40
3P	50	250	32A	IP44	PE3263PI	€8.53
3P	50	110	16A	IP67	PEW1643PI	€8.04
3P	50	250	16A	IP67	PEW1663PI	€7.07
3P	50	110	32A	IP67	PEW3243PI	€12.81
3P	50	250	32A	IP67	PEW3263PI	€11.62
3P	50	250	63A	IP67	PEW6363PI	€31.68
4P	50	380	16A	IP44	PE1664PI	€4.54
4P	50	380	32A	IP44	PE3264PI	€7.28
4P	50	380	16A	IP67	PEW1664PI	€7.78
4P	50	380	32A	IP67	PEW 3264PI	€9.82
4P	50	380	63A	IP67	PEW6364PI	€26.71
5P	50	380	16A	IP44	PE1665PI	€6.03
5P	50	380	32A	IP44	PE3265PI	€9.09
5P	50	380	16A	IP67	PEW1665PI	€10.37
5P	50	380	32A	IP67	PEW3265PI	€13.57
5P	50	380	63A	IP67	PEW6365PI	€38.47
5P	50	380	125A	IP67	PEW12565PI	€94.29

LOW VOLTAGE COUPLERS

Poles	Hz	V	AMPS	IP	Model	Price
3P	50	110	16A	IP44	PE 1643PV	€5.06
3P	50	250	16A	IP44	PE1663PV	€4.63
3P	50	110	16A	IP67	PEW1643PV	€8.01
3P	50	250	16A	IP67	PEW1663PV	€7.31
3P	50	110	32A	IP67	PEW3243PV	€13.43
3P	50	250	32A	IP44	PE3263PV	€9.09
3P	50	250	32A	IP67	PEW3263PV	€12.23
3P	50	250	63A	IP67	PEW6363PV	€43.53
4P	50	380	16A	IP44	PE1664PV	€4.54
4P	50	380	32A	IP44	PE3264PV	€7.89
4P	50	380	16A	IP67	PEW1664PV	€8.30
4P	50	380	32A	IP67	PEW 3264PV	€12.81
4P	50	380	63A	IP67	PEW6364PV	€40.85
5P	50	380	16A	IP44	PE1665PV	€7.83
5P	50	380	32A	IP44	PE3265PV	€10.89
5P	50	380	16A	IP67	PEW1665PV	€10.71
5P	50	380	32A	IP67	PEW3265PV	€13.77
5P	50	380	63A	IP67	PEW6365PV	€50.12
5P	50	380	125A	IP67	PEW12565PV	€118.23

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INSTALLATION EQUIPMENT - Industrial Plugs & Sockets

LOW VOLTAGE FLUSH MOUNTED APPLIANCE INLETS

Poles	Hz	V	AMPS	IP	Model	Price
3P	50	110	16A	IP44	PE1643SI	€5.03
3P	50	250	16A	IP44	PE1663SI	€4.59
3P	50	110	16A	IP67	PEW1643SI	€7.92
3P	50	250	16A	IP67	PEW1663SI	€8.02
3P	50	250	32A	IP44	PE3263SI	€8.10
3P	50	110	32A	IP67	PEW3243SI	€11.98
3P	50	250	32A	IP67	PEW3263SI	€11.98
3P	50	250	63A	IP67	PEW6363SI	€29.46
4P	50	380	16A	IP44	PE1664SI	€6.16
4P	50	380	32A	IP44	PE3264SI	€11.18
4P	50	380	16A	IP67	PEW1664SI	€8.96
4P	50	380	32A	IP67	PEW 3264SI	€12.70
4P	50	380	63A	IP67	PEW6364SI	€31.90
5P	50	380	16A	IP44	PE1665SI	€8.94
5P	50	380	32A	IP44	PE3265SI	€10.14
5P	50	380	16A	IP67	PEW1665SI	€10.04
5P	50	380	32A	IP67	PEW3265SI	€12.06
5P	50	380	63A	IP67	PEW6365SI	€34.33
5P	50	380	125A	IP67	PEW12565SI	€63.78

LOW VOLTAGE WALL MOUNTED APPLIANCE INLETS

Poles	Hz	V	AMPS	IP	Model	Price
3P	50	110	16A	IP44	PE 1643SM	€5.50
3P	50	250	16A	IP44	PE1663SM	€4.98
3P	50	110	16A	IP67	PEW1643SM	€13.94
3P	50	250	16A	IP67	PEW1663SM	€12.69
3P	50	250	32A	IP44	PE3263SM	€8.10
3P	50	110	32A	IP67	PEW3243SM	€16.32
3P	50	250	32A	IP67	PEW3263SM	€16.32
3P	50	250	63A	IP67	PEW6363SM	€47.87
4P	50	380	16A	IP44	PE1664SM	€5.98
4P	50	380	32A	IP44	PE3264SM	€8.66
4P	50	380	16A	IP67	PEW1664SM	€13.59
4P	50	380	32A	IP67	PEW 3264SM	€16.88
4P	50	380	63A	IP67	PEW6364SM	€47.38
5P	50	380	16A	IP44	PE1665SM	€6.51
5P	50	380	32A	IP44	PE3265SM	€11.46
5P	50	380	16A	IP67	PEW1665SM	€17.11
5P	50	380	32A	IP67	PEW3265SM	€18.02
5P	50	380	63A	IP67	PEW6365SM	€64.27
5P	50	380	125A	IP67	PEW12565SM	€185.12

SWITCHED INTERLOCKED SOCKETS IP44

Poles	Hz	V	AMPS	IP	Model	Price
3P	50	250	16A	IP44	PK1663EB	€27.29
4P	50	380	16A	IP44	PK1664EB	€36.84
5P	50	380	16A	IP44	PK1665EB	€31.63
3P	50	250	32A	IP44	PK3263EB	€57.34
4P	50	380	32A	IP44	PK3264EB	€62.09
5P	50	380	32A	IP44	PK3265EB	€75.31
3P	50	250	63A	IP44	PK6363EB	€88.12
4P	50	380	63A	IP44	PK6364EB	€95.66
5P	50	380	63A	IP44	PK6365EB	€106.37

SWITCHED INTERLOCKED SOCKETS WITH MODULAR COMPARTMENT IP55 PADLOCKABLE HANDLE

Poles	Hz	V	AMPS	IP	Model	Price
3P	50	250	16A	IP55	KI1663R15	€76.36
4P	50	380	16A	IP55	KI1664R15	€90.30
5P	50	380	16A	IP55	KI1665R15	€94.70
3P	50	250	32A	IP55	KI3263R15	€89.11
4P	50	380	32A	IP55	KI3264R15	€90.39
5P	50	380	32A	IP55	KI3265R15	€113.65
3P	50	250	63A	IP55	KI6363R15	€102.03
4P	50	380	63A	IP55	KI6364R15	€108.59
5P	50	380	63A	IP55	KI6365R15	€168.14

HEAVY DUTY INTERLOCKED SWITCHED SOCKETS-OUTLETS

⚠ *Will accept both IP44 & IP67 Plugs.*

Poles	Hz	V	AMPS	IP	Code	H x W	Price
3P	50	220	16A	IP67	TM1663SP	276 x 114	€66.13
3P	50	230	32A	IP67	TM3263KSP	285 x 114	€71.02
5P	50	415	32A	IP67	TM3265KSP	285 x 114	€82.67
5P	50	415	63A	IP67	TM6365SP	415 x 114	€211.67

HEAVY DUTY INTERLOCKED SWITCHED SOCKETS-OUTLETS WITH COMPARTMENT FOR MODULAR UNITS

⚠ *Will accept both IP44 & IP67 Plugs.*

Poles	Hz	V	AMPS	IP	Code	H x W	Price
3P	50	230	16A	IP67	TM1663IR	276 x 114	€68.26
3P	50	230	32A	IP67	TM3263KIR	285 x 114	€72.22
5P	50	415	32A	IP67	TM3265KIR	285 x 114	€84.88
5P	50	415	63A	IP67	TM6365IR	415 x 114	€225.74

FULL RANGE OF MULTI-POLE CONNECTORS AVAILABLE.
PLEASE ASK FOR CATALOGUE

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METAL BANDING TAPE For Fixing Signs, Signals, Enclosures, Etc.
ⓘ *Band price is trade price per roll of 30m. Buckle price is trade price per box of 100.*

Article	Type	Band	Width	Thickness	Material	Price
Band	T2	1/2"	12.7mm	0.75mm	Steel	€36.69
Buckle	G2	1/2"	12.7mm	1.2mm	Steel	€0.25
MK001	Tool for all bands and buckles					€129.38
D2	Dispenser for T2 Banding					€9.36

Dispenser for T2 Banding

WARNING TAPE

Code	Colour	Size	Price
BYWT	Yellow/Black Warning	150mm x 365mt	€32.04

Banding Tape

Our Banding system is made up of bands and buckles. Our sizes vary from 9.5mm(3/8") up to 19mm (3/4")

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REG FARRELL ENGINEERING LTD

INSTALLATION EQUIPMENT - Cable Stockings/Grips

EGI

CABLE STOCKING - SINGLE-EYE TYPE

Type	MM	Code	STD Lng	B Load	Weight	Price
1	10-15	Art 2570	600	900kg	0.1	€78.83
2	15-20	Art 2570	600	900kg	0.18	€98.28
3	20-25	Art 2570	600	1500kg	0.25	€108.12
4	25-30	Art 2570	600	2000kg	0.27	€137.59
5	30-45	Art 2570	700	3300kg	0.35	€142.73
6	45-60	Art 2570	800	3300kg	0.7	€157.25
7	60-80	Art 2570	800	6000kg	0.9	€176.90
8	80-100	Art 2570	900	6000kg	1	€186.95
9	100-140	Art 2570	1000	9000kg	1.1	€193.02
10	140-170	Art 2570	1200	9000kg	1.7	€255.67

CABLE STOCKING - HEAVY-DUTY AND LONG TYPE WITH SINGLE EYE

Type	MM	Code	STD Lng	B Load	Weight	Price
1	10-15	Art 2571	900	1200kg	0.22	€108.16
2	15-20	Art 2571	900	2000kg	0.25	€118.14
3	20-25	Art 2571	1000	2500kg	0.45	€129.79
4	25-30	Art 2571	1200	4000kg	0.5	€176.96
5	30-45	Art 2571	1500	5000kg	0.6	€183.24
6	45-60	Art 2571	1600	7000kg	1.25	€182.31
7	60-80	Art 2571	1800	7000kg	1.8	€274.56
8	80-100	Art 2571	2000	10000kg	1.9	€296.82
9	100-140	Art 2571	2000	12000kg	2	€326.35
10	140-170	Art 2571	2000	12000kg	2.8	€350.48

Art. 2570   Art. 2571

Art. 2574
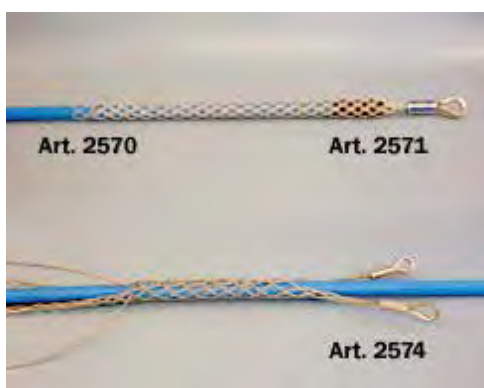
FIBREGLASS FISH TAPES,
PRICES AVAILABLE ON REQUEST

RFE are leading suppliers of audible and luminous warning devices offering an extensive range of products in two main markets sectors:

SIGNALING:

Automation, Robotics, Control Panels, Explosion Proof, Safety

AUTOMOTIVE:

Agricultural Vehicles, Earthmoving Machines, Industrial Vehicles, Emergency and Priority Vehicles

Mline /Modular and Multifunctional Signalling Devices

Automax – Devices for Industrial Automation

ELECTRA – Industrial Signalling Devices

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FOUR - Industrial and civil traffic signalization

EXPRO | Explosion proof signalling devices according to ATEX EX

ICARO | Aircraft Warning Lights

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WARNING DEVICES - Visual and Acoustic Signalling Devices
• Sirens

SiRENA

SIRENS

Voltage	Mini Celere				Medium Celere				Super Celere			
	12	24	110	240	12	24	110	240	12	24	110	240
	101	102	100	102	107	109	109	110	114	115	116	117
	42000	42001	42003	42005	42020	42021	42023	42025	42040	42041	42043	42045
Price	€65.00	€65.00	€65.00	€65.00	€152.15	€115.44	€115.44	€115.44	€191.67	€191.67	€154.86	€154.86

SIRENS

Voltage	Micro Siren		Industrial Sirens		Red Bell (165)	
	12 DC	24 DC	24 DC	240 AC	110 AC	240 AC
	94	98	95	95	90	100
	42200	42202	53003	53015	54204	54206
Price	€30.37	€30.37	€44.10	€44.10	€80.08	€80.08

SIRENS

Voltage	Emergency Alarm BIP 81		Micro Lamp and Acoustic	
	24 DC/AC	240v AC	240 AC	240 AC
	72	72	75	75
	42301	42308	79772 (Orange)	79773 (Red)
Price	€38.84	€38.84	€75.09	€75.09

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WARNING DEVICES - Audible & Visual Warning Devices
• Beacons

SiRENA
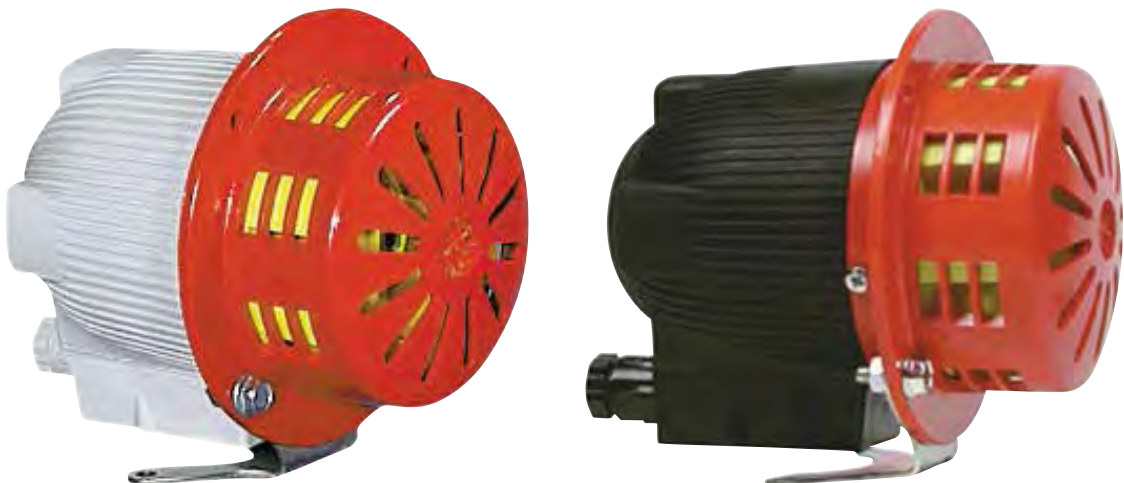
LAMP ALARM 12V

Colour	Voltage	Current (A)	PK Candelas	Code	Price
Orange/Red	12-48v DC (FIL BULB)	3.8	800	89493 (RED) 89492 (OR)	€121.37

LAMP ALARM 24V & 240V

Colour	Voltage	Current (A)	PK Candelas	Code	Price
Orange/Red	12-240V AC	0.17	800	89513 (RED) 89512 (OR)	€121.37

MINI FLASH 12V-110V-240V

Colour	Voltage	Current (A)	PK Candelas	Code	Price
Orange/Red	12-48VDC	3.8	200	89173 (RED) 89172 (OR)	€101.56
Orange/Red	24-240 V AC	0.1	200	89183 (RED) 89182 (OR)	€101.56

XENONFLASH--2 FLASH BULB --12V-110V-240V

Colour	Voltage	Current (A)	PK Candelas	Code	Price
Orange/Red	12-24V AC/DC	400	1000	63755 (RED) 63754 (OR	€166.92
Orange/Red	110V AC 2J	80	1300	63761 (RED) 63760 (OR)	€148.20
Orange/Red	240V AC 2J	42	1400	63766 (RED) 63765 (OR)	€148.20

STROBE LAMP

Colour	Voltage	Current (A)	PK Candelas	Code	Price
Orange	110V AC	0.36	450	87220 (OR)	€185.85
Red	240V AC	0.17	450	87223 (RED)	€185.85

MICRO LAMP (INDICATOR ONLY) 12V-24V-110V-240V

Colour	Voltage	Current (A)	PK Candelas	Code	Price
Orange/Red	12-48VDC	105	18	79602 (RED) 709603 (OR)	€36.19
Orange/Red	24-240 V AC	105	18	79613 (RED) 79612 (OR)	€36.19

REVERSING ALARM FOR AUTOMOBILES

Code	Item	Voltage	Price
52334	Retro Alarm	10÷100	€73.53

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WARNING DEVICES - Beacons/Sirens
• Tower Sector TWS SIRENA

BASE & COVER (TWS B.C)

Code	Voltage	Price
27700	Max 240V	€28.46

CONTINUOUS LIGHT MODULES (TWS F)

Colour	Code	Voltage 12-240 AC/DC	Price
Blue	27701	12-240	€17.63
Orange	27702	12-240	€17.63
Red	27703	12-240	€17.63
Green	27704	12-240	€17.63
Yellow	27705	12-240	€17.63
Clear	27706	12-240	€17.63

BLINKING LIGHT MODULE (TWS L)

Colour	V12-48 DC	V24-240 AC	Price
Blue	27711	27721	€52.50
Orange	27712	27722	€52.50
Red	27713	27723	€52.50
Green	27714	27724	€52.50
Yellow	27715	27725	€52.50
Clear	27716	27726	€52.50

ACOUSTIC MODULE (TWS A)

Code	Voltage	Price
27718	12-48V DC/AC	€50.99
27719	110-240V AC	€50.99

BASE HOLDER (TWS BS)

Code	Price
27760	€7.01

1 THREAD WALL SUPPORT (TWS BP 1)

Code	Price
27762	€10.50

TWS EXTENSION KIT (TWS KIT)

Code	Price
27764	€12.38

TWS EXTENSION KIT (TWS PR) W/O BASE

Code	Price
27761	€6.08

CABLE MARKING SYSTEMS
• Wire Marking System

Grafoplast®
WIRE MARKERS

TRASP SYSTEM

After having inserted the strips into the strip container, the marking tool is used to extract the coding elements. Codes consisting of one or more elements are fully assembled on the marking tool, which is then inserted into the cavity provided in the sleeve or the clip-on. Once the coding elements have been inserted into the upper cavity of the sleeve, slight pressure of the left thumb on the end of the sleeve is sufficient to release the marking too.

The advantages of the Trasp System:
• Time is saved because a complete identification marker can be assembled quickly and easily.
• It is possible to reduce the number of articles kept in stock, thus reducing storage costs.

TRASP SYSTEM

Code	Description	Price
012C/03	1 Tray Pre Assembled Starter Kit	€333.84
050C/03	2 Tray Pre Assembled Starter Kit	€485.68

TRASP STARTER KITS

Trasp Starter Kits – Everything you need to get Started.
We supply a full range of accessories that makes the TRASP System even more powerful!

STD TAPE DISPENSER

Has a compact design for easy handling and 10 refillable compartments to hold non-smear polyester tape rolls.
This carry-along dispenser has an end loop that hooks it easily to a tool pouch/belt for added convenience.
The pre-printed tapes have a high-tack, acrylic adhesive to resist solvents, oil and water while adhering firmly to insulation surfaces.

• For marking wire and cable
• Refillable dispenser
• Compact design for easy handling
• Includes 1 each of 0 to 9 numbered tape rolls
• Features an end loop to easily suspend it from a tool pouch or belt
• Durable plastic construction
• Withstands temperatures of -40 to 250 degrees F (-40 to 121 degrees C)
• Comes with a tape that has a high-tack, acrylic adhesive which resists
  solvents and water, making it ideal for marking wires and cables
• RoHS 2011/65/EU Compliant
• 25/case

STD TAPE DISPENSER

Code	Description	Price
STD0-9	STD Cable Marker Filled 09	€43.47

COMPASS^{LV}

Always on.
Always aware.
Always safe.

Product Description
P/N: CMP10LVEX50Hz

Compass LV is a lightweight non-contact voltage and current detector. Its advanced notification system is designed to quickly warn the user of the presence of voltage and current on a work site. When an energized source is detected, users are notified of its approximate distance and direction with visual and audible alerts. Compass will also detect sources of voltage located overhead or underground.

- Clips Firmly Attach to Any Hard Hat
- Rated for 120 V - 600 V
- Visual & Audible Alerts
- Mute/Unmute Audible Alerts
- 360° Proximity Awareness of Danger
- Custom Sensitivity Settings
- Detects Current Through Most Solid Surfaces

- Dielectricly Tested to Match ANSI Z89.1 Class E
- Notifies 5x OSHA MAD
- Detects Delta Systems
- Smart Adaptive Setting
- IEC IP6X
- Up to Ten-Day Chargeable Battery Life

Voltage Detection: Red lights indicate a detected Voltage from an energized conductor.

Current Detection: Blue lights indicate a detected current from a load carrying conductor.

Proximity Alerts: Rate and intensity of alerts increase as the user gets closer to a threat.

Directional Alerts
240° active bearing range
±10° accuracy ≤10 Ft.
±15° accuracy >10 Ft.

Source to Left   Source to Right

Applicable Industries:
Utilities | Gas and Water | Construction | Telecommunication | Arborist

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SAFETY EQUIPMENT - Electrical Test & Measurement Instruments

Electrical Test & Measurement Instruments

We stock a comprehensive range of Electrical Test & measurement instruments, such as:

- Power Quality Analysers
- Installation Testers
- Photovoltaic Testers
- Digital Multimeters
- Process Calibrators
- Clamp meters
- Voltage Detectors
- Environmental Measurements
- Laser Distance Meters

**We are industry experts in Electrical Test Instrumentation.
Discover new high quality products with the latest technology.
For Technical advice & support please contact a member of our sales team.**

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SAFETY EQUIPMENT - Electrical Test & Measurement Instruments

POWER QUALITY ANALYSERS PQA824/PQA823/HT9020

Power quality analysers designed for monitoring all electric parameters on single and three-phase installations. An in-depth verification of electric networks operation and increases the efficiency of installations and reducing consumption and costs.

PQA824 Available to Rent

INSTALLATION TESTERS - JUPITER/M74 & M75

A Multi-Function installation testers. Ensures the safety of people, electrical systems and buildings, and protect them against electrocution, fire and other equipment damage.

PHOTOVOLTAIC TESTERS SOLAR 300N/I-V500W & MPP300

A range of products to verify safety and efficiency of photovoltaic installations. This range includes 1500V I-V Curve Tracers, Insulation testers (IEC/EN62446), designed to provide more and more functional solutions for the activities to be performed.

DIGITAL MULTIMETERS HT21/HT210/MERCURY

The multimeter or voltage tester for those working in the electricity sector, must have the basic requirements of reliability, accuracy, and safety.

LASER DISTANCE METERS DM40/iDM70

Those Laser distance meters are the evolution of linear measurement with possibility of carrying out precision measurements, geometric calculations and transferring data onto your smartphone or tablet through the relevant App.

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SAFETY EQUIPMENT - Electrical Test & Measurement Instruments

PROCESS CALIBRATORS/ HT8100 & HT8051

Process calibrators is now part of the range of mobile devices which have become indispensable to technicians working on modern installations.

CLAMP METERS

We stock a complete range of Clamp Meters. Hand Held Clamp Meter hand-held clamp meter for trms AC/DC current

VOLTAGE DETECTORS - HT20-HT82

Voltage Detectors, Circuit Breaker finder are Indispensable equipment which must always accompany the technician. Its essential characteristics are an extreme handiness, a very high protection degree and easiness of use.

ENVIRONMENTAL MEASUREMENTS

Thermometers, temperature, sound level, probes, air velocity meters are everything you need for controlling and monitoring the quality of the environment.

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PHOTOVOLTAIC TESTERS

• Commissioning Tests - Certify a PV System Safety according to IEC62446 (PVCHECKs Device)
• Performance Recording: Solare300N, SolarI-Vw and MPP300

SOLAR300N

is also a powerful instrument for the complete analysis of mains quality in compliance with standard EN50160 (harmonic analysis, analysis of voltage anomalies, Flicker, unbalance, etc.). The management software provides the possibility of TopView also creating professional reports, which can be customized by adding the company's logo, the customer's data, comment, etc.,

For More information Contact our Technical Sales team at sales@rfe.ie

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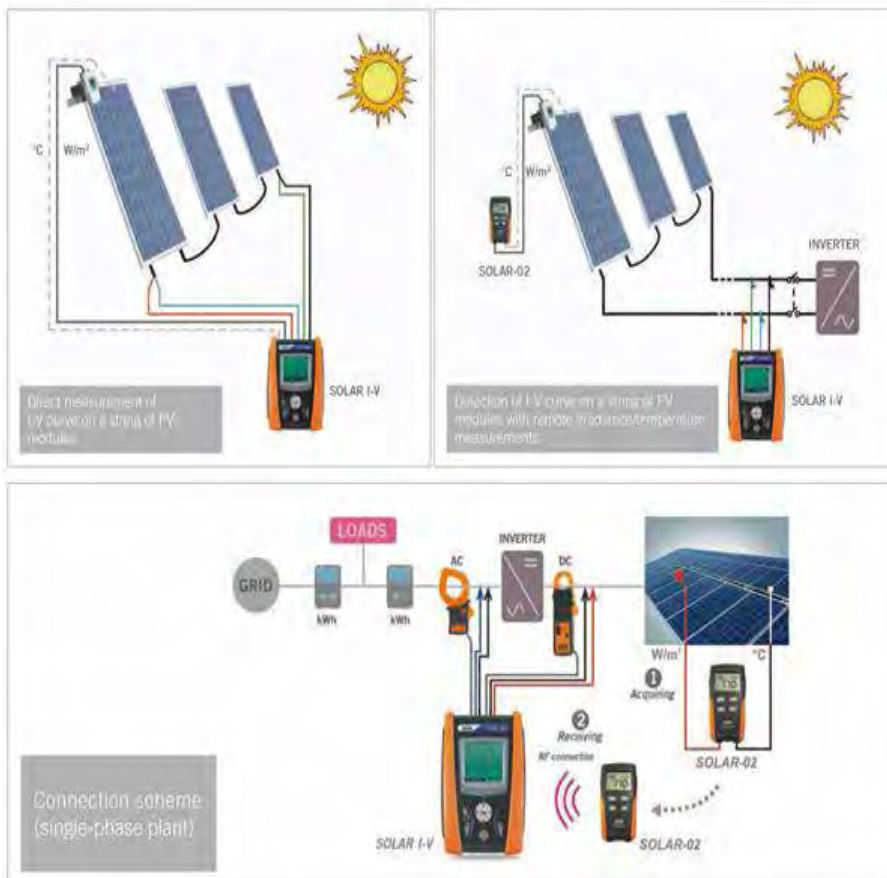
MULTI-FUNCTION INSTALLATION TESTERS WITH POWER QUALITY ANALYSIS

Item	Description	Price
PQA824/VEGA78	Three Phase Power Quality Analyser	POA
PQA820	Single Phase, Three Phase 3/4 Wire	POA
COMBI 420	Tests on Domestic and Industrial Systems	POA

PQA Available to rent, please contact a member of our sales team for further information.

M75 MULTIFUNCTION INSTALLATION TESTER

Item	Description	Price
M75	Safety verification devices in compliance with standard IEC/EN61557-1 with TRMS multimeter and LAN RJ-45 network cable mapping functions	POA
M74	Multimeter functions TRMS automatic sequence Ra, RCD and MΩ continuity of protective conductors with 200mA	POA

CLAMP METERS

Clamp meters HT9012/9014 Designed to Measure AC Current up to 600Aand AC/DC Voltage up to 1000V to reach CAT IV 600V and II 1000V in Compliance with standard IEC/EN61010-1.

Item	Description	Price
HT9014	Professional clamp meter AC 600A TRMS, CAT IV 600V	POA
HT9012	Clamp meter AC 600A CAT IV	POA
HT7004	AC 300A TRMS Compact Clamp Meter	POA

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DIGITAL MULTIMETERS WITH MEASUREMENT OF VOLTAGE AND PHASE SEQUENCE

Measurements of AC/DC voltage up to 600V and DC current up to 10A (HT25N) with complementary functions of resistance, continuity test, diode test and 9V and 1.5V alkaline battery tests. These devices have been designed in compliance with safety standard IEC/EN61010-1 with double protective insulation in CAT III 600V.

Item	Description	Price
HT21	Compact Digital Multimeters in CAT III 600V	POA
HR000MER	Mercury professional multimeter with built-in Thermal camera	POA

VOLTAGE PENS

Phase sequence and phase conformity test with LED indications and buzzer type.

Item	Description	Price
HT20	Pen phase detector with integrated torch	POA
HT70	Pen phase detector with measurement of phase sequence	POA
HT82	Self-Powered phase sequence	POA

DIGITAL MULTIMETER WITH MEASUREMENT OF VOLTAGE AND PHASE SEQUENCE

Performing the basic functions of a common digital tester, Model HT710 carries out measurements of AC/DC voltage, frequency, resistance and continuity test. Model HT712 also allows performing measurements of voltage and frequency and phase sequence with the innovative and patented method with 1 terminal also directly on the isolating sheaths of the cables.

Item	Price
HT710	POA
HT712	POA

SAFETY EQUIPMENT - Electrical Test & Measurement Instruments

PROCESS CALIBRATORS

To generate and measure DC current and voltage signals up to 10V and 24MA easy, by setting the values thanks to the innovative setting dial. For current measurement and generation you can also set data to be displayed as a percentage corresponding to the values set (0% = 4MA, 100% = 20MA). Voltage and current signal generation is also possible using up to 3 selectable ramps.

Item	Price
HT8100	POA
HT8051	POA
HT8000	POA

THERMOMETERS

Item	Description	Price
HT300	Thermometer for measuring temperature with K/J-type probe	POA
HT3320	Professional infrared video thermometer	POA

LIGHT METERS AND SOLAR IRRADIANCE METERS

Digital light meters used to measure illuminance up to 20KLUX (HT307) and 400KLUX (HT309) through a silicon photodiode sensor. Model HT309 also allows measuring illuminance of LED sources with various colours by setting the relevant correction factors, further to measuring luminous intensity (expressed in candles or LUX). Is a digital solar irradiance meter for measurements of solar irradiation up to 2000W/M2, which can be used as an inspection device, typically in photovoltaic installations.

Item	Price
HT307	POA
HT309	POA
HT204	POA

SOUND LEVEL METER

HT154 is a professional digital precision sound level meter, the ideal solution to carry out common inspection checks on environmental noise, verification of soundproofing levels, acoustic pollution, etc. The use of the device is extremely easy and immediate thanks to the wide lcd display and the management of operations through only 5 buttons. Sound level meter HT154 is provided with mobile calibrator for integrity checks before each operation and it is housed in a practical carrying case to transport it together with all accessories necessary for measurements.

Item	Price
HT154	POA

RFE (REG FARRELL ENGINEERING LIMITED)
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INFRARED THERMAL IMAGING INSPECTION CAMERAS

Applications
- Electrical/Mechanical
- Solar Panel Inspection
- Buildings
- Under Floor Inspection
- Fever Detection
- Process
- Surveillance
- Report IR Software Included

(Prices on Application) Level 1, 2 & 3 Thermography Training also available.

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SAFETY EQUIPMENT - Insulated Matting/Glove/Rods Helmets

Work Italia
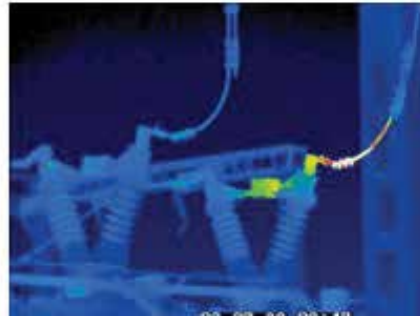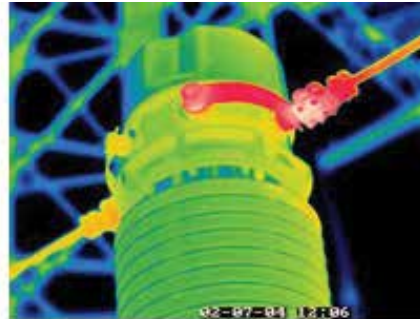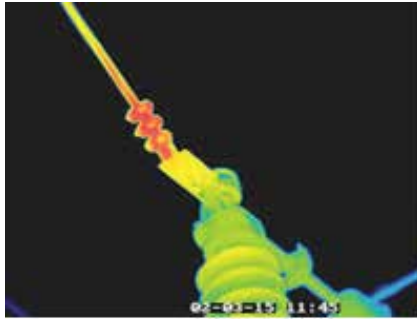
INSULATED CARPET

Model	Description	Price
WI 3/100	Thickness 3mm Voltage Test 30,000V, Anti-sliding Surface, Grey, Max Operating Voltage 26,500. Supplied in 10 Metre Lengths. Conforms to Standard IEC IIII.	€67.27 P/Mtr
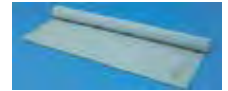
INSULATED GLOVES (CE MARK)

Model	Description	Nominal Volt	Price
GI 2.5	Voltage Test 2,500	500	€42.66
GI 5	Voltage Test 5,000	1,000	€49.80
GI 10	Voltage Test 10,000	7,500	€69.89
GI 20	Voltage Test 20,000	17,000	€77.17
GI 30	Voltage Test 30,000	26,500	€101.92
VPG 90	Pneumatic Tester for Insulating Gloves		€171.81
Cust/GI	Plastic Case for Insulating Glove		€13.98

HELMET WITH BUILT IN VISOR FOR ELECTRICIANS

Helmet according to DIN EN397 & VDE 0680 Part 1, Retractable Visor, Full Facial Protection, Against accidental switching and Arc Flash. Visor: Scratchproof Polycarbonate, transparent 2mm Thick.

Model	Price
AV9303W	€151.66

RESCUE ROD

High Insulation tube rod made of Polyester resin reinforced with fibreglass.
Tube 0 32mm Voltage 63kv Length 2m. 1 Piece.

Model	Price
FS63	€174.72

INSULATING PLATFORM (500X500X4MM)

With antislip surface made of fibreglass resin reinforced with insulated plastic legs - Insulation 30kv

Model	Price
WI30	€74.55

INSULATED PLASTIC PEGS

Plastic Peg/Clamp 1000v Insulated

Model	Price
PI/96	€23.30

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SAFETY EQUIPMENT - Substation Rescue Kits
• Wall Mounted 24kV Substation Rescue Kit (Prices Available on Request)

reece

Dielectric Insulating Safety boots – ELE20/9

• Fully insulating gloves each test stamped
  for working voltages – manufactured to EN60903
• Tested voltage to 20kV
• Added Safety protection of a 200 Joule steel toe cap
  and rubber sole
• Manufactured to EN345-1992 and ASTM F1117-93
• Non-absorbent polyester lining
• Kick off lug for easy removal
• Oil resistant outsole to EN345

25KV Cable Cutters

• Double heat-treated drop-forged blade
• No breakdown of insulation in tests to 50kV
• Handles of fibre reinforced plastic
• Replaceable blade
• Special tool steel head
• Cutting capacity
  IV150mm2/VVR22-3C/CV100mm2/CVT22mm2
• Overall length: 460 mm
• Weight: 980 g

IP66 grade wall mounted storage box
• Body Colour; Grey
• Material; Polycarbonate
• Depth; 800mm/31.5"
• Height; 300mm/11.8"
• Width; 600mm/23.6"
• IP rating; IP66
• UV stabilised thermo
  plastic

Insulated Rescue Hook – 24kV rated

• Humidity-proof seals on each end
• M-10 metric head
• Total length of 1.75 M
• Working voltage: 45 kV

Class 3 Electrical Insulating safety gloves with case – ELE14/9

• Fully insulating gloves each test stamped
  for working voltages – manufactured to EN60903
• Length 360mm
• Thickness; 2.9mm
• Test voltage 30kV
• Working Voltage 26.5kV
• Class 3

Voltage detector

• Works with no battery.
• For Indoor use.
• Rated voltage: 5 to 36 kV
• Insulating pole 1.25M
• Frequency: 50 Hz

Safety insulation platform

• Manufactured from copolymer polypropylene
  plastic, according to the Standard UNE 204001
• Rough, non-slip surface
• Rubber feet gives high adherence to the floor surface
• Stable, high impact and slip resistance
• Platform: 525 x 525mm; Surface: 575 x 575mm

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SAFETY EQUIPMENT - Insulation Rods for Switches Disconnection

Work Italia

INSULATING RODS		
MODEL	SIZE	PRICE
PR1/150	GS- L=1.5m - 1 Piece - ØTube 32mm	**84.24**
PR1/200	GS- L=2m - 1Piece - ØTube 32mm	**113.57**
PR1/250	GS- L=2.5m - 1Piece - ØTube 40mm	**100.88**
PR2/300	GS- L=3m - 2Pieces - ØTube 40mm	**147.68**

Rods in fibreglass tube for switches disconnection complete of hand guard, metallic hook & fast connection for the models with two elements. • Test by ENEL. • Test by USSL • Test by Electrotechnic Italian Institute GALILEO FERRARIS of Turin. • Certificate in agreement to the NBN 761.03 Standard (Belgium).

PLEASE SPECIFY CONTACT ATTACHMENTS FROM TABLE BELOW

CLAMP TYPE	
MODEL	Description
Type G	Steel hook
Type B	Steel bayonet
Type D	Aluminium DIN bayonet
Type F	Plastic threaded for tube 40mm diameter
Type FA	Aluminium threaded for tube 32mm diameter
Type CH	Aluminium CH22/26 hexagonal
Type EF	Plastic CH12 thread M10
Type U	Universal

DENOMINATION EXAMPLES

PR1/200 B Rod 2m length in unique piece with Type B steel bayonet attack.
P2/300 F   Rod 3m total length in 2 pieces of 1,5m each with Type F plastic threaded attack.
PR3/600 G Rod 6m total length in 3 pieces of 2m each with Type G steel hook attack.

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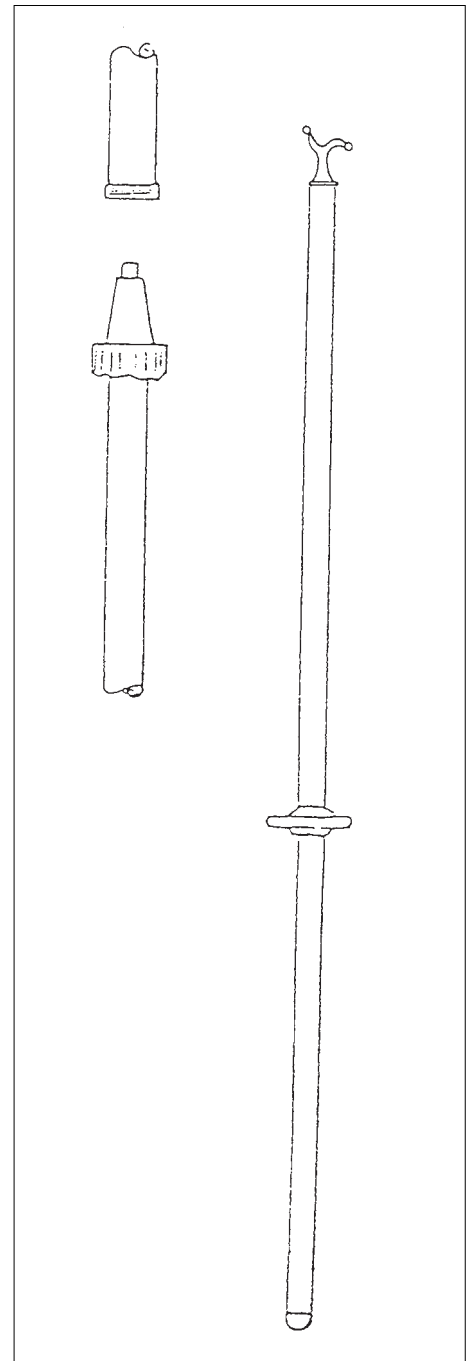
SPECIFICATION FOR SHORT-CIRCUITING AND EARTHING SYSTEMS

CHARACTERISTICS

- Selected connection type: Sketch No _____

- Connect clamps (type MT - _____

- Short-circuiting cable (§ A)
     • Length (m) _____
     • Dia. or section (mm, mm^2) _____

- Grounding cable (§ B)
     • Length (m) _____
     • Dia. or section (mm, mm^2) _____

- Earth clamp, type _____

- Insulation stick, type _____

Sketch No 1   Sketch No 2   Sketch No 3
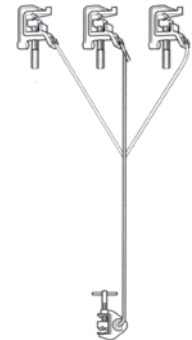
- Accessories
     • Carrying bag for sticks   ▭
     • Canvas bag for equipment   ▭
     • Carrying case for equipment   ▭

A) GROUNDING INSTALLATION CHARACTERISTICS

Network voltage: _____ kV   Max. short-circuiting current (1s): _____ kA
Nature of the conductive materials: Basis Al ▭   Basis Cu ▭

OVERHEAD LINES ▭

-Dia. or section of the conductors: min. _____
                                                          max. _____

SWITCHBOARD OF SUBSTATION ▭

-Round bars dia. (mm):   mini. _____   maxi. _____

-Flat bars ⟨ H type ▭ Length = _____ Thickness = _____
                V type ▯ Length = _____
                              Thickness = _____

-Fitting on edge face ▭   Fitting on side face ▭

B) CHARACTERISTICS OF THE GROUNDING EQUIPMENT

- Selected sketch (out of the three standard types shown above)

- Distance between live conductors (m): _____ , between live conductors and grounding point (m) _____

- To place the clamps in position, the operator will stand: above the conductors ▭   under the conductors ▭
                                                                                at the conductors level ▭

- For cable sections, please indicate max. ▲ T or min. dia. of the conductor _____

C) GROUNDING CONNECTION POINT

- Earth rods: or thickness on side face (mm): _____   Flat bar, angle-bar, thickness (mm): _____

- Round conductor dia. (mm): _____

D) OPERATING SYSTEM

- Insulating stick: total length: _____   Fixed ▭   Connectable stick ▭

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SAFETY EQUIPMENT - Short Circuiting and Grounding Devices

Work Italia

SHORT CIRCUITING & GROUNDING DEVICES

MODEL	DESCRIPTION	PRICE
MT/PF	Standard Type (Icc: 13,7 kA eff / 0,25 s.)	**509.60**
MT/PF-50	with short circuit cables section 50mm² (Icc: 13 kA eff / 0,5 s.)	**642.72**
MT/PF-95	with short circuit cables section 95mm² (Icc: 24 kA eff / 0,5 s.)	**680.16**

Short circuiting and suitable grounding equipment for electric cabins and MV installations with contact clamps suitable for ball head fixed point diam. 20/25 mm.

CLAMPS

CLAMPS		
MODEL	DESCRIPTION	PRICE
PF20	Spherical Fixed Point 20mm, Round up to 20mm, Flat up to 22mm.	**49.92**
PF25	Spherical Fixed Point 25mm, Round up to 20mm, Flat up to 22mm.	**49.92**
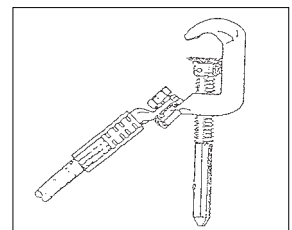
Contact clamp for short circuiting and grounding equipment for electric cabins and MV HV installations.
Complete with EF attachment.

CLAMPS		
MODEL	DESCRIPTION	PRICE
PC 2018	Round conductor 3-20mm (Icc 14.1 kA eff/ 1 s)	**35.36**
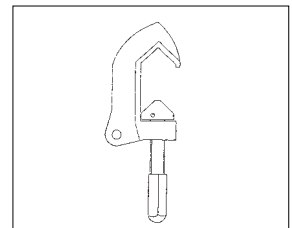
Contact clamp for short circuiting and grounding equipment for electric cabins and MV HV installations.
Complete with EF attachment.

CLAMPS		
MODEL	DESCRIPTION	PRICE
PC 2013	Flat Bar up to 40 x 16mm (Icc 10 kA eff/ 1 s)	**37.44**
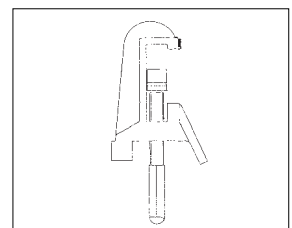
Contact clamp for short circuiting and grounding equipment for electric cabins and MV HV installations.
Complete with EF attachment.

CLAMPS		
MODEL	DESCRIPTION	PRICE
PC 22	Flat Bars up to 22mm (Icc 30 kA eff/ 1 s)	**49.92**
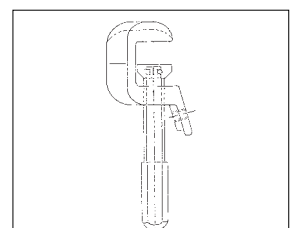
Contact clamp for short circuiting and grounding equipment for electric cabins and MV HV installations.
Complete with EF attachment.

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Work Italia

CLAMPS

GROUND CLAMP		
MODEL	DESCRIPTION	PRICE
MT 22	Flat Bars up to 22mm	**53.40**

In agreement to the ENEL specifications Short Circuit Current: 30 kA eff / 1 s
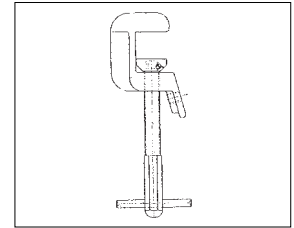
GROUND CLAMP		
MODEL	DESCRIPTION	PRICE
MT 33	Round conductor up to 33mm	**49.92**

In agreement to the ENEL specifications Short Circuit Current: 40 kA eff / 1 s.
Test certificate of short circuit by electrotechnic Italian Institute Galileo Ferraris of Turin.
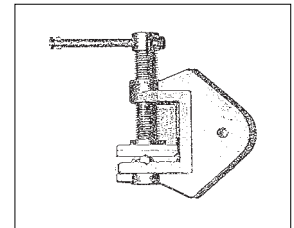
GROUND CLAMP		
MODEL	DESCRIPTION	PRICE
MT 40	Round conductor up to 40mm	**56.00**

In agreement to the ENEL specifications Short Circuit Current: 40 kA eff / 1 s.
Test certificate of short circuit by electrotechnic Italian Institute Galileo Ferraris of Turin.
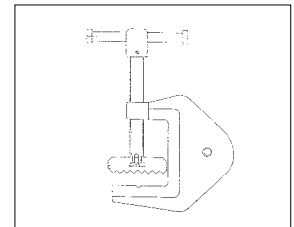
GROUND CLAMP FOR SPHERICAL FIXED POINTS		
MODEL	DESCRIPTION	PRICE
MT20	Round up to 20mm. Flat up to 22mm.	**53.04**
MT25	Round up to 25mm. Flat up to 22mm.	**58.24**

In agreement to the ENEL specifications Short Circuit Current: 30 kA eff / 1 s.
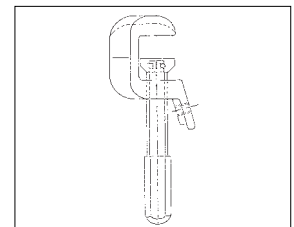
ELECTOLYTIC COPPER CABLE		
MODEL	DESCRIPTION	PRICE
	Please specify CSA and length	**POA**

In agreement to CEI 20-29/CENELEC HD 383 Standard
Sections: 16mm², 25mm², 35mm², 50mm², 70mm², 95mm², 120mm²,

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SAFETY EQUIPMENT - Voltage Detectors
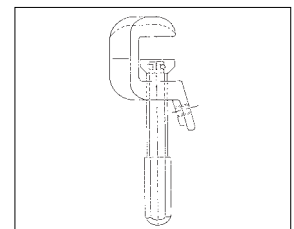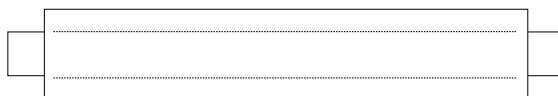
VOLTAGE DETECTORS

VOLTAGE DETECTORS		
MODEL	**DESCRIPTION**	**PRICE**
RBT 750	Single, Double Pole for LV - Visual & Acoustic Indication. 25-500v AC. 50-750v DC. Built-in self control check.	**260.00**

VOLTAGE DETECTORS		
MODEL	**DESCRIPTION**	**PRICE**
RMT 1030	Electronic voltage capacitive detector for MV, Indoor/Outdoor, Volt Range 3-52kV. Built-in self control check.	**468.00**
RMT 3090	Electronic voltage capacitive detector for MV, Indoor/Outdoor, Volt Range 10-400kV. Built-in self control check.	**540.80**

VOLTAGE DETECTORS		
MODEL	**DESCRIPTION**	**PRICE**
RMT 1133	Electronic Voltage Capacitive Detector for MV-HV, indoor/outdoor, Volt Range 3-36kV. Built-in self control check.	**291.12**
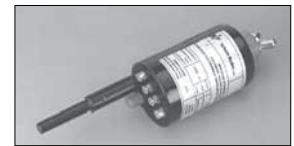
VOLTAGE DETECTORS		
MODEL	**DESCRIPTION**	**PRICE**
RBM 36	Phasing & Voltage Detector to detect a presence or absence of MV with visual signal. Operating Range 5kV-36kV.	**829.92**

VOLTAGE DETECTORS		
MODEL	**DESCRIPTION**	**PRICE**
RTC 3600	DC voltage electronic detector with visual & acoustic indicator. Built-in self control check. 500-3600vDc	**866.32**

Price includes two part rod, 2 x 2 metres = 4 metres

Fabric Bag for rod - metallic contact probe

- copper cable -ground clamp

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SAFETY EQUIPMENT - PPE (Personal Protective Equipment)

SAFETY HARNESSES & LANYARDS - FALL PROTECTION

Workman Harness
Part No. 10072479

Stand-Up
Back
D-Ring

Workman Harness
Part No. 10072491

ARC-BALA-HE

High Energy Arc Flash protective Balaclava for electricians. With dual eye port design. ATPV 45 cal/cm². Must be worn with additional PPE. The product is designed to protect eyes and face, if used as intended, against the mechanical and thermal hazards of an arc flash during live working or when staying in the vicinity of live parts. It is not intended for arc welding, especially not to protect against long term high heat, chemicals or any other radiation than emitted by an arc flash.

Code	Material	Weight	Colour	Standard
ARC-BALA-HE	Triple layer; Carbonized fiber (100 % Carbon-X)	176g (6.21oz)	Black	ANSI Z87.1, ASTM F2178, EN 166, NFPA 70E

ARC-SK1-PC-8

Arc Flash Protective Face Shield Kit. Includes cap bracket with US clips. With Standard Coating. Tested to an ATPV of 8 cal/cm2 as per ASTM F2178 (Open Arc Test). Meets NFPA 70E (HRC 2). The product is designed to protect eyes and face, if used as intended, against the mechanical and thermal hazards of an arc flash during live working or when staying in the vicinity of live parts. It is not intended for arc welding, especially not to protect against long term high heat, chemicals or any other radiation than emitted by an arc flash.

Code	Material	Window Size	Weight	Colour	Standard
ARC-SK1-PC-8	Polycarbonate	18,4 x 50,8 x 0,15 cm (7.25" x 20" x 0.06")	298g (10.5oz)	Green	ANSI Z87.1, ASTM F2178, NFPA 70E

intercable

INSULATED TOOLS-1000 VOLT
Stripping Tools

INSULATED TOOLS

Hand Tools

• Electricians Scissors
• Insulated Screwdrivers
• Insulated Pliers & Cutting Tools
• Modular Insulated Tools

INSULATED TOOLS

Cutting Tools

• Hydraulic Cutting Heads
• Hand Operated Hydraulic Cutting Tools
• Battery Operated Cutting Tools

CE

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Critical Asset Surveillance Technologies (CAST)

- Infrared Inspection Windows
- Wireless Temperature Monitoring System
- Intelligent Asset Monitoring System & Ultrasound Detection

IR windows, EMSD's (Electrical Maintenance Safety Solutions), ultrasound ports, and asset tracking for the electrical industry to save time, money, and lives

The CAP Series Infrared Windows

The IRISS CAP Series of infrared windows are the largest standard sized IR windows available in the marketplace today. The series incorporates a rectangular design available in standard sizes of 4, 6, 12, and 24 inches and allows for more freedom to inspect multiple components through one infrared window. This reduces the number of IR windows required and the installation time and costs associated with multiple round window installations.

The Delta-T **Wireless Monitoring Temperature** Alert System

Delta-T Alert ™ is a wireless, self-contained temperature monitoring sensor that attaches to an electrical enclosure. The patented Delta-T Alert™ unit is simple to install and comprises of two temperature sensors – one to monitor the electrical enclosure's interior temperature and the second to monitor the ambient room temperature where the enclosure is located. Delta-T Alert™ sensors are configured to collect data daily at specific time intervals. The data is wirelessly transmitted for analysis and trending and warns the operator of temperature issues within their electrical enclosures – well   before more serious problems occur Delta-T provides an easier, more effective way to prevent costly electrical damage and system downtime.

Critical Asset Surveillance Technologies (CAST)

- Infrared Inspection Windows
- Wireless Temperature Monitoring System
- Intelligent Asset Monitoring System & Ultrasound Detection

IR windows, EMSD's (Electrical Maintenance Safety Solutions), ultrasound ports, and asset tracking for the electrical industry to save time, money, and lives

E Sentry Connect System

The E Sentry Connect ™ is our next generation intuitive asset information tagging system. The E Sentry Connect system utilizes Near Field Communication (NFC) contactless Smart Card technology that allows smart-phone devices with NFC to easily access critical data relating to the equipment being inspected and also save up-to-date inspection data directly to the assets E Sentry Connect tag via a free App from IRISS. The E Sentry Connect Tagging system has been designed to be operated on 2 platforms, a standalone system and a subscription based cloud system allowing historical data back-up and complete access to the current status of all assets utilizing E Sentry Connect tags.
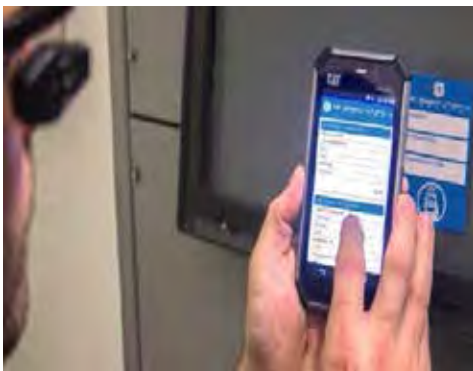
The Sonus Series For Ultrasound Port Inspections

The versatility of Sonus XT makes it ideally suited to work with any plant maintenance program and the perfect complement to other Predictive Maintenance (PDM) Technology. Ultrasound detection can be utilized to detect early warning signs of equipment failure and to conduct energy conservation audits. Quickly and Safely perform closed panel airborne Ultrasound inspections of electrical equipment including Switchgear, Switchboards, Panel boards, Transformers, Motor Control Centres and Process Equipment Panels to detect early warning signs including such as Arcing, Tracking and Corona. Fast and accurate diagnosis of problems using the Sonus XT will save you time and money.

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SAFETY EQUIPMENT
- (LOTO) Lockout Tagout Safety Products

Essential Products for Lockout/Tagout systems in the workplace, over 1,500 safety products available

FULL LOCK OUT/TAG OUT CATALOGUE AVAILABLE CONTACT SALES@ RFE.IE TO REQUEST YOUR COPY

- Safety Padlocks Steel/Plastic
- Lockout Kits for Industry
- Lockout Hasps-Lockout Labels & Signs, Circuit Breaker Lockout/Kits
- Lockout Stations
- Valve Lockout
- Fuse, Plug & Controls Lockout, Lockout Stations
- Hazard Signs

Customised Products also available.

"LIFE CRITICAL SAFETY PRODUCTS"

RFE (REG FARRELL ENGINEERING LIMITED)
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SAFETY EQUIPMENT - (LOTO) Applying Lockout/Tagout

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Applying Lockout/Tagout

Energy isolation and Lockout/Tagout are to be applied only by trained employees authorised to perform service or maintenance. Before Lockout/Tagout is applied, all employees who work in the affected area must be notified. Legislation requires that control of hazardous energy be done according to a step-by-step procedure.

1) Preparation For Shutdown

Before you turn off any equipment in order to lock/tag it out, you must know:
◆ The types and amounts of energy that power it.
◆ The hazards of that energy.
◆ How the energy can be controlled

2) Equipment Shutdown

Shut the system down by using the operating controls. Follow whatever procedure is applicable for the equipment so that you don't endanger anyone else during shutdown.

3) Equipment Isolation

◆ Install all energy-isolating devices so that the equipment is isolated from its energy source.
◆ Be sure to isolate all energy sources and secondary power supplies as well as the main one.
◆ Never remove a fuse instead of disconnecting the energy or power.

4) Application Of Lockout Devices

◆ All energy-isolating devices are to be locked and tagged according to your company Lockout/Tagout procedures.
◆ Only the standardised devices supplied by your employer should be used for Lockout/Tagout and they should not be used for anything else.
◆ Use a Lockout device if your padlock cannot be placed directly on the energy control.
◆ When a Lockout device is used, every employee can lock out a single energy-isolating device.
◆ For large jobs, a Lockout Box can be used to maintain control over a large number of padlocks and keys.
◆ If tags are used together with a padlock, ensure they are securely fastened to the padlock.
◆ Fill tags out completely and correctly.

5) Control Of Stored Energy

Take any of the following steps that are necessary to guard against energy left in the equipment after it has been isolated from its energy sources.

◆ Inspect the system to make sure all parts have stopped moving.
◆ Relieve trapped pressure.
◆ Release the tension on springs, or block the movement of spring-driven parts.
◆ Block or brace parts that could fall because of gravity.
◆ Block parts in hydraulic and pneumatic systems that could move from loss of pressure.
◆ Bleed the lines and leave vent valves open.
◆ Drain process piping systems and close valves to prevent the flow of hazardous materials.
◆ If a line must be blocked where there is no valve, use a blank flange.
◆ Purge reactor tanks and process lines.
◆ Dissipate extreme cold or heat, or wear protective clothing.
◆ If stored energy can reaccumulate, monitor it to make sure it stays below hazardous levels.

6) Equipment Isolation Verification

Take any of the following steps that fit your company's equipment and energy control program:

◆ Make sure all danger areas are cleared of personnel.
◆ Verify that the main disconnect switch or circuit breaker cannot be moved to the 'on' position.
◆ Use a voltmeter or other equipment to check the switch.
◆ Press all start buttons and other activating controls on the equipment itself to PROVE that it is isolated. (This procedure is vital. Many accidents happen due to isolating the wrong control switch and not testing prior to commencing work)
◆ Shut off all machine controls when the testing is finished.

7) Performing The Work

Look ahead and avoid doing anything that could re-activate the equipment. Don't bypass the lockout when putting in new piping or wiring.

Simple steps for Locking Out
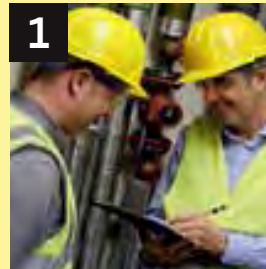
1 Plan and prepare
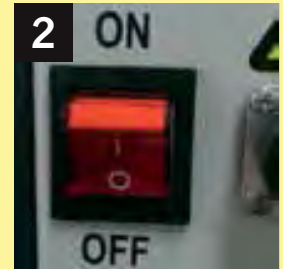
2 Shut down equipment in a normal manner

3 Disconnect energy isolation devices

4 Application of Lockout/tagout devices

5 Render all stored and residual energy safe

6 Verify equipment isolation

7 Perform work safely

8 Reactivation by responsible person

MLH1 Stainless Steel Lockout Hasp

Manufactured from 316 stainless steel with a bright, durable nickel plated finish. Ideal for use in all industrial environments.

5mm Diameter

40 mm

25 mm

Fully opening body for easier application

8mm Diameter Holes

**Code
MLH1**

MLH7 Flexible Lockout Hasp

Manufactured from heavy duty flexible nylon with 80mm clearance. Can easily be manipulated into place. Ideal for difficult applications. Accepts padlocks with a shackle diameter up to 9mm.

**Code
MLH7**

MLH10 Stainless Steel Lockout Hasp Thin

The MLH10 lockout hasp is manufactured with a small 3mm diameter hasp making it ideal for those 'small hole' applications.

- ◆ Accepts up to 6 padlocks
- ◆ 10mm dia padlock holes
- ◆ 30mm vertical hasp clearance
- ◆ Stainless steel

**Code
MLH10**

MLH4 Aluminium Lockout Hasp

Double scissor action lockout hasp manufactured from aluminium, with 25mm and 38mm diameter jaws. Overall length 149mm. Accepts padlocks with a shackle diameter up to 7.5mm.

**Code
MLH4**

MLH5 Safety Lockout Hasp

Manufactured from steel with a red plastic coated body. Scissor action with 25mm diameter jaw size. Accepts padlocks with a shackle diameter up to 10mm.

**Code
MLH5**

MLH6 Safety Lockout Hasp

Manufactured from steel with a red plastic coated body. Scissor action with 38mm diameter jaw size. Accepts padlocks with a shackle diameter up to 10mm.

**Code
MLH6**

SAFETY EQUIPMENT
- (LOTO) Safety Padlocks Steel/Plastic Shackle

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New

Nylon Body Safety Padlocks Supplied With Steel Shackles or Non-Conductive Plastic Shackles

These nylon body safety padlocks with steel or non-conductive plastic shackles are a cost effective solution to meet your lockout requirements.

◆ High security key cylinder
◆ 2 keys to each lock
◆ Bodies and keys stamped with key number as standard
◆ 9 different colour options available for clear identification
◆ Available keyed to differ and keyed alike
◆ Standard safety/owner labelling on both sides included
◆ Can be engraved if required
◆ Other keying systems available upon request
◆ Durable and lightweight with non-conductive lock bodies
◆ 38mm wide x 44mm bodies, vertical shackle clearance 38mm, shackle diameter 6.4mm

STEEL SHACKLE

PLASTIC SHACKLE

Steel shackle model

Plastic shackle (non-conductive) model

2 keys to each lock

SAFETY PADLOCKS KEYED DIFFERENTLY

Description	Steel Shackle Code	Plastic Shackle Code
RED Safety padlock keyed differently	TT38RED	NC38RED
YELLOW Safety padlock keyed differently	TT38YLW	NC38YLW
PURPLE Safety padlock keyed differently	TT38PRP	NC38PRP
WHITE Safety padlock keyed differently	TT38WHT	NC38WHT
GREEN Safety padlock keyed differently	TT38GRN	NC38GRN
BLUE Safety padlock keyed differently	TT38BLU	NC38BLU
TEAL Safety padlock keyed differently	TT38TEA	NC38TEA
ORANGE Safety padlock keyed differently	TT38ORJ	NC38ORJ
BLACK Safety padlock keyed differently	TT38BLK	NC38BLK

SAFETY PADLOCKS KEYED ALIKE

Description	Steel Shackle Code	Plastic Shackle Code
RED Safety padlock keyed alike to KA30003	TT38REDK	NC38REDK
YELLOW Safety padlock keyed alike to KA30005	TT38YLWK	NC38YLWK
PURPLE Safety padlock keyed alike to KA30002	TT38PRPK	NC38PRPK
WHITE Safety padlock keyed alike to KA30009	TT38WHTK	NC38WHTK
GREEN Safety padlock keyed alike to KA30001	TT38GRNK	NC38GRNK
BLUE Safety padlock keyed alike to KA30007	TT38BLUK	NC38BLUK
TEAL Safety padlock keyed alike to KA30004	TT38TEAK	NC38TEAK
ORANGE Safety padlock keyed alike to KA30006	TT38ORJK	NC38ORJK
BLACK Safety padlock keyed alike to KA30008	TT38BLKK	NC38BLKK

Both steel and plastic shackle padlocks are supplied Keyed to Differ or Keyed Alike as standard.

Other keying options can be made upon request.

Explanation of Keyed to Differ
All locks have a different key

Explanation of Keyed Alike
One key fits a series of locks

The nylon padlock body and both keys are stamped with identification letters/numbers as standard.

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SAFETY EQUIPMENT - (LOTO) Zenex and Other Padlocks

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Zenex Padlocks

These Zenex lockout padlocks are ideal for lockout applications.

- ◆ Durable, lightweight with non-conductive Zenex lock bodies.
- ◆ High security 6 pin cylinder lock, up to 100,000 different locking mechanisms.
- ◆ 1 key to each lock.
- ◆ Key retaining ensures that padlocks are not left unlocked.
- ◆ 8 different colour options available for clear identification.
- ◆ Available keyed to differ, or keyed alike in 8 colour coded suites.
- ◆ Standard 'Do Not Remove' label and write on property labels included.
- ◆ Can be engraved if required.
- ◆ 38mm wide x 44mm bodies, vertical shackle clearance 38mm, shackle diameter 6.4mm.
- ◆ Lock and key number records for this range can be maintained by RFE Safety upon request.

Supplied with front and rear labels

- ◆ **Available with 2 standard keying options, keyed to differ or keyed alike.**
- ◆ **Other keying options can be made upon request (eg. Master & Differ).**

Zenex PADLOCKS KEYED DIFFERENTLY

Code	Description
R410GRN	Zenex padlock GREEN, keyed differently
R410PRP	Zenex padlock PURPLE, keyed differently
R410RED	Zenex padlock RED, keyed differently
R410TEA	Zenex padlock TEAL, keyed differently
R410YLW	Zenex padlock YELLOW, keyed differently
R410ORJ	Zenex padlock ORANGE, keyed differently
R410BLU	Zenex padlock BLUE, keyed differently
R410BLK	Zenex padlock BLACK, keyed differently

Explanation of padlocks keyed differently

Zenex PADLOCKS KEYED ALIKE

Code	Description
R410GRNK	Zenex padlock GREEN, suite 3XX1412
R410PRPK	Zenex padlock PURPLE, suite 3XX1353
R410REDK	Zenex padlock RED, suite 3XX2155
R410TEAK	Zenex padlock TEAL, suite 5XX1723
R410YLWK	Zenex padlock YELLOW, suite 3XX5998
R410ORJK	Zenex padlock ORANGE, suite 4XX4246
R410BLUK	Zenex padlock BLUE, suite 3XX6795
R410BLKK	Zenex padlock BLACK, suite 3XX8094
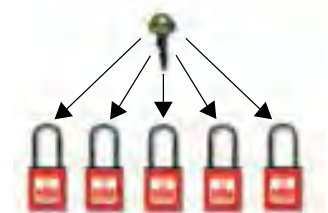
Explanation of padlocks keyed alike

Small Brass Padlocks

4mm Diameter

3mm Diameter

15 mm

12 mm

20mm

25mm
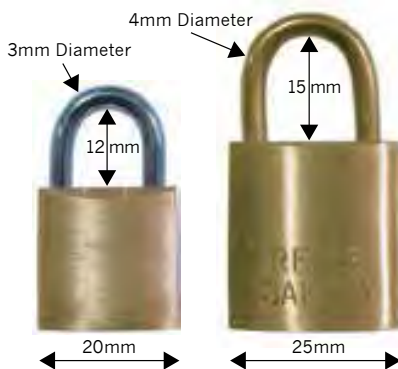
- ◆ S25D available with 600 individual key combinations
- ◆ Rustproof brass body
- ◆ Lock and key number recording as standard
- ◆ Ideal for applications where applying a lock has restricted space

Code	Description
S20K	Keyed alike (steel shackle)
S25D	Keyed to differ (brass shackle)
S25K	Keyed alike (brass shackle)

Brass Combination Padlocks

The RFE re-settable combination padlocks are ideal for a wide range of applications, with a 4 digit combination giving an impressive 10,000 different possible combinations.

Combinations are factory set at 0000 and are easily changed to a memorable number.

The chosen combination number can be changed at any time should a breach of security arise.

Code	Description
BCT2035	21mm body, 22mm clearance and 3mm diameter shackle
BCT1040	40mm body, 26mm clearance and 5mm diameter shackle

Stainless Steel Padlocks

This marine grade padlock is fully manufactured from stainless steel and is designed to be used in very harsh/ aggressive environments.

- ◆ Stainless steel body/shackle.
- ◆ 5 pin high security cylinder mechanism.
- ◆ Supplied with random locking mechanisms.
- ◆ Double ball bearing deadlock.
- ◆ Key retaining when shackle is open.
- ◆ 40mm body, vertical shackle clearance 51mm, shackle diameter 7mm.
- ◆ Lock and key number records are not maintained by RFE Safety for this range.

Code	Description
R2340	Stainless steel padlock

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SAFETY EQUIPMENT
- (LOTO) Lockout Tagout Safety Products

Universal Lockout Device for Fuse Holders

- Will lock out most types of fuse holders - One size fits all.
- Lock out 20 Amp to 400 Amp fuse holders.
- 8mm padlock hole - max clamping 5mm.
- Made from sturdy nylon plastic.
- Dimensions: 60x35x15 mm wide.

Code	Description
UFL2	Universal Fuse Lockout

Slimline Universal Fuse Lockout

Our RFB5 universal fuse lock has similar properties to the UFL2. However, its slimline, low profile design allows this to be used on fuse carriers that are fitted within enclosures, very close to the door.

By using the RFB5, fuse carriers can be locked off and the enclosure door still closed.

Code	Description
RFB5	Slimline Fuse Lockout

Bottle Fuse Lockouts

The new bottle fuse lockout is available in two sizes to fit DZ3 and D02 Fuses.

Remove the fuse, screw in the lockout device and secure using a cable lockout and padlock.

D02   DZ3

D02 for small fuses
DZ3 for large fuses

Code	Description
D02	Small bottle fuse lockout
DZ3	Large bottle fuse lockout

Fuse Lockout Station

This fuse lockout station includes a selection of lockout equipment for a wide range of applications. Shadow profiles on the board highlight the position of the equipment.

Complete with the following:

4 x TT38RED Padlocks
1 x S806 Cable Lockout
2 x MLH7 Lockout Hasps
1 x D02 Bottle Fuse Lock
1 x DZ3 Bottle Fuse Lock
1 x RFL1 Fuse Lockout
1 x RFL2 Fuse Lockout
1 x RFB3 Fuse Blockout
1 x RFB4 Fuse Blockout
1 x RFB5 Fuse Lockout
1 x UFL2 Fuse Lockout
3 x LSE10T Packs of 10 Tags   Size: 500mm H x 420mm W

Code	Description
LSE308FS	Fuse lockout station with equipment

Universal Fuse Lock and Block Kit

An ideal kit for locking and blocking all types of bladed fuses and fuse holders.

This kit contains 5 different devices (UFL2, RFL1, RFL2, RFB3, RFB4), along with a TT38RED padlock, pack of 10 RPT32AR tags and pen, all packed in a strong canvas waist bag allowing contents to be carried at all times.

Code	Description
FBLKIT	Fuse Lock and Block Kit

IEC detachable Power Cord Lockout

Equipment fitted with the popular IEC type input power connector can now be secured using the IEC lockout. This device will fit most computers, test instruments, power supplies, monitors, lab equipment etc.

The IEC lockout features an elastomeric nose that bulges to firmly grip to the interior surfaces of the connector housing. This palm-sized, lightweight, simple device is made of durable nylon that accommodates a personal padlock for lockout and security applications.

Code	Description
IEC	IEC lockout

Push Button Lockout Cover

Designed to fit over push button switches to prevent accidental operation. Overall 50mm dia. with 30mm dia. hole. Secured with padlock - max. shackle dia. 7mm.

Strong double sided securing tape included.

New

Code	Description
SC0100	Push button cover

'Big Red Bag' Control Panel Cover

This 'Big Red Bag' entirely envelops the control panel of machinery and equipment, and is highly visible.

The cover slides over the control panel, from the top, bottom, left or right. The neck of the cover is closed by the toggle cord, and finally the lockout device is tightened and padlock secured.

Code	Description
BIGRED	'Big Red Bag' control panel cover

Plug Lockouts

◆ Especially developed to secure all types of plugs.
◆ Completely encloses electrical plugs to prevent accidental reconnection.
◆ Two sizes available.

Model LP330 90 x 50 x 50mm
Model LP770 180 x 80 x 80mm

Padlock not included

Code	Description
LP330	Small plug lockout
LP770	Large plug lockout

Safety Lockout Bag

Padlockable safety lockout bag ideal for use on larger 3 phase plugs.

Plug and electrical cable are placed inside the bag, the cord is tightened around the cable, then the cord clamp is closed and padlock attached, or multiple padlocks with a lockout hasp.

Ensures the plug cannot be removed until all maintenance work is completed and all padlocks removed.

Size: 460mm H x 250mm W

Code	Description
YSLB1	Safety lockout bag

Plug and Pendant Lockout Station

This plug and pendant lockout station includes a selection of lockout equipment for a wide range of applications. Shadow profiles on the board highlight the position of the equipment.

Complete with the following:

4 x TT38RED Padlocks
2 x MLH7 Lockout Hasps
1 x YSLB1 Lockout Bag
1 x R453XXL Pendant Lockout Bag
2 x Plugblock plug lockouts
2 x RPSL1 Plug Lockouts
1 x LP330 Small plug box
1 x LP770 Large plug box
3 x LSE10T Pack of 10 Tags

Size: 620mm H x 680mm W

Code	Description
LSE314FS	Plug and Pendant lockout station

SAFETY EQUIPMENT
- (LOTO) Lockout Tagout Safety Products

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Gate Valve Lockouts

Gate valve covers are a simple, low cost, effective way to prevent unauthorised operation of valves. Valve covers consist of two flattened half moons that completely cover the valve handwheel. Once locked, the cover rotates freely around the handwheel preventing operation.

- ◆ Made of strong polypropylene plastic
- ◆ Fully dielectric
- ◆ Highly resistant to cracking and abrasion
- ◆ Resistant to extreme temperature changes
- ◆ Available in 5 sizes to fit handwheels 25mm (1") to 355mm (14")

Red valve covers supplied as standard, other colours available on request.

Code	To fit valve handwheel diameter
VS02	25mm to 70mm (1" to 2.1/2")
VS04	70mm to 130mm (2.1/2" to 5")
VS06	130mm to 170mm (5" to 6.1/2")
VS09	170mm to 257mm (6.1/2" to 10")
VS13	257mm to 355mm (10" to 14")

Quarter Turn Ball Valve Lockouts

A quick and simple way of preventing the operation of quarter turn ball valves.

Manufactured from steel with powder coat finish - 2 sizes available, both accept padlocks with a shackle diameter up to 9.5mm

- ◆ Easy slide-on application
- ◆ Colour: red

Step 1 Slide on
Step 2 Squeeze together
Step 3 Apply lock

Code	Description
BS07	To fit valve levers 6mm to 25mm wide To fit valve
BS08	levers 32mm to 76mm wide

Valve Lockout Station

This valve lockout station includes a selection of lockout equipment for a wide range of applications. Shadow profiles on the board highlight the position of the equipment.

Complete with the following:

1 x VS02, VS04, VS06, VS09, VS13 Gate Valve Lockouts
1 x BS07 Ball Valve Lockout
1 x BS08 Gate Valve Lockout
1 x BS16 Ball Valve Lockout
1 x BS17 Gate Valve Lockout
2 x MLH7 Lockout Hasps
3 x LSE10T Packs of 10 Tags
6 x TT38RED Padlocks

Size: 875mm H x 825mm W

Code	Description
LSE309FS	Valve lockout station with contents

Valve Position Notification Labels

Highly visible labels to notify the position of a locked out valve. They are available in five sizes designed for our range of Gate Valve Lockouts (VS02, VS04, VS06, VS09, VS13).

Supplied as a single sheet with one of each message label on self-adhesive vinyl.

VALVE OPEN
VALVE CLOSED
VALVE SET
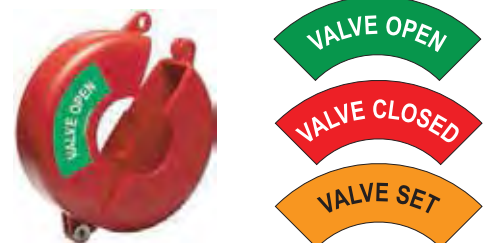
Code	Description
VSET1	Status labels for VS02/Sheet
VSET2	Status labels for VS04/Sheet
VSET3	Status labels for VS06/Sheet
VSET4	Status labels for VS09/Sheet
VSET5	Status labels for VS13/Sheet

SAFETY EQUIPMENT
- (LOTO) Lockout Tagout Safety Products

Ball Valve Lockouts

Ball valve lockouts are available in 3 sizes to lock your ball valves from 9.5mm (3/8") to 200mm (8"). These simple, easy to use lockouts clamp over the valve lever, preventing the valve from operating, and lock in place using a padlock.

Red ball valve lockouts supplied as standard, other colours available on request.

Models BS01 & BS02 can lock valves in the 'open' or 'closed' positions.

Model BS03 locks 'closed' only.

Models	Width A	Height B	Length of Handle C	Lock Hole D
BS01	3.100" 80 mm	3.250" 82 mm	5.375" to 7.500" 135 mm to 190 mm	0.312" dia. 8 mm
BS02	3.750" 95 mm	5.000" 125 mm	7.500" to 10.000" 190 mm to 250 mm	0.312" dia. 8 mm
BS03	4.000" 100 mm	7.450" 188 mm	12.000" to 17.500" 300 mm to 438 mm	0.312" dia. 8 mm

BS03   BS01/BS02
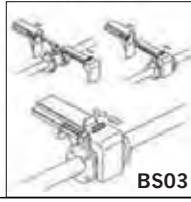
BS01

BS02   BS03

Code	To fit ball valve size
BS01	9.5mm to 31.5mm (3/8" to 1.1/4")
BS02	37.5mm to 62.5mm (1.1/2" to 2.1/2")
BS03	50mm to 200mm (2" to 8")

Butterfly Valve Lockouts

The butterfly valve lockout is a simple, effective way to secure your butterfly valves to prevent unauthorised operation.

Model	Length A	Height B	Width C	Lock Hole D
BS04	12" 305 mm	2.750" 70 mm	4.000" 102 mm	0.375" 9.5 mm

ASSEMBLY INSTRUCTIONS
1   2   3
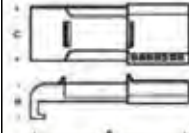
Code	Description
BS04	Butterfly valve lockout

Red valve lockouts supplied as standard, other colours available on request.

Key Storage Stations

Ideal for keeping keys stored in a central location, these mobile and wall mountable key stations are made from 6mm rigid PVC for durability and rigidity.

The mobile station holds 48 keys and comes with a robust handle attached for easy carrying and a protective aluminium foot strip.

The wall mountable stations hold 64 or 125 keys and are pre-drilled for easy installation.

Custom stations can be made to order. Please ask for details.

Code	Description
MKS48	48 Key Board
WMKS64	(Mobile)64 Key Station
WMKS125	125 Key Station

125 Hook Key Station

KEY STATION
PLEASE RETURN KEYS AFTER USE

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SAFETY EQUIPMENT
- (LOTO) Lockout Tagout Safety Products

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Miniature Circuit Breaker Lockouts

A range of four padlockable circuit breaker lockouts designed to fit most modern single and multiple pole miniature circuit breakers.

Manufactured from strong nylon, this range of miniature circuit breaker lockouts allows breakers to be locked off individually.

CB05
Push button operated and locates into the 2 holes either side of the breaker switch (see illustration). Fits most popular breakers up to 60 Amp. Will also fit breakers connected with a cross bar. Locates prongs inside.

CB06
Push button operated and locates into the 2 holes either side of the breaker switch (see illustration). Fits most popular breakers up to 60 Amp. Will also fit breakers connected with a cross bar. Locates prongs outside.

CB07
Push button operated and locates into the 2 holes either side of the breaker switch (see illustration). Extra wide for larger breakers over 60 Amp. Will also fit breakers connected with a cross bar. Locates prongs inside.

CB08
Adjustable thumb wheel operation and fits larger or multi-pole circuit breakers connected with a cross bar. No holes in the breakers are required.

Code	Description
CB05	MCB lockout inside prongs
CB06	MCB lockout outside prongs
CB07	MCB lockout wide inside prongs
CB08	MCB lockout thumb wheel

'No Hole' Circuit Breaker Lockouts

This range of 'No Hole' circuit breaker lockouts are ideal for breakers that do not have any built in locking facility. The unique design, with thumb wheel operation clasps onto the switch providing secure locking protection. Available in 3 sizes. Can be used with lockout cleats for hard to lock longer sliding switches and switches with large angular rotation.

CB09 Fits switches 16.5mm wide x 11.6mm thick (up to 277 Volt).
CB10 Fits switches 41.2mm wide x 13.9mm thick (480/600 Volt).
CB11 Fits oversized switches 63.5mm wide x 22.2mm thick (usually 480/600 Volt).

Lockout Cleats

Compatible with models CB09 and CB10, ensures positive lockout for hard to lock long sliding switch throws and switches with a large angular rotation. Snap-on and off design allows for use only when needed.

Code	Description
CB09	277 Volt lockout
CB10	480/600 Volt lockout
CB11	480/600 Volt oversize lockout
CLT1	Cleat for use with CB09
CLT2	Cleat for use with CB10

MCB 'Toggle Lock'

Possibly the simplest yet most versatile MCB lockout in our range. The CB12 'Toggle Lock' simply fits over the MCB toggle, and then the internal grub screw is tightened using a small flat screwdriver which secures the CB12 onto the toggle. Once tight and secure, insert a padlock which blocks access to the grub screw so the device cannot be removed or toggle operated until the lock is removed.

Code	Description
CB12	Toggle Lock

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MCB 'Toggle Lock'

Possibly the simplest yet most versatile MCB lockout in our range. The CB12 'Toggle Lock' simply fits over the MCB toggle, and then the internal grub screw is tightened using a small flat screwdriver which secures the CB12 onto the toggle. Once tight and secure, insert a padlock which blocks access to the grub screw so the device cannot be removed or toggle operated until the lock is removed.

Code	Description
CB12	Toggle Lock

Grip Tight MCB Lockouts

Secure mounting for a solid lockout. Grips tight with simple thumb turn and clamping handle. The Grip Tight Circuit Breaker lockout offers superior holding power compared to other devices.

GRIP TIGHT

GRIP TIGHT

Closing the handle causes grips to clamp securely against breaker toggle

CB13

CB14

Universal fit. Exclusive design accommodates many styles of breaker toggles.

Durable construction. The Grip Tight lockouts are made of powder coated steel and reinforced polymer to operate in harsh conditions.

Compact design. The narrow profile permits side-by-side breaker lockout. These compact devices are also easy to carry and easy to store.

Two styles available:

Model CB13 locates sideways onto the toggle and is ideal for tall and wide toggles.

Model CB14 locates over the toggle and is ideal for use with single and double toggles.

Easy Operation:

1) Move breaker to off position. Open red handle.

2) Place CB14 lockout over breaker toggle (CB13 fits sideways). Turn black knob clockwise until grips touch toggle. Do not overtighten. When the handle is closed the grips will tighten against the toggle.

3) Move lockout handle to closed position. Check that lockout is secure and breaker can not be moved to 'on' position. Apply padlock.

Code	Description
CB13	Grip Tight MCB lockout
CB14	Grip Tight MCB lockout

Breaker Blocker 480-600V Lockout

Perfect for locking out oversized and irregularly shaped switches.

Self-adhesive backed rails are permanently installed onto an electrical panel. Simply clean panel surface and adhere.

No drilling required!
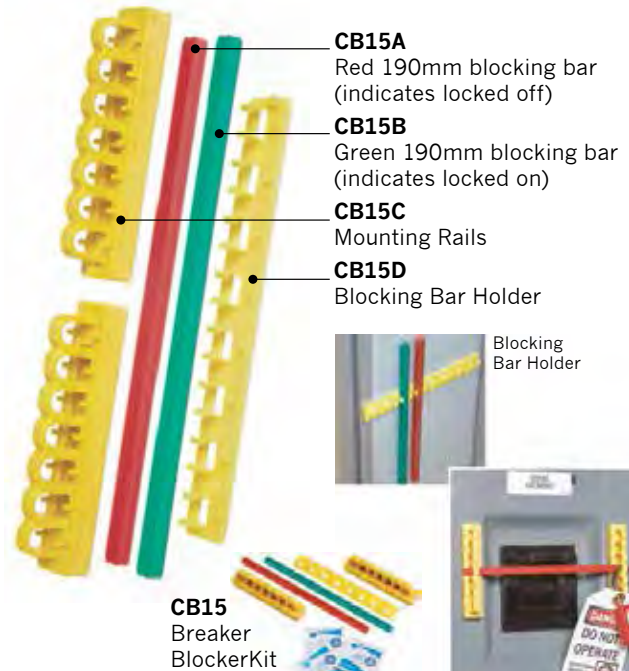
CB15A
Red 190mm blocking bar (indicates locked off)

CB15B
Green 190mm blocking bar (indicates locked on)

CB15C
Mounting Rails

CB15D
Blocking Bar Holder

Blocking Bar Holder
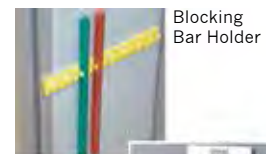
CB15
Breaker BlockerKit

Breaker Blocker Kit

Code	Description
CB15	Breaker Blocker Kit containing: 2 yellow mounting rails,1 red blocking bar, 1 green blocking bar, 1 blocking bar holder and 3 alcohol wipes.

Breaker Blocker Components

Code	Description
CB15A	190mm red blocking bar (pack of 5)
CB15B	190mm green blocking bar (pack of 5)
CB15C	101mm yellow mounting rail (pack of 2)
CB15D	Blocking bar holder (pack of 5)

SAFETY EQUIPMENT
- (LOTO) Lockout Tagout Safety Products

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Universal Lockout for Miniature Circuit Breakers
- ◆ Will lock out many types of miniature circuit breakers.
- ◆ Locks out 1 pole through to 4 pole circuit breakers.
- ◆ Dimensions: 45mm x 25mm x 10mm.
- ◆ Made from durable plastic.
- ◆ Maximum clamping 8 mm.
- ◆ 8mm padlock hole.

Code	Description
UCL1	MCB lockout

Universal Lockout for Moulded Case Circuit Breakers
- ◆ Locks out most types of moulded case circuit breakers.
- ◆ Locks out 1 pole through to 4 pole circuit breakers.
- ◆ Dimensions: 51mm x 25mm x 23mm.
- ◆ Made from durable plastic.
- ◆ Maximum clamping 13mm.
- ◆ 8mm padlock hole.

Code	Description
UCL2	Moulded case lockout

Lockout for Large Circuit Breakers
- ◆ Locks out most types of large circuit breakers with a toggle.
- ◆ Locks out 1 pole through to 4 pole circuit breakers.
- ◆ Made from durable plastic.
- ◆ Dimensions: 125mm x 63mm x 40mm wide.
- ◆ 8mm padlock hole.
- ◆ Clamping 12mm to 19mm.

Code	Description
UCL5	Large toggle

Universal Multi-Functional Breaker Lockout

Designed to fit most MCB's and main switches our CB17 is ideal for use on domestic and industrial applications.

Extra length clearance on the toggle side allows the device to be used on breakers with extra long toggles, as well as the standard size.

Thicker main switches are accommodated on the opposite side making this 2-in-1 device truly multi-functional in today's market.

Code	Description
CB17	Multi-functional lockout

Merlin Gerin Powerpact 4c Toggle Padlocking Attachment

This device locates in the slot behind the switch toggle when in the off position, blocking its operation. Adding a padlock prevents unauthorised operation and secures the device in place when the breaker is in the off position.

Code	Description
MG29370	Merlin Gerin toggle attachment

Circuit Breaker Lockout Station

Complete with the following:
4 x TT38RED Padlocks
2 x MLH7 Lockout hasps
2 x CB05 MCB Lockouts
2 x CB06 MCB Lockouts
2 x CB07 MCB Lockouts
2 x CB08 MCB Lockouts
6 x CB12 MCB Lockouts
2 x CB17 MCB Lockouts
2 x UCL1 MCB Lockouts
2 x UCL2 MCB Lockouts
2 x UCL5 MCCB Lockouts
3 x LSE10T Packs of 10 Tags
Size: 540mm H x 440mm W

Code	Description
LSE315FS	Circuit breaker lockout station

Starter Circuit Breaker Lockout Kit

This is an ideal starter circuit breaker lockout kit for individual use. It contains 5 individual breaker lockouts, a single safety tag and a TT38RED padlock keyed to differ. All packed in a mini pouch with belt loop which allows the products to be carried at all times.

Code	Description
SCBKIT	Starter MCB Lockout/Tagout kit

Intermediate Circuit Breaker Lockout Kit

This circuit breaker/isolator lockout kit is our best seller and is ideal for electricians and engineers who regularly work on various applications where power is isolated via circuit breakers or electrical isolators.

Designed for use in today's industrial applications this kit includes twelve different types of breaker lockout, models CB01, CB02, CB03, CB04, CB05, CB06, CB07, CB08, CB09, CB12, CB16 and UCL1 which will cover the majority of the applications in today's industry.

Also included is our most popular MLH1 stainless steel lockout hasp, two individual TT38RED padlocks and a pack of our RPT29AR re-usable 'Do Not Operate' tags, along with a non-permanent marker and ties for clear lockout identification.

All supplied as a kit in a strong rigid plastic storage container.

Code	Description
ECBKIT	Intermediate MCB Lockout/Tagout kit

Domestic Circuit Breaker Lockout Kit

This circuit breaker/isolator lockout kit is aimed at the domestic electrician who regularly works on various applications where power is isolated via circuit breakers or electrical isolators.

The kit includes six different types of breaker lockout, models CB05, CB09, CB12, CB13, CB16 and UCL1 which cover the majority of domestic applications, usually breakers up to 63 amp.

Also included in the kit is our MLH1 multiple lockout device to allow more than one padlock to be applied at any point of isolation, a TT38RED individual padlock, and a pack of LSE10T 'Do Not Operate' tags with marker pen for clear lockout identification.

All supplied as a kit in a strong canvas bag which can be worn around the waist allowing contents to be carried at all times.

Code	Description
DCBKIT	Domestic MCB Lockout/Tagout kit

Ultimate Circuit Breaker Lockout Kit

This circuit breaker/isolator lockout kit is the ultimate for locking off circuit breakers in domestic/industrial applications.

It contains one each of the devices, models CB01, CB02, CB03, CB04, CB05, CB06, CB07, CB08, CB09, CB10, CB11, CB12, CB13, CB14, CB15, CB16, UCL1, UCL2, UCL5, S2391, S2390, CLT1 & CLT2.

Also included are two of our MLH1 lockout hasps, four individual TT38RED padlocks and a pack of LSE10T 'Do Not Operate' tags with pen.

Ideal for group use or just to cover every type of MCB/toggle switch application in today's market.

The most comprehensive breaker lockout kit available to cover all your breakers

Code	Description
UCBKIT	Ultimate MCB Lockout/Tagout kit

SAFETY EQUIPMENT
- (LOTO) Lockout Tagout Safety Products

KIT0

A great starter kit, ideal for individuals, this kit contains equipment for locking off small ball valves, gate valves, pneumatic equipment, circuit breakers, toggle switches and electrical isolators.

Kit includes:

1 x SBOX02 Storage box
1 x BS01 Ball valve lockout
1 x CLKIT Cable lockout
1 x MLH1 Lockout hasp
2 x TT38RED Individual padlocks
1 x LSE10T Pack of 10 safety tags
1 x RWPT01 Non-permanent marker
1 x BS10 Adjustable gate valve lockout
1 x BS11 Pneumatic lockout
1 x CB05, CB12 and CB16 circuit breaker lockout

Code	Description
KIT0	Starter lockout kit box and contents

KIT1

A great intermediate kit, ideal for individuals or small groups/departments. This kit contains equipment for locking off ball valves, gate valves, pneumatic equipment, circuit breakers, toggle switches, electrical isolators and portable equipment.

Kit includes:

1 x SBOX02 Storage box
1 x BS01 Ball valve lockout
1 x BS02 Ball valve lockout
1 x CLKIT Cable lockout
2 x MLH1 Lockout hasp
4 x TT38RED Individual padlocks
3 x LSE10T Pack of 10 safety tags

1 x V480 Gate valve lockout
1 x V481 Gate valve lockout
1 x V482 Gate valve lockout
1 x BS11 Pneumatic lockout
1 x YSLB1 Lockout bag
1 x CB05, CB12 and CB16 Circuit breaker lockout
1 x RWPT01 Non-permanent marker

Code	Description
KIT1	Intermediate lockout kit box and contents

LOTO Equipment Storage Bag

Storage bag supplied empty so you can create your own custom kits, tailored to your specific requirements.

BAG22
400mm L x 280mm W x 300mm H

Code	Description
BAG22	LOTO equipment storage bag

Lockout/Tagout Safety Equipment Box Holder

Wall mounted, ideal for keeping your lockout kit nearby and in a prominent position. Holds SBOX02 Medium lockout box, KIT0 and KIT1.

Size: 450mm H x 450mm W

Kit box not included

Code	Description
LSE320	Lockout/tagout equipment box holder

KIT2

A great comprehensive kit ideal for groups/departments. This kit contains equipment for locking off ball valves, gate valves, pneumatic equipment, circuit breakers, toggle switches, electrical isolators, portable equipment and any device that utilises the popular IEC60320 input connector.

Kit includes:

1 x SBOX03 Storage box
1 x BS01 Ball valve lockout
1 x BS02 Ball valve lockout
2 x CLKIT Cable lockout
4 x MLH1 Lockout hasp
8 x TT38RED Individual padlocks
1 x Each circuit breaker lockout CB01 to CB16, UCL1, UCL2, UCL5, S2391, S2390

1 x CLT1, CLT2 Lockout cleats
3 x BS11 Pneumatic lockout
1 x YSLB1 Lockout bag
1 x LP770 Plug lockout
1 x IEC Connector lockout
1 x V480 Gate valve lockout
1 x V481 Gate valve lockout
1 x V482 Gate valve lockout
3 x LSE10T Pack of 10 safety tags
1 x RWPT01 Non-permanent marker

Code	Description
KIT2	Comprehensive lockout kit box and contents

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SAFETY EQUIPMENT
- (LOTO) Lockout Tags And Tag Stations

Reusable Safety Lockout Tags

These highly visible safety tags aid the safe running and maintenance of site machinery. Each tag is manufactured from high impact styrene ensuring it will withstand a multitude of weather and factory conditions. Wire ties included.

Description
110 x 50mm Tags (pack of 10)
200 x 100mm Tag (single)

Select an item code for the size (mm) and tag design you are ordering

Size						
110x50	RPT29AR	RPT22AR	RPT23AR	RPT24AR	RPT28AR	RWT56A
200x100	RPT29BR	RPT22BR	RPT23BR	RPT24BR	RPT28BR	RWT56B
110x50	RWT28AR	RWT26AR	RPT32AR	RPT39AR	RLT11	RLT08
200x100	RWT28BR	RWT26BR	RPT32BR	RPT39BR	RPT11BR	RLT08BR
110x50	RPT16AR	RPT26AR	RWT55AR	RPT45AR	RPT34AR	RPT33AR
200x100	RPT16BR	RPT26BR	RWT55BR	RPT45BR	RPT34BR	RPT33BR
110x50	RPT53AR	RLT02	RLT03	RLT04	RLT05	RLT06
200x100	RPT53BR	RLT02BR	RLT03BR	RLT04BR	RLT05BR	RLT06BR
110x50	RWT42A	RWT41A	RWT40A	RLT09	RLT10	RLT07
200x100	RWT42B	RWT41B	RWT40B	RLT09BR	RLT10BR	RLT07BR

Reusable Styrene Tags

Manufactured from high impact styrene each tag measures 145mm x 80mm and is ideal for frequent use with water based marker pens. Supplied in packs of 10.

This size of tag is also suitable for use with our range of lockout stations and centers.

Code	Description
LSE10T	Pack of 10 tags with ties

Large Tag Station

Our largest Tag Station, highly visible, combining acrylic pockets and hooks to enable a wider range of tag sizes to be contained.

Supplied without tags or choose a selection of tags from this page and add them to your order.

New

Size: 800mm H x 500mm W

Tags not included

Code	Description
LSE316	Large tag station (without tags)

SAFETY EQUIPMENT
- (LOTO) Lockout Tags And Tag Stations

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Two Part Isolation Tag

Our 2 part isolation tag is ideal for more complex isolations where traceability is important.

After parts 1 and 2 are filled in, part 1 is attached to the isolation point. Part 2 is detached and returned back to the responsible person as confirmation of isolation. Both parts of the tag have areas for tag and permit numbers which can be entered onto the permit to work, again to aid traceability.

Once the job is complete, both parts can be filed with the permit as a long term record of the work. Alternatively if used with a dry wipe marker, both parts can be cleaned ready for re-use.

Parts 1 and 2 are pre-scored to allow easy separation by hand.

Combined size: 265mm x 100mm

Supplied in packs of 50

Material: PVC

Pens
Ideal for writing on tags and padlock tags. Available as permanent or non-permanent.

Code	Description
ISTAG50	Pack of 50 Isolation Tags
RWPT01	Water based non-permanent pen
RWPT02	Oil based permanent pen

Tag Station

Size: 600mm H x 500mm W

Ideal for keeping all your safety tags in a central location, accessible to everybody.

◆ Maximum tag size 200mm x 100mm
◆ 8 clear acrylic tag compartments
◆ Supplied with or without contents.

Contents included are:

1 x RLOT1 (pack 100)
1 x RLOT2 (pack 100)
1 x RLOT3 (pack 100)
1 x RLOT4 (pack 100)
1 x RLOT5 (pack 100)
1 x RLOT6 (pack 100)
1 x RLOT7 (pack 100)
1 x RWPT01 Marker pen.

Code	Description
LSETG	Tag Station
LSETGC	Tag Station & contents

Disposable Lockout Tags

These disposable lockout tags measure 145mm x 80mm and are manufactured from Polybond which is a paper like material, fully weatherproof, ideal for indoor or outdoor isolations.

Printed on both sides, each tag carries a standard 'Danger This equipment has been locked out, Do not operate' message with a choice of 7 different reverse messages or blanks to suit various applications.

Supplied in packs of 100 with ties.

Front (standard)

Reverse Options
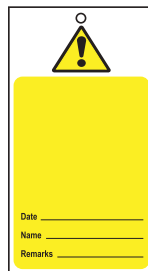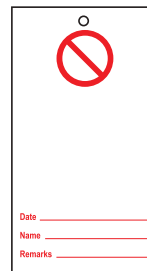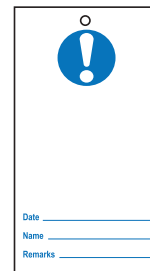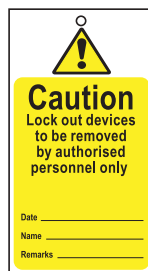
RLOT1 RLOT2 RLOT3
RLOT4 RLOT5 RLOT6 RLOT7

Description
Pack of 100 tags with ties

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Lockout Safety Tags

Use these tags on machinery which has been locked out. Manufactured from flexible PVC. Supplied in packs of 10 complete with cable ties. Size: 160 x 75mm.

Description
Lockout Safety Tag/Pack 10
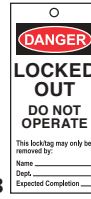
DANGER DO NOT OPERATE — RLTT08B
DANGER LOCKED OUT DO NOT OPERATE — RLTT09B
DANGER DO NOT START — RLTT10B
DANGER DO NOT OPEN — RLTT11B

Lockout Padlock Fold-Over Tag

Use these to identify individual's and department's lockout padlocks, or display a safety message. Stays securely in place. Tag faces are 40x40mm. Punched with a 7mm hole to fit most padlocks.

LOCKED OUT — RSHA01
SAFETY LOCK MAINT DEPT — RSHA04
SAFETY LOCK PROD DEPT — RSHA05
SAFETY LOCK ELEC DEPT — RSHA06
SAFETY LOCK MECH DEPT — RSHA07
SAFETY LOCK CONTRACTOR LOCK — RSHA13

SAFETY LOCK Do not remove — RSHA0
PROPERTY OF — RSHA03
SAFETY LOCK DO NOT SWITCH ON — RSHA09
SAFETY LOCK DO NOT TOUCH — RSHA10
SAFETY LOCK CAUTION — RSHA08
SAFETY LOCK DANGER — RSHA11
SAFETY LOCK THINK SAFETY — RSHA12

Tag is locked in place by the padlock

Description
Padlock fold-over tag/Pack 10

Photo ID Lockout Tags

Clearly identifies who is in charge of the lockout procedures.

- Self-laminating tags allow employees to fill in vital information, add a passport sized personal photo and seal it under the attached clear self-adhesive overlay.
- Will resist chemicals, abrasion, grease and solvents.
- Supplied in packs of 10 complete with cable ties.

Danger Equipment locked out by — RLTT12
Danger This tag & lock to be removed only by — RLTT13
Danger Do not operate Equipment locked out — RLTT14
Danger Do not attempt to operate — RLTT15

Description
160mm x 75mm Pack of 10

Reinforced Tags

1mm PVC tags, 100mm x 75mm printed on both sides giving a clear caution message. Ideal for use through lock shackles, with a reinforced brass eyelet preventing the tag from tearing.

Code	Description
RPT01	Reinforced Caution Tag

Self-Laminating Danger Boards

Personalise your safety message with these self-laminating danger boards. Add a photo, write your details and cover with the laminate film for a secure and protected finish. Except for the photo area, laminate is pre-applied for ease.

These danger boards are manufactured from 5mm Foamex, which is durable and lightweight. A 6mm hole, reinforced with brass eyelet, enables attachment to padlocks with chain.

Code	Description
SLDB	150 x 75mm Self-laminating Danger Board
SLDB/3	As above with 75mm chain attached

Personalised ID Tags

These personalised laminated ID tags measure 115mm x 75mm and are printed on both sides with our standard notice. Your employee name and photograph are added which clearly shows who is working on the isolated equipment.

Code	Description
PTG01	Personalised ID Tag

Front

Back

To order, simply email us your photographs and names

SAFETY EQUIPMENT - (LOTO) Group Lockout Boxes

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5-Lock Safety Lockout Boxes

This safety lockout box has 5 individually keyed locks to facilitate group lockout. Each worker removes and retains their key which ensures that access to the contents of the lockout box cannot be released until each of the keys has been returned by its respective keeper.

◆ Made of heavy duty grey coated steel
◆ All keys are 'keyed to differ'
◆ Internal steel shelf and 3 hooks
◆ Hole punched flange top and bottom for additional padlocks
◆ Dimensions: 230mm H x 155mm W x 90mm D

Optional Customised Self-adhesive Labelling

Personalise your 5-lock lockout box with custom text and/or logo. Label design is shown left, just change the text and/or add logo (specify text/supply logo when ordering).

Supplied with 5 write-on key tags.

Padlocks not included

Code	Description
EK5LO	5-lock safety lockbox without label
EK5LAB	Self-adhesive label fitted to lockbox plus 5 write-on key tags

Wall Mounted Group Lockout Box

Manufactured from high quality impact resistant plexiglass, these lockout boxes are ideal for group lockout situations.

Complete with 16 key hangers and a clear tamper proof sliding cover which allows the contents to be easily viewed/checked.

Code	Description
GLB1	Wall mounted group lockout box

Single Work Permit Station

Size: 560mm H x 740mm W

Complete with the following:

1 x GLB1 Lockout box
1 x RRWP1 Permit to work wallet
Permit documents and padlocks not included

Code	Description
LSE312FS	Single work permit station

Group Lockout Station

Size: 1220mm H x 1220mm W

Complete with the following:

3 x GLB1 Lockout boxes
3 x RRWP1 Permit to work wallets
22 x TT38RED Padlocks
9 x LSE10T
Permit documents not included

Code	Description
LSE313FS	Group lockout station

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SAFETY EQUIPMENT - (LOTO) PERMIT TO WORK

Permit To Work Forms Help Promote Safe Work Systems

The process for planning, organising, controlling and reviewing work activities should form an integral part of every Health & Safety Management System. Before all lockout and maintenance work is undertaken a risk assessment should be conducted and a permit issued.

The permit should specify work to be done, precautions to be taken and ensure that all possible hazards are considered. It is used when normal safe systems need to be removed for maintenance or if new hazards could be caused by work.

Permit Control Board

Size: 660mm H x 300mm W

Complete with:

1 x RRWP1 permit document holder
1 x GLB2 group lock box.

Permit documents are not included.

Code	Description
LSE317FS	Permit control board

A4 Permit to Work Forms

These permits include a section on Risk Assessment which is required under the Management of Health & Safety at Work and other regulations.

Permits are 3-part (top plus 2 carbon copies) with a convenient card backing, which is also an A4 sign.

Sold as packs of 10 of one type.

RWP04
Electrical Work Permit

RRWP1

PERMIT TYPES AVAILABLE

Code	Permit Type
RWP01	Hot Work
RWP02	Working at Heights
RWP03	Confined Spaces
RWP04	Electrical Work
RWP05	General Work
RWP06	Pressure Testing
RWP07	Excavation Work
RWP08	Window Cleaning
RWP09	Lifting Equipment Operations
RWP10	Overhead Cranes
RWP11	Breaking Lines
RWP12	Hazardous Substances
RWP13	Asbestos Present
RWP14	Asbestos (no register available)

Description
A4 Permit/Pack 10

A4+ Permit Document Wallet

Provides ultimate protection and ease of viewing of permits or documents at the point of use.

◆ UV and moisture resistant transparent plastic.
◆ Easy access side-zip closure from top to bottom.

Code	Description
RRWP1	Permit document wallet

Lockout Safety Station

Keeps all Permits to Work together in a central location.

◆ Manufactured from lightweight 5mm PVC for easy mounting, but durable to factory conditions.
◆ The backboard is fitted with a clear perspex tray to hold your file and documents securely in place.

Size: 750mm H x 400mm W

Code	Description
RFCS05	Lockout Safety Station

Work Permit Station

Size: 900mm H x 1220mm W

These stations allow you to keep a record of all issued permits along with blank permits ready for use.

Complete with:

4 x RRWP1 permit document holders
4 x A4 acrylic trays.
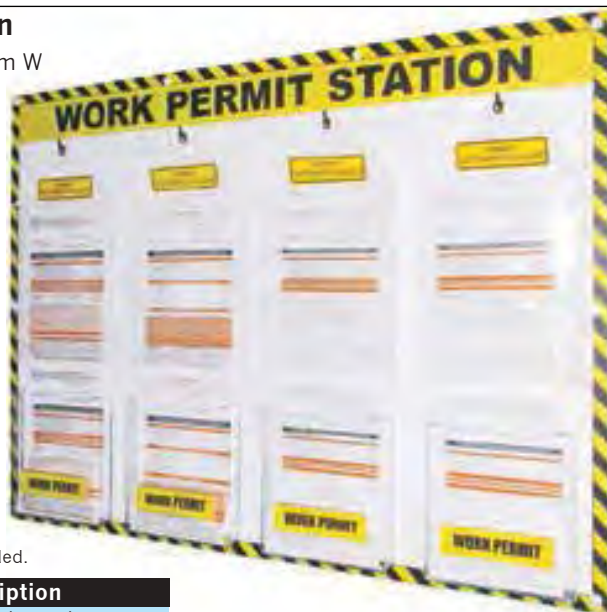
Permit documents are not included.

Code	Description
LSE319FS	Work permit station

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SAFETY EQUIPMENT - (LOTO) Lockout Stations

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LSE200 Lockout Station

Size: 600mm H x 800 W

Designed with steel bars instead of individual hooks. Padlocks can be locked onto the station with the key inserted ready for use, or without the key which is ideal for deterring theft.

Supplied with or without contents.

Supplied with

50 x TT38RED Individual padlocks
3 x MLH1 lockout hasp
4 x Packs of RPT29AR tags
1 x RWP04 pack of electrical work permits

Code	Description
LSE200	Station only
LSE200FS	Station and contents

LSE306 Departmental Lockout Station Shadow Board

Size: 800mm H x 1220mm W
Supplied with or without contents.

Supplied with the following:

100 x TT38RED Padlocks
10 x MLH5 Lockout Hasps 25mm
9 x LSE10T Packs of 10 Tags
1 x RWPT01 Pen

Code	Description
LSE306	Lockout station only
LSE306FS	Lockout station and contents

LSE307 Equipment Lockout Station Shadow Board

A complete system which includes equipment for locking off ball valves, gate valves, butterfly valves, portable electrical equipment, electrical isolators, circuit breakers, pneumatic equipment and any device that utilises the popular IEC input connector.

Size: 800mm H x 1220mm W

Supplied with the following:

9 x LSE10T Packs of 10 Tags
1 x BS16R Ball Valve Lockout
1 x BS17R Ball Valve Lockout
5 x MLH5 Lockout Hasps 25mm
1 x LP330 Small Plug Lockout
1 x LP770 Large Plug Lockout
1 x VS02, VS04, VS06, VS09, VS13 Gate Valve Lockouts
1 x CLKIT Cable Lockout
1 x IEC Lockout
1 x RWPT01 Pen
2 x BS11 Pneumatic Lockouts
12 x TT38RED Padlocks
2 x CB05 MCB lockouts
2 x CB06 MCB Lockouts
2 x CB07 MCB Lockouts
2 x CB08 MCB Lockouts
2 x UCL1 MCB Lockouts
2 x UCL2 MCB Lockouts
2 x UCL5 MCB Lockouts
2 x CB17 MCB Lockouts
2 X UFL2 Fuse Lockouts

Code	Description
LSE307FS	Lockout station and contents

SAFETY EQUIPMENT - (LOTO) Electrical Safety Labels

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Electrical Safety Labels

Ideal for all of your inspection and safety requirements. Packs of 10 or 20, subject to size. Sizes are in mm.

Size	Description
50x50mm	Self-adhesive label/Pack 10
20x60mm	Self-adhesive label/Pack 20

240V.AC 20x60 RWF08AS
415V.AC 20x60 RWF09AS
115V.AC 20x60 RWF10AS
Danger Disconnect the mains supply before removing this cover — 20x60 RWF11AS

Danger 110 volts 50x50 RWF17AS
Danger 230 volts 50x50 RW80AS
Danger 240 volts 50x50 RW65AS
Danger 400 volts 50x50 RW82AS
Danger 415 volts 50x50 RW57AS
Danger 440 volts 50x50 RWF18AS

Danger 6600 volts 50x50 RWF19AS
Danger 11000 volts 50x50 RWF20AS
Danger High voltage 50x50 RW44CS
Danger Mains voltage 50x50 RW56AS
Danger Isolator 50x50 RWF21AS
Danger Live wires 50x50 RWF13AS

Danger Live Terminal 50x50 RW55AS
Danger Live busbars 50x50 RWF22AS
Danger Electric shock risk 50x50 RWF14AS
Danger Live electrical equipment 50x50 RWF15AS
Danger Back of this panel is live 50x50 RWF16AS
50x50 RW86AS
50x50 RW07CS
50x50 RW87AS

Voltage Labels

A range of high visibility voltage labels designed for use on fuse boxes, circuit breakers and other electrical equipment.

Manufactured from self-adhesive vinyl, these labels will withstand temperatures from -40°C to +100°C. Sold in packs of 10.

To order replace asterisk (✱) with:
A (20x60mm) **B** (30x90mm) **C** (40x120mm)
Example: RVT01**A** is 110 volts (20x60mm)

Size
20x60mm
30x90mm
40x120mm

110 VOLTS RVT01✱
240 VOLTS RVT05✱
115 VOLTS RVT02✱
400 VOLTS RVT08✱
220 VOLTS RVT03✱
415 VOLTS RVT06✱
230 VOLTS RVT04✱
440 VOLTS RVT07✱

Safety Labels

These internationally recognised labels, supplied in packs of 250, will help you identify and understand potentially hazardous situations quickly.

Made from self-adhesive vinyl.

Label size is 50x50mm.

Size	Description
50x50mm	Self-adhesive label/Pack 250

Danger Mains voltage RLR15S
Danger High voltage RLR12S
Danger Live terminal RLR09S
Danger 230 volts RLR34S
Danger 240 volts RLR16S

Danger 400 volts RLR35S
Danger 415 volts RLR14S
RLR22S
RLR08S
RLR13S
Emergency stop RLR27S
Emergency stop RLR18S

RFE (REG FARRELL ENGINEERING LIMITED)
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SAFETY EQUIPMENT - (LOTO) Electrical Safety Labels

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Electrical Cable Marking Labels

Highly visible cable marking labels. Easy to apply, simply peel off the label backing and fix around your electrical cable.

Self-adhesive vinyl. Size is 30x90mm. Sold in packs of 250 labels.

Size
30mm x 90mm

DO NOT USE	DANGER ELECTRIC SHOCK RISK	DANGER LIVE WIRE	DANGER HIGH VOLTAGE	DANGER 240 VOLTS	DANGER 110 VOLTS	DANGER 440 VOLTS	TESTED FOR ELECTRICAL SAFETY
RCA01AA	RCA01AB	RCA01AC	RCA01AD	RCA01AE	RCA01AF	RCA01AG	RCA01AH
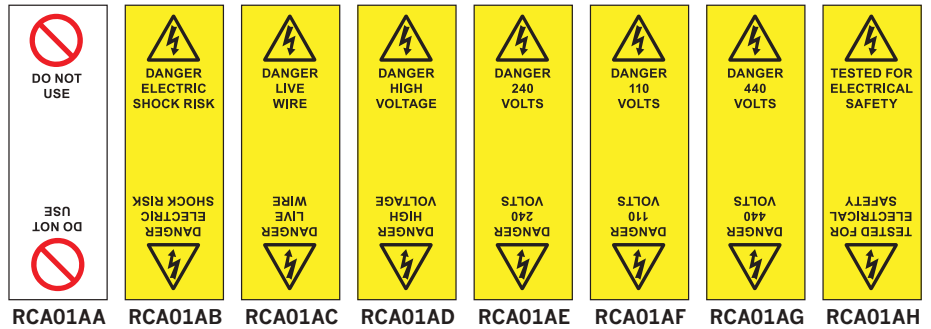
Write-On Cable Marking Labels

Simply write on your information, peel off the label backing and fix around your electrical cabling.

Self-adhesive vinyl. Size is 40x90mm. Sold in packs of 250 labels.

Size
40mm x 90mm

TESTED	FAILED	DO NOT USE
RCA02AA	RCA02AB	RCA02AC

EQUIPMENT No.	SERIAL No.	INSPECTED
RCA02AD	RCA02AE	RCA02AF

Plug Warning Labels

Highly visible warning labels for plug identification. Supplied in packs of 10

Fax	Printer	Scanner	Photocopier
RPWL01	RPWL02	RPWL03	RPWL04

Computer	Fitted with 3 amp fuse	Fitted with 13 amp fuse	Do not remove
RPWL05	RPWL06	RPWL07	RPWL08
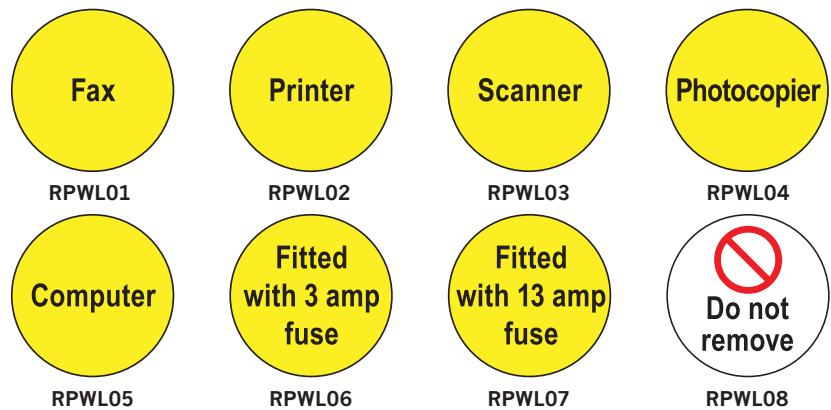
Size
30mm Diameter

LOTO Authorised Labels

50mm diameter, self adhesive. Clearly identify who is authorised to lockout. Ideal for distribution after training.

Code	Description
HL01	Pack of 10 LOTO labels

Plug Tab

Use this plug tab to notify people that a plug socket or appliance must remain on.

- An extremely simple, safe and low cost device.
- It can be used wherever a 13 amp main plug is connected to a socket.
- Made from insulating material.
- Supplied in packs of 25.

Code
RPLG1

WEEE Regulation Labels

The Waste Electrical and Electronic Equipment Directive (WEEE) aims to encourage the reuse and recycling of electrical equipment. All electrical equipment put onto the market in the EU has to be labelled to conform to the directive.

- Designed and manufactured to BS EN 50419.
- Extremely durable remaining intact and legible for the life of the equipment.
- Two styles: flat self-adhesive or a cable wrap-around self-adhesive RCA01AJ.
- Supplied in packs of 250.

Code	Description
RWRL1	13x10mm flat label
RWRL2	20x15mm flat label
RCA01AJ	90x30mm cable label

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SAFETY EQUIPMENT - (LOTO) Electrical Safety Labels

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Electrical Inspection Labels

Identify electrical equipment easily and quickly by using these self-adhesive inspection labels. Supplied in packs of 250.

Size
25mm x 40mm
40mm x 75mm

TESTED comments — signed dated
25x40 RQF14AS / 40x75 RQF14BS

CALIBRATED comments — signed dated
25x40 RQF15AS / 40x75 RQF15BS

PASSED comments — signed dated
25x40 RQF02AS / 40x75 RQF02BS

ELECTRICAL SAFETY PASSED
25x40 RQF39AS / 40x75 RQF39BS

INSPECTED comments — signed dated
25x40 RQF13AS / 40x75 RQF13BS

DATE INSTALLED signed dated
25x40 RQF35AS / 40x75 RQF35BS

MODEL NO. signed dated
25x40 RQF32AS / 40x75 RQF32BS

SERVICED BY signed dated
25x40 RQF33AS / 40x75 RQF33BS

REPAIRED BY signed dated
25x40 RQF34AS / 40x75 RQF34BS

AWAITING INSPECTION comments — signed dated
25x40 RQF01AS / 40x75 RQF01BS

DO NOT USE comments — signed dated
25x40 RQF12AS / 40x75 RQF12BS

CALIBRATION DUE signed dated
25x40 RQF31AS / 40x75 RQF31BS

ELECTRICAL SAFETY TESTED
25x40 RQF93AS / 40x75 RQF93BS

ELECTRICAL SAFETY FAILED
25x40 RQF37AS / 40x75 RQF37BS

ELECTRICAL SAFETY NOT TESTED DO NOT USE
25x40 RQF38AS / 40x75 RQF38BS

DO NOT USE UNTIL CALIBRATION COMPLETED
25x40 RQF22AS / 40x75 RQF22BS

CALIBRATION NOT REQUIRED
25x40 RQF23AS / 40x75 RQF23BS

NOT CALIBRATED DO NOT USE
25x40 RQF24AS / 40x75 RQF24BS

Photovoltaic 'PV' Labels

Photovoltaic 'PV' Labels available in high grade self adhesive vinyl.

Supplied individually or in packs of 250.

PV Array d.c. Junction Box. Danger - contains live parts during daylight. — 25mm x75mm VC1

Do not disconnect d.c. plugs and sockets under load - turn off a.c. supply first. — 25mm x75mm VC2

PV Array d.c. Isolator. Danger - contains live parts during daylight. — 25mm x75mm VC3

Inverter - Isolate a.c. and d.c. before carrying out work. — 25mm x75mm VC4

PV system - main a.c. Isolator. — 25mm x75mm VC5

WARNING Dual Supply — Do not work on this equipment until it is isolated from both mains and on-site generation supplies. Isolate on-site generator at____ Isolate mains supply at____ — 40mm x100mm VC6

INDIVIDUAL Code	PACK OF 250 Code
VC1	VC1PACK
VC2	VC2PACK
VC3	VC3PACK
VC4	VC4PACK
VC5	VC5PACK
VC6	VC6PACK

Electrostatic Labels

Electrostatic labels conform to BS CECC 00015: Part 1: 1991. Basic specification for protection of Electrostatic Sensitive Devices.

15x15 RW81AS / 25x25 RW81BS / 50x50 RWA7AS / 100x100 RWA7BS

ESD PROTECTED AREA OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES — 150x500 RWB10AS

ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES — 30x75 RW53AS

ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES — 150x500 RWA6AS

Code	Description
RW81AS	15x15mm self adhesive label/Pack 10
RW81BS	25x25mm self adhesive label/Pack 10
RWA7AS	50x50mm self adhesive label/Pack 10
RWA7BS	100x100mm self adhesive label/Single
RW53AS	30x75mm self adhesive label/Pack 10
RWB10AS	150x500mm self adhesive label/Single
RWA6AS	150x500mm self adhesive label/Single

SAFETY EQUIPMENT
- (LOTO) Housekeeping and Electrical Posters

Housekeeping Posters

Get your workforce into good housekeeping habits with this range of posters. They are a light-hearted way of conveying a 'Good Housekeeping' message and will brighten up any office or factory. Made from 1mm semi-rigid PVC. Size is 600mm x 400mm.

Made from durable 1mm PVC

1mm PVC

Description
600x400mm Housekeeping poster 1mm PVC

RHKP1   RHKP2   RHKP3   RHKP4   RHKP5   RHKP6

RHKP7   RHKP8   RHKP9   RHKP10   RHKP11   RHKP12

Lockout Poster
Know How to Lock Off Accidents

Step-by-step guides to lockout procedures.

◆ Learn how to lock-off accidents in 8 simple steps.

◆ Highlight all the safety steps that must be followed to achieve effective lockout safety.

◆ Wallchart measures 600mm x 400mm.

Code	Description
RLOTA1	Lockout Poster 600 x 400mm

Electrical Wiring Regulations

An amendment to BS 7671:2001 (The IEE Wiring Regulations) states that new cable core colours must be used for all fixed wiring in electrical installations in the UK.

The poster (right) explains the colour changes in more detail.

The notice (below) must be fixed at the distribution board or consumer unit.

Caution

This installation has wiring colours to two versions of BS 7671. Great care should be taken before undertaking extension, alteration or repair that all conductors are correctly identified.

RWC109   840x570mm

This notice is available in a range of sizes and materials to suit your requirements. See below.

Code	Description
RWC109	600mm x 400mm Know Your Wiring Colours poster
RPW36Z	50mm x 70mm self-adhesive label/Pack 10
RPW37Z	50mm x 70mm self-adhesive label/Pack 250
RPW34ZR	150mm x 200mm rigid 1mm PVC sign
RPW34ZS	150mm x 200mm self-adhesive vinyl sign
RPW35ZR	300mm x 400mm rigid 1mm PVC sign
RPW35ZS	300mm x 400mm self-adhesive vinyl sign

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Safety Posters

Create and maintain awareness, avoiding the dangers of the workplace, by informing everyone about potential hazards.

Size
600x400mm

1mm PVC

Made from durable 1mm PVC

Electricity Safety Posters

600x400mm   RSTP8

600x400mm   RWC191
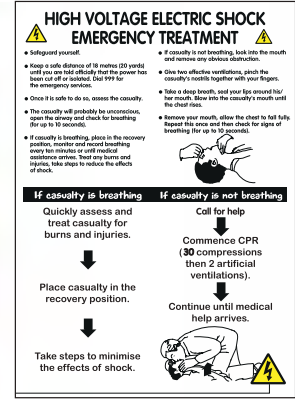
600x400mm   RWC161

600x400mm   RWC140

600x400mm   RWC76

600x400mm   RWC184
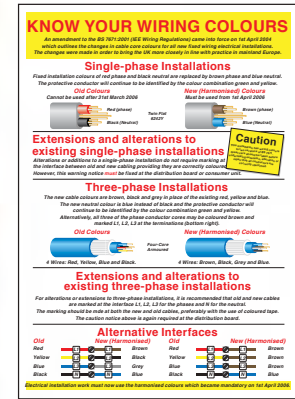
600x400mm   RWC109

Lockout/Tagout Safety Posters

600x400mm   RLOTA8

600x400mm   RLOTA7

600x400mm   RLOTA6

600x400mm   RFWCAA

600x400mm   RLOTA1

600x400mm   RLOTA3

600x400mm   RLOTA4

600x400mm   RLOTA5

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SAFETY EQUIPMENT - (LOTO) General Safety Posters

600x400mm RHKP12	600x400mm RWC121	600x400mm RSP06A	600x400mm RSP10A	600x400mm RTH03
600x400mm RWC160	600x400mm RPG23	600x400mm RWC91	600x400mm RPG29	600x400mm RRSP1
600x400mm RWC108	600x400mm RWC52	600x400mm RWC156	600x400mm RWC61	600x400mm RWC2
600x400mm RWC06	600x400mm RWC81	600x400mm RWC171	600x400mm RFWC31	600x400mm RFWC21

Energy Saving Message Labels

Use these labels as part of your energy saving campaign to create awareness within your workplace.

Size: 32mm diameter.

Material: Self-adhesive Vinyl

Description
Self-adhesive labels 32mm diameter/Pack 250

Last one out... Switches OFF
RESP11

Not in use? Switch it OFF
RESP12

Don't waste your ENERGY Save it
RESP13

SAFETY EQUIPMENT
- (LOTO) Electrical Hazard Warning Signs

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Danger
High voltage test area
400x300 Rigid RPW12AR

Danger
Electricity
400x300 Rigid RW184AR
S/A RW184AS

Danger
Isolator
200X150 S/A RWC31AS

Danger
Overhead live wires maximum headroom meters
400x300 Rigid RW58BR
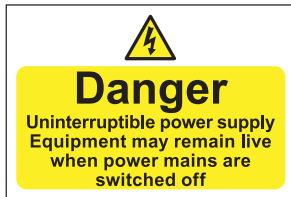
Danger
Uninterruptible power supply Equipment may remain live when power mains are switched off
300X400 Rigid RW153AR
S/A RW153AS

Danger of death if interfered with
200X150 S/A RS10AS

Danger of death
400X300 Rigid RW85BR
S/A RW85BS

Switch off electrical supply before working on this equipment
120x90 Rigid RMC13AR
S/A RMC13AS

Switch off electricity here
200X150 S/A RWM18AS
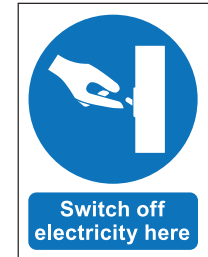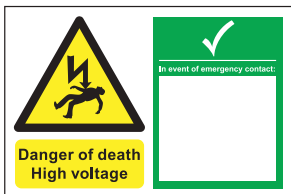
In event of emergency contact:
Danger of death High voltage
300X400 Rigid RWM93AR
S/A RWM93AS
450X600 Rigid RWM93BR

Danger
Electric shock risk
Switch off power before charging batteries
300X400 Rigid RV14AR
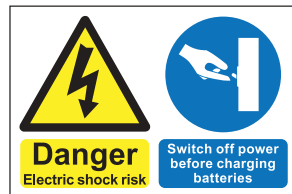
Danger
Exposed live conductors
Keep away
150X225 Rigid RWM49AR
S/A RWM49AS

Danger
Electrical hazard
Keep locked
150X225 Rigid RWM75AR
S/A RWM75AS
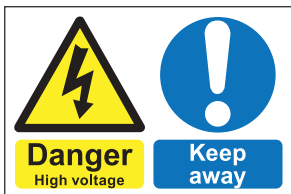
Danger
High voltage
Keep away
300X400 Rigid RWM20AR
S/A RWM20AS
450X600 Rigid RPW90YR

Danger
Isolate before removing cover
Label 40x60 S/A RWB3AS

Danger
Live electrical equipment
Isolate for safe working
300x450 Rigid RWM21AR
S/A RWM21AS

Danger
The back of this panel is live
Isolate for safe working
75x110 Rigid RWM19AR
S/A RWM19AS
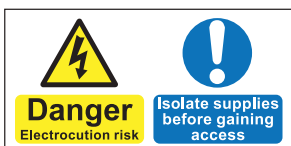
Danger
Electrocution risk
Isolate supplies before gaining access
Label 25 x 50 S/A RPW57AS

Danger
Lock it out
450x600 Rigid RMK2YR

Danger
Electrical room
No storage permitted
150x225 Rigid RWM57AR
S/A RWM57AS

Danger
High voltage
No unauthorised access
150x225 Rigid RWM63AR
S/A RWM63AS
300x450 Rigid RWM63BR
S/A RWM63BS

Danger
This equipment has more than one source of supply
Before working on or testing this equipment obtain a permit or sanction from the authorised person
150x225 Rigid RWM95AR
S/A RWM95AS
300x450 Rigid RWM95BR
S/A RWM95BS
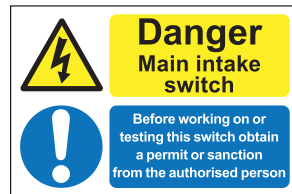
Danger
Main intake switch
Before working on or testing this switch obtain a permit or sanction from the authorised person
150x225 Rigid RWM94AR
S/A RWM94AS
300x450 Rigid RWM94BR
S/A RWM94BS

Made from durable 1mm PVC or flexible self-adhesive vinyl.

1mm PVC

Self-adhesive Vinyl

Code/Size
RPW57AS
RWB3AS
75x110mm
120x90mm
150x225mm
200x150mm
300x400mm
300x450mm
450x600mm

Can't see the sign you need?
Give us call and we will make it for you.

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ENGINEERING LTD

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SAFETY EQUIPMENT - (LOTO) General Safety Labels

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Danger
Live wires

200x150 Rigid RW75AR
S/A RW75AS

Danger
Buried cable

100x75 Rigid RPW63CR
400x300 Rigid RW63AR

Danger
Main switch

200x150 Rigid RWA9AR

Danger
Overhead electrical power lines

400x300 Rigid RWB5AR

Danger
High voltage cables overhead

400x300 Rigid RW335BR

Danger
High voltage cables underground

200x150 Rigid RW336AR

Danger
Overhead cables

400x300 Rigid RTA41BR
800x600 Rigid RTA41AR

Danger
230 volts

200x150 Rigid RW65BAR

Danger
240 volts

200x150 Rigid RW65BR
S/A RW65BS

Danger
440 volts

200x150 Rigid RW50AR
S/A RW50AS

Danger
Overhead live wires

200x150 Rigid RW48CR
S/A RW48CS
400x300 Rigid RW48BR

Danger
Switchgear

200x150 Rigid RWC30AR
S/A RWC30AS
400x300 Rigid RPWC3AR

Danger
Live busbars

200x150 S/A RW72AS

Danger
Bare live wires

400x300 Rigid RW178AR
S/A RW178AS

Danger
400 volts

200x150 Rigid RW45BAR
S/A RW45BAS

Danger
6600 volts

200x150 Rigid RW83XR
400x300 Rigid RPW83AR

150x150 Rigid RW07DR
S/A RW07DS
300x300 Rigid RW07ER

Label 25x25 S/A RW07JS
Label 50x50 S/A RW07CS

Danger
High voltage

200x150 Rigid RW44AR
S/A RW44AS
400x300 Rigid RW44BR
S/A RW44BS
800x600 Rigid RTA06AR

Danger
Electric shock risk

200x150 Rigid RW07GR
S/A RW07GS
400x300 Rigid RW07HR
S/A RW07HS

Danger
415 volts

200x150 Rigid RW45AR
S/A RW45AS
400x300 Rigid RPW45AR
S/A RPW45AS

Danger
11000 volts

200x150 Rigid RW54AR
S/A RW54AS
400x300 Rigid RW54BR

Warning
Electric fence

400x300 Rigid RW341AR

Made from durable 1mm PVC or flexible self-adhesive vinyl.

1mm PVC

Self-adhesive Vinyl

450x600
Rigid
RWC33AR

Danger
Men working on electrical circuits

Code/Size
RW07JS - pack of 10
RW07CS - pack of 10
100x75mm
150x150mm
200x150mm
300x300mm
400x300mm
450x600mm
800x600mm

RSL17S

Handy Safety Label Packs

Always there when you need them and easy to store. Self-adhesive vinyl. Size is 50mm x 150mm.

Code
RSL17S

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SAFETY EQUIPMENT - Permanent Electrical Safety Devices
• Lockout Tagout Safety Products

GRACE PORT®

PESDS: (PERMANENT ELECTRICAL SAFETY DEVICES)

GracePorts® are a foundational tool many facilities use across the globe to keep voltage away from people. GracePorts are fully customizable communication ports that allow workers to access control panels safely and conveniently through closed doors.

The Voltage Test Station (VTS) takes the guesswork out of verifying electrical energy and enhances your work place safety and productivity.

• The Voltage Test Station (VTS) is a Permanent
• Electrical Safety Device that allows workers to quickly and safely validate zero electrical energy from outside the electrical enclosure.
• The VTS combines a voltage indicator and test points to confidently verify zero electrical energy.
• Provides a safer and more productive method of performing LOTO, while exceeding NFPA 70E and meeting the OSHA energy isolation principle.
• Lockable housings add an additional layer of protection by allowing authorized personnel to safely access the VTS.

The PPE You Don't Wear/MAXIMIZE SAFETY MINIMIZE RISK!

Mount your SafeSide® PESDs exactly how and where you want with our accessories including door-mount kits and labels.

VOLTAGE INDICATOR WITH SOLID-ON LEDS OR FLASHING LEDS

SafeSide® thru-door voltage indicators provide electrical safety information while the panel doors are safely closed. This "one-size-fits-all" solution detects 3-phase AC or DC voltage from 40-750VAC/30-1000VDC. The encapsulated construction and redundant circuit design means rugged reliability. SafeSide® products are available with flashing LEDs (R-3W) and non-flashing LEDs (R-3W-SR).

Safer Lock-Out Tag-Out (LOTO)

Keeping personnel away from live voltage is foundational to electrical safety. Electrical safety demands a precise answer to the question 'Is voltage present?'. Thru-door voltage indicators provide visibility of voltage from outside the enclosure without exposing personnel to voltage.

More Productivity in Mechanical LOTO

Workers performing mechanical LOTO must isolate electrical energy. An externally-mounted voltage detector provides a means to check voltage inside an electrical panel. Without a voltage indicator, a mechanic performing mechanical LOTO would be required to work in tandem with an electrician using a voltmeter to physically verify voltage inside an electrical panel. In this case, the electrician is exposed to voltage. With thru-door voltage detectors, the mechanic can verify zero electrical energy without any exposure to voltage.

Reduced Voltage Exposure and Arc Flash Risk

Voltage is the common denominator in an electrical accident or an arc flash; no voltage means no accident, no arc flash. While performing electrical LOTO with a thru-door voltage detector installed, the electrician can pre-check the internal voltage state without opening the enclosure. Next, the electrician should replicate a zero voltage reading with his voltmeter as per NFPA 70e 120.1(5). This low-cost, redundant voltage-verification task reduces arc flash risk and increases electrical safety for workers.

VOLTAGE INDICATOR WITH SOLID-ON LEDS OR FLASHING LEDS

FEATURES:

• Redundant Circuitry / Long Life LED's
• 40-750VAC / 30-1000VDC / 35-600VAC 1Ø Potted
• Construction with 6' Leads
• Phase Insensitive
• 30mm Pushbutton or Pilot Hole
• High Surge Immunity
• UL Listed, Type 4X, 12, 13

APPLICATIONS:

• Circuit Breaker Disconnects - No Visible Blades
• High Energy Panels (NFPA 70E Category 3 or 4
• Frequently Accessed Panels
• Mechanical LOTO: Indicating Zero Energy
• Panels with Multiple Power Sources

UL TYPE 4X

c(UL)us
LISTED
IND. CONT. EQ.
496Y
UL File: E256847

RoHS CE

Three Phase 40-750VAC/30-1000VDC UL-Listed Voltage Indicator for Type 4X/12/13 for 30mm Mounting

Also Introducing "The flexmount Indicator"

TRUSTED INDICATION. MORE PLACES.

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INTRODUCING FLEX-MOUNT VOLTAGE INDICATOR

Flex-Mount voltage indicator is a Permanent Electrical Safety Device (PESD) that conveniently mounts onto any electrical equipment. This 3-phase voltage indicator uses redundant, longlife LEDs (flashing or non-flashing options available) to provide a visual representation of energy presence with the flexibility of being mounted anywhere……

(R-3MT Kit)

Safe-Test Point (R-3MT with Dust Cover + Label) A Permanent Electrical Safety Device (PESD) that allows workers a safer way to verify presence or absence of voltage from outside the electrical cabinet.

Thru-Door Test Point

Adding PESD'S reduces the risk of Arc Flash

(HSM) HOT SPOT MONITOR

(HSM) is a non-conductive temperature monitoring device that identifies potential hot spots and enables user to predict the failures in an electrical equipment. Identifying faults before they occur saves money when unplanned outages, service interruptions, and equipment failures are avoided. Design and communication flexibility allows the HSM to be used as either stand-alone or fully integrated into a plant wide information system. Plant wide integration is made simple when the device is connected via MODBUS TCP I/P or Ethernet I/P to the facility's

TECHNICAL SPECIFICATIONS

Varying fiber lengths an lug sizes available. **See Accessories section in the right.**		
COMPONENT CODE	**G-HSM-9SK**	**G-HSM18K**
Contents	9 Point Temperature Monitoring Module with LCD Display and Ethernet IP Communication, 9 x 10M Probes, 9 x 0.5in Ring-Style Lugs, Probe Tightening Tools, Fiber Trimmer and Quick Start Guide	18 Point Temperature Monitoring Module with Ethernet IP Communication, 18 x 10M Probes, 18 x 0.5in Ring-Style Lugs, Probe Tightening Tool, Fiber Trimmer and Quick Start Guide
Polymer Optical Fiber	10M (kit) standard, 15M sold separately	
Temperature Rating	**Probe:** -20°C to 120°C (-4°F to 248°F) High-Temperature Probe (sold separately) 160°C (320°F) **Module:** -20°C to 70°C/-4°F to +158°F	
Resolution	1°C (1°F)	
Accuracy	+/- 2C (+/- 3.5°F)	
Output Relay	Normally Open Contact 2A/250V	
Communication	MODBUS RTU, MODBUS TCP/IP, Ethernet IP	
Power Requirements	24VDC (0.12A @ 24VDC, 3 Watt)	
Calibration	No calibration necessary	
Dielectric Characteristics	80kV withstand	
Warranty	5-Year Warranty (register your product online to view detailed warranty information)	

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SAFETY EQUIPMENT - Arc Flash Relays

ARC FLASH RELAYS

IMPROVE SAFETY AND RELIABILITY WITH INSTANT ARC-FLASH DETECTION

ARC FLASH RELAYS

Code	Description
AF0100-00	ARC FLASH RELAY 100- 240V AC/DC, 24 - 48V DC
AF0500-00	ARC FLASH RELAY 100- 240V AC/DC, 24 - 48V DC 4 INPUTS
PGR-8800	ARC FLASH RELAY 100- 240V AC/DC, 24 - 48V DC 6 INPUTS
PGA-LS10	10 POINT SENSOR
PGA-LS20	20 POINT SENSOR
PGA-LS30	30 POINT SENSOR
MP8000	"MOTOR PROTECTION RELAY (Motor protection electronic overload relays, fully Programmable via Bluetooth®")"

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Littelfuse®

Fast Arc-Flash Detection

Circuit breakers (CBs) or overcurrent protection devices (OCPDs) alone do not provide optimal protection for your personnel and equipment. The Littelfuse Arc-Flash Relays rapidly detect an arc flash and send a trip signal to interrupt power.

PGR-8800 Arc-Flash Relay

*Backup battery not included
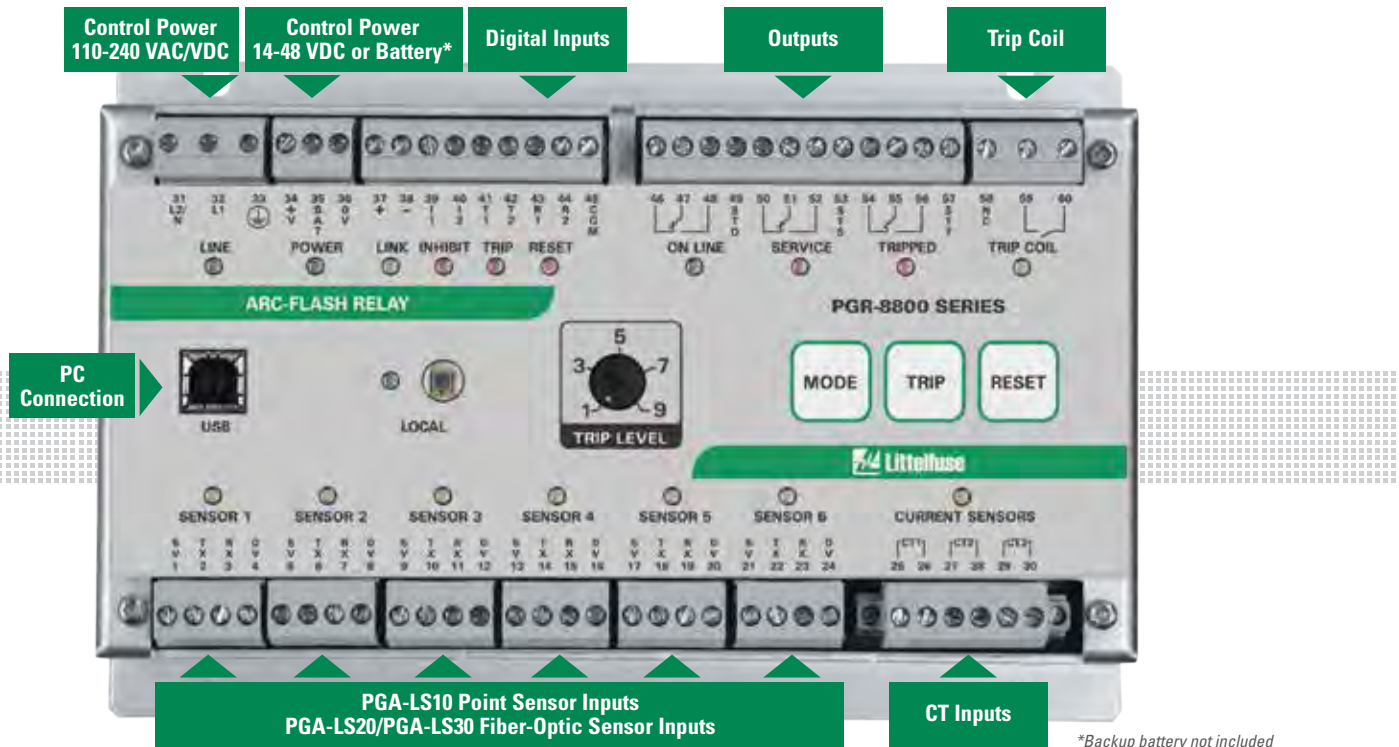
Simple Plug & Play Installation and Maintenance

The **PGR-8800** and **AF0500** Arc-Flash Relays and sensors are easily retrofitted into existing switchgear or pre-installed in new equipment with little or no configuration. Even elaborate systems only take minutes to configure using the relays' built-in USB interface software, and the innovative digital inputs/outputs on the AF0500.

- Improve sustainability and life of electrical equipment
- Lower the Hazard Risk Category (HRC) of the equipment
- Provide protection against equipment damage and potential injury to personnel

- Easily installed without changes to existing layout
- Flexible sensor configuration for any application
- No additional software is required

Installs up to 8X Faster than Competition!

Installing a Littelfuse arc-flash relay can lower your HRC rating.

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in Less Than 1 ms
to Minimize Damage

AF0500 Arc-Flash Relay

| Control Power 100-240 VAC/VDC | Outputs | Digital Inputs/Outputs | Trip Coil #1 | Digital Inputs/Outputs | Trip Coil #2 |

PC Connection

ARC-FLASH RELAY

RESET

AF0500 SERIES

Littelfuse

| Control Power 24-48 VDC | Modbus® TCP Communications Ports | PGA-LS10 Point Sensor Inputs PGA-LS20/PGA-LS30 Fiber-Optic Sensor Inputs |
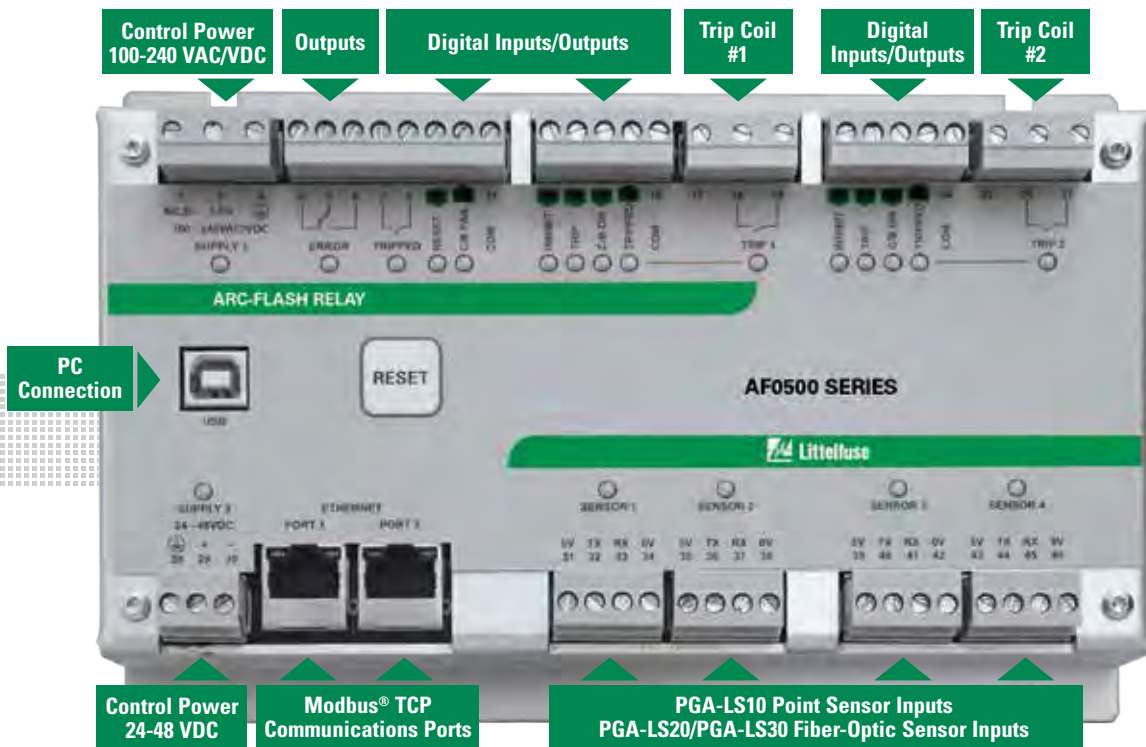
Damage Caused By Arc-Flash Incident
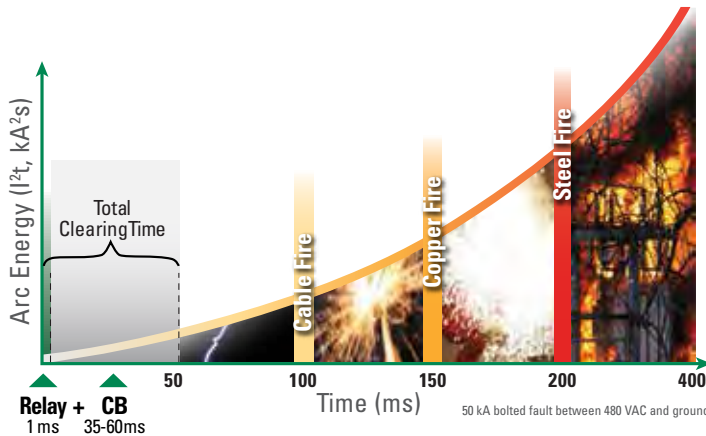
Arc-Flash Relays use a 125-µs light-sampling scheme in combination with an ultra-fast IGBT output to be able to detect a developing arc flash and send a trip signal to a circuit breaker in less than 1 ms.

Arc Energy (I²t, kA²s)

Total Clearing Time

Cable Fire

Copper Fire

Steel Fire

50   100   150   200   400

Time (ms)

50 kA bolted fault between 480 VAC and ground.

Relay +   CB
1 ms   35-60ms

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Superior and Robust
Sensor Design

Point Light Sensor

Line-of-sight light sensor detects an arc as small as 3 kA in a 2-meter half-sphere radius.

- Visual LED indication for "Ready" or "Tripped" state to assist with fault location
- Robust sensor design can withstand a detected arc-flash event
- Sensor can be installed up to 50 m (164 ft) away from relay; electrical cable can be cut and easily re-terminated in the field

180° 2-meter Half-Sphere Sensor Viewing Angle
Connect to Relay
2.5m
Up to 50 m cable
2m
Light Sensor

Fiber-Optic Light Sensor

The 360° light sensor detects light throughout the entire length of the fiber. Ideal to protect bus bars, multiple compartment installations like motor control centers, or areas with many obstructions.

- Visual LED indication for "Ready" or "Tripped" state to assist with fault location
- Durable resin fiber material allows small bending radius (>5 cm) and greater flexibility without breaking
- Ready to install from the factory, no need to terminate in the field or polish as with glass fiber
- Fiber sensors can be installed in locations up to 50 m (164 ft) away from relay; electrical cable can be cut and easily re-terminated in the field

Connect to Relay

Fiber-Optic Sensor
360° Light Detection
PGA-LS20 (8 m/26.2 ft*)
PGA-LS30 (18 m/59 ft*)
* Distance of light-detecting fiber

Black Shield
(no light detection)
Receiver
Up to 50 m cables
Transmitter
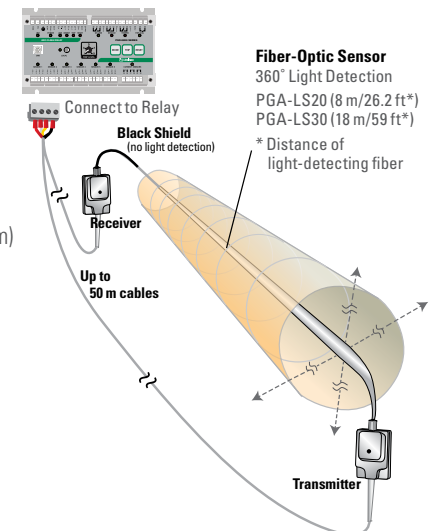
Sensor Placement Recommendations

Generally, it is recommended to mount 1 or 2 sensors per cubicle to cover all horizontal and vertical bus bars, breaker compartments, drawers, and anywhere that there is potential for an arc fault. Threading a fiber-optic sensor through the cabinets and in areas where point-sensor coverage is uncertain results in complete coverage and an added level of protection. Even if policy is to only work on de-energized systems, all maintenance areas should be monitored for arc flash to prevent potential damage and additional cost. For more information, download the Installation Guide PF711 from Littelfuse.com/ArcFlash.

Fiber-Optic Sensor
Point Sensor 1
Point Sensor 2
Point Sensor 3
Point Sensor 4
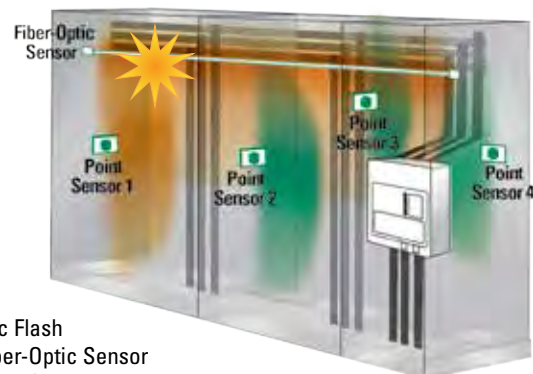
☀ Arc Flash
— Fiber-Optic Sensor
▣ Point Sensors

Scenario with point sensor placement on the wall of each compartment. Arc detection area for each sensor is shown in green shade. In this case, both Point Sensor 1 and the Fiber-Optic Sensor detected the flash as it was within their viewing area (shown in orange).

Application Example PGR-8800

Transmitter
Fiber-Optic Sensor
Receiver
Point Sensor
Control Power & Battery Back-up
Circuit Breaker
Current Transformers
Electrical Cables To Relay
Upstream Breaker
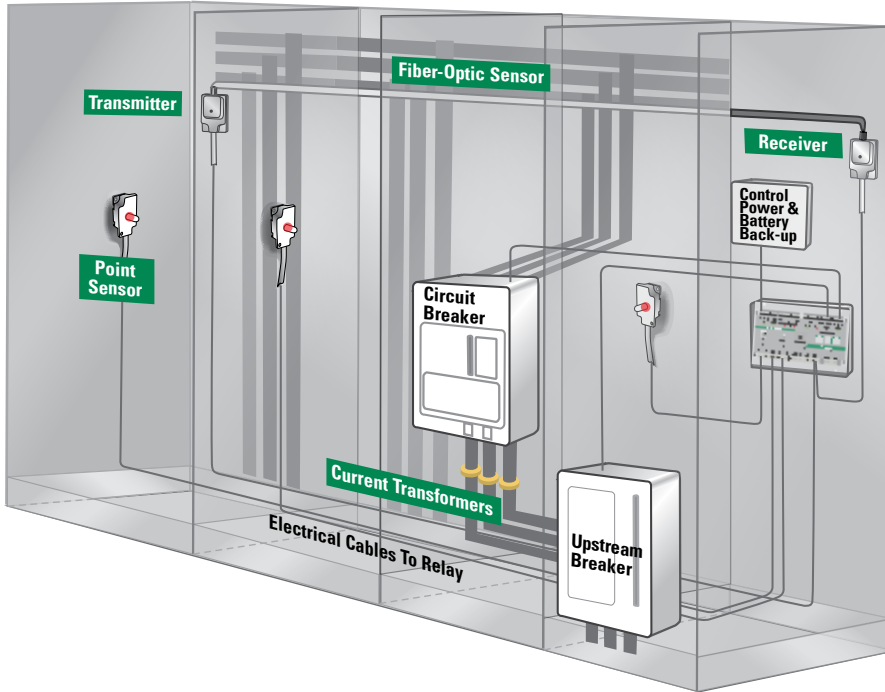
Fiber-Optic Sensor

PGA-LS20 and PGA-LS30
Detects light 360° along the entire length of the exposed fiber. Sensor is pre-wired with 10 m (expandable to 50 m) of electrical cable and a plug-in terminal block.

Point Sensor

PGA-LS10
Detects light at 180° angle in line of sight. Sensor is pre-wired with 10 m (expandable to 50 m) of electrical cable and a plug-in terminal block.

Application Example AF0500

Trip 1
Trip 2
Tie Breaker
Trip 2
Trip 1
Fiber-Optic Sensor
Receiver
Fiber-Optic Sensor
Transmitter
Source 1 Breaker
Point Sensor
Transmitter
Receiver
Source 2 Breaker
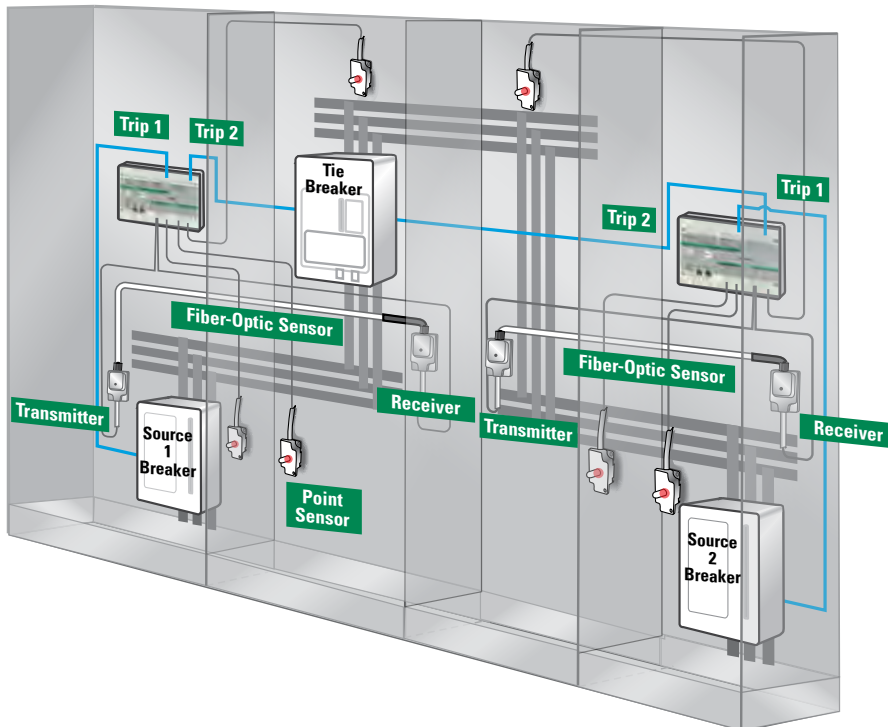
Breaker Connection

Sends trip signal to breaker trip coil (undervoltage or shunt trip) to interrupt power. Ability to trip upstream breaker if local breaker fails.

Current Transformers

Optional, PGR-8800 only
Measures current to help eliminate nuisance trips.

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Reliable Operation with
Built-In Redundancies

When you are entrusting a safety device to protect equipment from catastrophic damage, it is important to know that it will operate as expected. Littelfuse Arc-Flash Relays do this by having built-in redundancies and health monitors, making maintenance and installation tasks faster, more efficient and helping to minimize downtime.

	PGR-8800	AF0500
Redundant Internal Trip Path ■ Two internal trip paths for added reliability—if the microprocessor trip path fails, the backup analog trip path will seamlessly take over, sending an alarm notification to operators ■ Backup analog trip path initializes very quickly upon power up, ensuring protection is enabled while energizing the system when hazard risk is higher	✓	✓
Health Monitoring ■ Continuously monitors connection to trip coil to ensure path is intact ■ LED indication of sensors' "Ready" or "Tripped" status on sensor and relay ■ Sensors are durable enough to withstand a detected arc-flash event	✓	✓
Reliable Light Detection ■ Two types of light sensors (point and fiber-optic) for different applications ■ Adjustable light-level and wide-angle detection add flexibility ■ Durable and flexible sensor design eliminates breakage and re-work	✓	✓
Upstream Tripping ■ Ability to trip upstream device if the local breaker fails to clear the fault	✓	✓
Optional Current Detection for Fault Verification ■ Avoid nuisance tripping with current-supervised arc-flash trips ■ Phase Current Transformers for overcurrent detection ■ Two user-defined definite-time overcurrent protection levels and times	✓	
Tie Breaker Tripping ■ Ability to trip both incoming feeder and tie breaker when arc is detected in one section of a switchboard ■ Affected part of the switchboard is isolated from the non-affected part		✓
Zone Tripping ■ Ability to trip 2 separate zones with 1 relay ■ Sensor zone assignment through simple PC configuration and/or digital inputs and outputs		✓

SAFETY EQUIPMENT - Arc Flash Relays

Littelfuse®

Technical Specifications

℄ (UL)us CE ℗ ℠

PGR-8800 Arc-Flash Relay

Relay Part Nos.	PGR-8800-00 PGR-8800-00-CC (conformal coating)
Sensor Inputs	6 light sensor inputs for PGA-LS10, PGA-LS20 and PGA-LS30 sensors
Sensor Part Nos.	PGA-LS10 (Point) PGA-LS20 (Fiber-Optic) PGA-LS30 (Fiber-Optic)
IEEE Device No.	Overcurrent (50), Arc Flash (AFD)
Input Voltage	100-240 Vac, 110-250 Vdc, or 14-48 Vdc
Dimensions	**H** 130 mm (5.2") **W** 200 mm (7.9") **D** 54 mm (2.2")
Optical Trip Settings	9-25 klux
Trip Coil Output	<1 ms; IGBT switch

Current Rating:	Voltage Rating:
750 mA cont.	24 to 300 Vac
20 A for 2 s	24 to 300 Vdc
10 A for 5 s	

Relay Outputs	Programmable Form C Output Contact: 5 A at 250 Vac/30 Vdc Status Output Contact: 3 A at 50 Vac/50 Vdc
Communications	RS-485, Modbus® RTU
System Expansion	Link up to 4 units
Sensors	Up to 24 (6 per unit)
Battery	24 V lead-acid gel cell (not included)
Approvals	CE, UL Listed (UL508), C-Tick, CSA, DNV
Warranty	5 years
Mounting	DIN, Surface Mount

PGA-LS10 Point Sensor

Type	Point light sensor
Detection Radius	180° Line-of-sight light sensor
Trip Status LED	Displays "tripped" state on each sensor
Health Status LED	Displays "ready" state on each sensor
Electrical Cable	10 m (32.8 ft) included, expandable to 50 m (164 ft)

AF0500 Arc-Flash Relay

Relay Part Nos.	AF0500-00 AF0500-00-CC (conformal coating)
Sensor Inputs	4 light sensor inputs for PGA-LS10, PGA-LS20 and PGA-LS30 sensors
Sensor Part Nos.	PGA-LS10 (Point) PGA-LS20 (Fiber-Optic) PGA-LS30 (Fiber-Optic)
IEEE Device No.	Arc Flash (AFD)
Input Voltage:	100 to 240 Vac, 110 to 250 Vdc or 24-48 Vdc
Dimensions	**H** 130 mm (5.1") **W** 200 mm (7.9") **D** 54 mm (2.1")
Optical Trip Settings	10-30 klux
Trip Coil Outputs	<1 ms; IGBT switch

Current Rating:	Voltage Rating:
750 mA cont.	24 to 300 Vac
20 A for 2 s	24 to 300 Vdc
10 A for 5 s	

Communications	Ethernet, 2 ports with internal Ethernet switch, Modbus® TCP
System Expansion	Unlimited
Sensors	4 per unit
Approvals	CE, UL Listed (UL508), C-Tick
Warranty	5 years
Mounting	Surface, DIN (with optional D0050 adapter clips)

PGA-LS20/LS30 Fiber-Optic Sensors

Type	Fiber-optic light sensor
Detection Radius	360° Line-of-sight light sensor
Trip Status LED	Displays "tripped" state on each sensor
Health Status LED	Displays "ready" state on each sensor
Sensor Length	**PGA-LS20:** 8 m (26.2 ft) active; 10 m (32.8 ft) total **PGA-LS30:** 18 m (59 ft) active; 20 m (66 ft) total
Electrical Cable	10 m (32.8 ft) included, expandable to 50 m (164 ft)

PGA-1100 Diode Logic Unit

Type	Diode Logic Unit
Diodes	1000V reverse voltage, 3 A continuous, 25 A for 1 second
Certification	CE
Dimensions	**H** 70 mm (2.76") **W** 20 mm (5.9") **D** 80 mm

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SAFETY EQUIPMENT
- Monitoring Devices for Conveyor Systems

PULL ROPE EMERGENCY STOP SWITCHES

To stop conveyors at any location in emergencies in accordance to EN 620.

Description

- Enclosures in aluminium, plastic or cast iron
- Uni-and bidirectional installation of pull rope
- ATEX ⟨Ex⟩ II 2D-II 3D
- Enhanced temperature range to - 40°C (- 40°F)
- Two-wire-fieldbus connection

ACCESSORIES FOR STOP SWITCHES

Required for assembling a pull rope system for Emergency Stop Switches

Description

- Pull rope of 3 and 5mm diameter with red PVC Coating
- Tension springs, turnbuckles and rope clamps
- Rope support eyebolts and accessories
- Corrosion-resistant materials available

BELT MISALIGNMENT SWITCHES

Protect equipment by shutting down the conveyor when the belt mistracks

Description

- enclosures in aluminium, plastic or cast iron
- pre-warning; switch off; latching / catch mechanism
- ATEX ⟨Ex⟩ II 2D-II 3D
- enhanced temperature range to - 40°C (- 40°F)
- two-wire-fieldbus connection

PRICES AVAILABLE
ON REQUEST.

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SAFETY EQUIPMENT
- Monitoring Devices for Conveyor Systems

KIEPE ELEKTRIK

ROBUST LIMIT SWITCHES

For position monitoring

Description

- Enclosures in aluminium, plastic or cast iron
- Various actuating levers, rods, trollers
- ATEX ⟨Ex⟩ II 2D-II 3D

Speed Monitors

For monitoring the speed and rotation of conveyors

Description

- Pulse generators
- Low-speed-detection, direction of rotation
- Belt driven speed monitors
- ATEX ⟨Ex⟩ II 2D-II 3D

Misalignment Switches for Bucket Elevators

Contact free monitoring of bucket travel

Description

- For aluminium, mild steel and stainless steel
- Switching distance up to 70mm

Belt Monitoring

For detection of belt breakage

Description

- Separable switches
- Installation material

PRICES AVAILABLE
ON REQUEST.

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Safety Interlocks are suitable for applications across a wide industrial base including power generation and distribution, steel, automotive, recycling, building materials, pharma, food and beverage, robotics and palletisers.

Its extensive product offering and interlocking experience allows us to provide unique solutions for all safeguarding applications.

It regularly creates bespoke solutions, often by customising its standard products.

tGard

tGard offers total integration of control and safety. This is Fortress' brand new product that is customisable as standard.

Its unique design allows the configuration of safety interlock switches, trapped key interlocks and machine control stations or any configuration of all three.

tGard elements are housed in a metal body to create a simple and robust safety system.

mGard

mGard is the premier range of modular robust trapped key interlocks for heavy duty applications. Trapped key interlocking is a tried and tested method of mechanically safeguarding dangerous machines and hazardous processes, and is suitable for use up to SIL 3 (EN/IEC 62061), Category 4 and PLe (EN/ISO 13849-1).

It is called "Trapped Key" as it works by releasing and trapping keys in a predetermined sequence. After the control or power has been isolated, a key is released that can be used to grant access to individual or multiple doors.

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Gardpro

amGard*pro* is the ultimate range of modular safety gate switch interlocks for heavy duty applications.

Its unique modular construction allows easy configuration and provides total electro-mechanical solutions for practically any safeguarding application up to SIL3 (EN/IEC 60261) Category 4 and PLe (EN/ISO 13849-1).

GardS40

amGard*S40* is a range of safety interlock switches, manufactured in 316 stainless steel. The range is modular in design, allowing a wide range of safety interlock switches to be configured to suit many industrial applications, including:
   • Solenoid Locking Safety Switches
   • Non Solenoid Tongue Switches, all with or without machine control
The range is supplied in enclosures sealed to IP69K making it suitable to be pressure washed at high temperatures and has a retention force of 10,000N, so it is ideal for ensuring guard doors are held closed until machines and/or processes are in a safe condition.

Gardnct

amGard*nct* is a range of safety switches that utilise non contact technology.

Designed with IP69K housings, these robust, coded, non contact, safety proximity switches are long lasting and virtually maintenance free with a high level of misalignment making them ideal for guarding applications across a range of industries.

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tGard is the new innovative approach to controlling access to hazardous machinery and equipment. It is a compact metal bodied system that enables the configuration of various safety products including electrical safety gate switches (with or without guard locking), mechanical trapped key interlocks, and electrical operator controls, either as separate devices or integrated into one device.

tGard offers "**a customised safety solution, as standard**" and is defined by a range of tGard elements, including selector switches, safety switches (solenoid and non solenoid), personnel keys, emergency release, push buttons, eStops, indicator lamps and a choice of operating handles for both hinged and sliding guard doors.
These elements are simply selected and then assembled into a robust housing, suitable for mounting onto machine guarding, providing the user with an exact configuration specific to the application.

tGard is quick and easy to install and can be mounted directly onto a flat surface. doors or extruded aluminium profiles without the need for mounting plates or brackets. It is IP65 as standard and has been designed to be fully compliant with the new machinery safety standards.

Customised Safety Solutions as Standard

• Combines interlocking and control in one device
• Simply Robust - All metal housing.
• Customisable - Select exact elements required.
• Future proof for future element expansion.
• Easy and fast to install.
 • Quick Disconnects as standard
  (selfwire option available).
• Mounts directly to extruded aluminium frame.

• Fast on site handing change.
• Allows for door misalignment
• Compliant with all key standards.
 - EN ISO 14119.
 - EN ISO 13849 1 & 2
• Configured products include:
 - Safety Gate Switches.
 - Trapped Key Interlocks.
 - Operator Control.
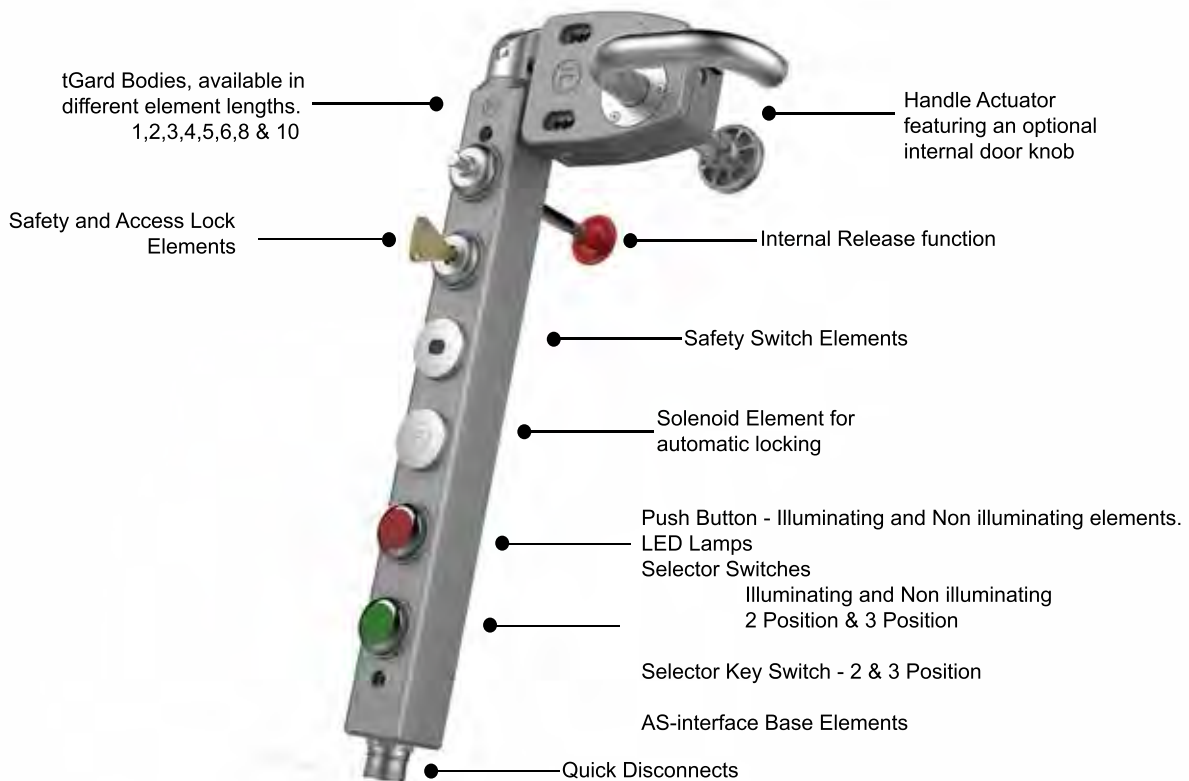
tGard Bodies, available in different element lengths.
1,2,3,4,5,6,8 & 10

Safety and Access Lock Elements

Handle Actuator featuring an optional internal door knob

Internal Release function

Safety Switch Elements

Solenoid Element for automatic locking

Push Button - Illuminating and Non illuminating elements.
LED Lamps
Selector Switches
    Illuminating and Non illuminating
    2 Position & 3 Position

Selector Key Switch - 2 & 3 Position

AS-interface Base Elements

Quick Disconnects

mGard is the premier range of modular robust trapped key interlocks for heavy duty applications. Trapped key interlocking is a tried and tested method of mechanically safeguarding dangerous machines and hazardous processes, and is suitable for use up to SIL3 (EN/IEC 62061) Category 4 and PLe (EN/ISO 13849-1).

It is called "Trapped Key" as it works by releasing and trapping keys in a predetermined sequence. After the control or power has been isolated, a key is released that can be used to grant access to individual or multiple doors.

The principles of trapped key technology apply to all industries where it is essential that all energy sources are isolated before gaining access to machinery. Almost all safety issues can simply be solved by selecting the required products in order of the steps shown on this page.

Power/Control Isolation

SE-CLIN-A02022

Identify the energy sources to be isolated and/or any hazard that cannot immediately be isolated such as; heat, pressure, radiation or machine rundown time

Power isolation	Control isolation
• Mechanical Bolt Interlock	• Key Switches
• Bolt Interlock with Limit Switch	• Solenoid Controlled Key Switch
• Bolt Interlock with Switch	• ATEX Key Switch
• Breaker Locks	• ATEX Solenoid Controlled Key Switch
	• Electronic Time Delay Unit
All Fortress Interlocks rotary switches have European, Canadian, Chinese and North American approvals.	• Voltage Sensing Unit
	• Knob and Key Operated Switch Control Unit

Key Exchange

Key Exchange with Switch

XM4-MLIN

XMR4-CLIN

Identify the type and number of access points.

• Key Exchange Units
• Key Exchange Units with Switch

Because of the modular arrangement of **mGard** both key exchange and door lock units can easily be extended with an *extension module (XMA),* for instance when doors are added to the safeguarded area or machine.

The Fortress Trapped Key System allows the safeguarding of potentially hazardous areas without the need for wiring.
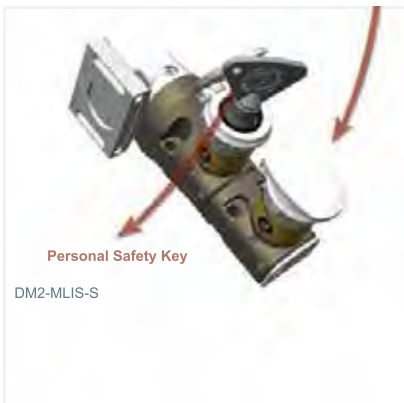
Door Locks & Actuators

Personal Safety Key

DM2-MLIS-S

DM1-CLIN

Identify the type of access point; part body or full body access doors with or without the use of personal safety keys (to prevent accidental lock in).

• Single Door Interlocks
• Multiple Door Interlocks

• Fixed actuator
• Handle operated actuator
• Spring loaded handle operated actuator
• Self aligning actuator
• Compressible actuator

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amGardpro is the ultimate range of modular safety gate switch interlocks, for heavy duty applications. Its unique modular construction allows easy configuration and provides total electro-mechanical solutions for practically any safeguarding application up to SIL3 (EN/IEC 62061), Category 4 and PLe (EN/ISO 13849-1).

With its unrivalled design concept, amGard*pro* offers a range of fully integrated safety interlocks, including solenoid and non-solenoid safety switches complete with a host of additional options including key control modules, emergency release, redundant sensors, lock out/tag out and push buttons, e-stops and indication lights for enhanced functionality. The robust construction of this range makes it ideal for use in a wide range of industrial applications when safety, strength and reliability are of paramount importance.

The **amGard***pro* system replaces all adaptions normally fitted within a guarding system, such that additional hardware like door catches, actuators, closing mechanisms, internal mechanisms, key functions including authorised access and deadlocks may be no longer needed. All of these separate functions can be incorporated into amGard*pro* configurations, resulting in the most flexible safety interlock solution available for today's industrial environment.

Actuators
Actuators
Handle Actuators
Tongue Actuator
All in One Head and Handle Actuator
Slidebars

Head Modules
Head Modules
Handle Actuator Head Module
Tongue Actuator Head Module
All in One Head and Handle Unit
Padlock Adaptor
Foot (to terminate mechanical lock)

Adaptors
Adaptors
Safety Key Adaptors
Access Key Adaptors
Extracted Key Adaptors
Internal Release Adaptors

Electrical Switching / Locking
Electrical Switching / Locking
Safety Switch Bodies
Solenoid Controlled Lock Bodies
Extended body Solenoid Controlled Lock Bodies
Explosion Proof Switch Bodies
Foot (to terminate mechanical lock)

AS-interface versions available
European, Canadian and North American approvals

Option PODs
Option PODs
Key Switch Option Pod
Indicator Lamp Option Pod
Pushbutton Option Pod

AS-interface versions available
European, Canadian and North American approvals

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SAFETY EQUIPMENT - Interlock Systems
• Safety Interlocks For All Industries

FORTRESS

STAINLESS STEEL MODULAR GATE SWITCHES - AMGARDS40

amGardS40 is the latest range of safety interlock switches from Fortress Interlocks. Manufactured in 316 stainless steel, the range is modular in design, allowing a wide range of safety interlock switches to be configured to suit many industrial applications. The choice of configurations include:

• Solenoid Locking Safety Switches
• Solenoid Locking Safety Switches with internal release
• Solenoid Locking Safety Switches with "safety keys" (for personnel protection)
• Solenoid Locking Safety Switches with machine control
• Non Solenoid Tongue Switches
• Non Solenoid Tongue Switches with machine control
• Mechanical Trapped Key Interlocks
• Machine Control Stations

The range is supplied in enclosures sealed to IP69K making it suitable to be pressure washed at high temperatures and has a retention force of 10,000N (greatest on the market) so it is ideal for ensuring guard doors are held closed until machines and/or processes are in a safe condition. Each module has a slim body design of 40mm so that it can be easily fitted to 50mm guarding sections or areas where space is limited.

The rugged design and strength capability makes the S40 range an ideal choice for applications in the Food & Beverage, Pharmaceutical, Chemical, and Construction Materials industries.

The graphic below shows the modules currently available in the range.

amGardS40 Range

	S40 Slidebar	S40 Hinged Handle	S40 Tongue Actuator		S40 Cap	S40 Slimline Head
Actuators				**Head Modules**		
	S40 IR Adaptor	S40 E Adaptor	S40 Lock Adaptor			
Adaptors						
	S40 Stop	S40 Lok	S40 Foot			
Electrical Switching / Locking						
	S40 Option Pod					
Option Pod						

proNet - ProfiNet / Profisafe communications module for amGardpro

Fortress Interlocks has 40 years' experience manufacturing safety interlocks and over that time has developed products to keep pace with and shape the development of safety practices. One facet of this is the interlocks interface to a systems control system; we see the first step back in 1992 when Fortress introduced its wired at gate solution amGard. Technology has changed considerably since then. With advances in PLC technology, software and communication has become prolific throughout factories and automation. Standards like EN61508 and its derivatives have now been developed to allow these advances to be carried into safety applications. In line with these developments, Fortress is able to communicate the state of its device in a range of ways, via hardwiring, field buses, (like AS-i Safety at Work) and is now proud to add its proNet, industrial Ethernet communications to its range. Using the ProfiNet protocol and its extension Profisafe the proNet module integrates easily into the amGardpro range. This integration provides a range of modular solenoid gate switches that have all of the configurability of amGardpro with the added benefit of reduced installation cost, easier maintenance and greater availability of data, for improved diagnostics.

Non Contact Switches

Non-contact safety switches are interlocking devices that are designed to protect people, industry and productivity.

Non-contact safety switches are ideal for use in applications where precise guidance of guards is difficult. Due to the design they are extremely long-lasting devices that require minimal maintenance. In addition they are resistant to shock and vibrations and offer a high level of prevention against tampering.

Fortress have developed the amGardncs, a coded non-contact, safety, proximity switch in a robust package, featuring:

• Stainless Steel IP69K housing, ideal for food, beverage and pharmaceutical environments or anywhere hygiene or
    robustness are paramount.
• PLe Cat 4/SIL3 safety rating.
• Can be used as a coded interlock in accordance with EN14119.
• Based on solid state Hall Effect sensors that do not suffer from vibration and contact bounce.
• Copes with a very high level of misalignment
• Integrated electronics that monitors for faults and ensure the safety relay does not enter a fault state, irrelevant
    of the approach direction.
• Local user indication.
• Monitor outputs for use in the control system.
• Available with a variety of termination options.

Circuit Breakers - Modular Component

When mounted on the front of the Circuit Breaker this lock allows or prevents switching of the breaker.

SAFETY EQUIPMENT - X-Guard Machine Guarding

X-Guard Machine Guarding One system, 1000 advantages…

X-Guard is the number one machine guard that complies with the Machine Directive's new demands on permanent guards. With its wide range of standard components and accessories, X-Guard is guaranteed to cover all possible machine guard needs. We also have a new machine guard, X-Guard Contour, which is the first machine guard with round corners.

X-Guard development has been based on three main criteria: The system should be flexible, quick to assemble, and comply with all conceivable safety requirements and relevant machinery directives. The result was an incredibly intelligent system with a number of benefits which machine guards provide. These include:

• X-Guard has only one post bracket. Used on both corners and straight walls
• The post's have pre-stamped holes to ensure quick assembly
• X-Guard is available in 13 different section widths and 4 different heights
• Doors can be rotated to open right or left so this does not need to be decided when ordering (not X-lock)
• The attachment is pre-fitted to the wall section at the factory
• The spacing between the posts is the same for doors and fixed sections
• A door in the corner is standard, no additional fittings are required
• 20x30 mm section frame is our standard product
• X-Guard Lite is available as an option
• X-Guard is available with rounded corner panels called Contour
• X-Guard can be supplied with a bracket that allows the X-Tray cable rack to be easily fitted

RFE (REG FARRELL ENGINEERING LIMITED)
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FACILITY ELECTRICAL PROTECTION

RFE (REG FARRELL ENGINEERING LTD)

have for many years been market leaders in the industry when it comes to earthing/grounding, lightning and surge protection. We offer a complete solution to the IS EN62305 lightning protection standard which includes our unique erico system 3000 "dynasphere lightning protection system". For the wind energy industry, we provide a complete economic solution to your grounding and lightning protection requirements, from the initial risk assessment software, through to design, and finally a commissioning service.

For technical advice, support & design services please contact a member of our sales team sales@rfe.ie

RFE partner with the following high quality brands such as

TYPICAL PRODUCTS INCLUDE: 25 X 3 COPPER TAPE, SQUARE TAPE CLAMPS, TAPE CLIPS, TEST CLAMPS, COPPER BONDED EARTH RODS, ROD TO TAPE CLAMP, INSPECTION PITS, and GROUND ENHANCEMENT MATERIAL.

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FACILITY ELECTRICAL PROTECTION - Surge Protection Devices
• Surge Protection Equipment

DINLINE SURGE ARRESTERS

Code	Description	Price
DT27510R	DT2 DIN Rail Surge Protection Class II, 1+0 Mode	POA
DT27511R	Surge Diverter Type 2 75V 11	POA
DT130030R	Surge Diverter Type 1 300V 30	POA
10020	TYPE 1+2+3 1 Pole Surge Arrester 12.5 / 50KA	POA
10020/2	TYPE 1+2+3 2 Pole Surge Arrester 12.5 / 50KA	POA
10020/4	TYPE 1+2+3 TP+N (4Pole) Surge Arrester 50KA	POA
10811/LED	Type 1+2+3 Combined Lightning & Surge Arresters 4 pole, 100ka 10/350µs Enhanced protection Mode protection common and differential	POA
DT130020R	CLASS 1 +2 2 Pole 12.5 / 50KA 300V 2M Surge Arrester	POA
DT130040R	CLASS 1 +2 4 Pole 12.5 / 50KA 300V 4M Surge Arrester	POA
SY2D LED	CLASS 2 2 Pole *** 1 mod *** Live & Neutral	POA
SY2D	CLASS 2 2 Pole *** 1 mod *** Live & Neutral CLASS 2 Pluggable	POA
27023	CLASS 2 4 Pole TP+N Surge Arrester	POA
DT230010R	CLASS 2 + 3 1 Pole 50KA 300V 1M Surge Arrester	POA
SY1-C 40X	CLASS 2 + 3 2 Pole L+N Surge Arrester	POA
DT230020R	CLASS 2 + 3 2 Pole 50KA 300V 2M Surge Arrester	POA
DT230030R	CLASS 2 + 3 3 Pole 50KA 300V 3M Surge Arrester	POA
DT230040R	CLASS 2 + 3 4 Pole 50KA 300V 4M Surge Arrester	POA
SY2-C 40X LED	CLASS 2 + 3 4 Pole Surge Arrester LED	POA

DATA/SIGNAL SURGE PROTECTION DEVICES

Code	Description	Price
SP30	Data/Signal Surge Arrester up to 30vDC	POA
SP48	Data/Signal Surge Arrester up to 48vDC	POA
DTB2/ART	Surge Arrester for Telephone	POA
32006	class 2/3 Fire / Burglar Alarm Individual Sockets	POA
P1S1	Status Indicator for Surge Arrester Panel Mount	POA
210200	Surge For Cable TV (COAX) male/female	POA
210210	Surge for Satellite SKY (F type)	POA
220205	Surge for Signal Cable 5V DC (1pair)	POA
220212	Surge for Signal Cable 12V DC (1 pair)	POA
220248	Surge for Signal Cable 48V DC (1pair)	POA
210228	Surge for TV (BNC type)	POA
220194	Surge for Analogue Telephone (1 Pair)	POA
220224	Surge for Signal Cable 24V DC (1pair)	POA
210130	Surge P-TK/Z- CAT 5 CAT 6 S	POA
207201	Plug in P-HMS 280 Surge	POA

ERIFLEX
ERITECH

Bonding, Grounding, Surge Protection and Low Voltage Panel Components

Clear SPD Status indication

Remote Contacts

Smaller width and more compact modules

Enhanced TOV withstand capability via TD (Transient Discriminant technology)

Backup fuse 315A for 25kZ SCCR* systems

Lock back DIN rail clips

Rugged base connection and base keying mechanism

Maz SCCR* of 50kA

Anti-vibration module locks

APPROVALS

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FACILITY ELECTRICAL PROTECTION - Grounding & Bonding

CONCRETE / PLASTIC INSPECTION PIT

Code	Ref	Description	Dimensions	Unit Wgt	Price
710180	PIT03	Plastic Inspection Pit	250 x 200 x 215 mm	1.35 kg	POA
103450	IP-900-C	Concrete Inspection Pit	325 x 325 x 145 mm	27 kg	POA

GEM GROUND ENHANCEMENT MATERIAL

Code	Description	Price
163670	11.3Kg per Bag	€47.07

A superior conductive material that solves your toughest grounding problems. Anywhere ground rods can't be driven, or where rocky or sandy soil creates high resistance, GEM can be used to lower the ground impedance. Mixed with water to form a slurry or installed dry, GEM is easy to use and permanent.

FACILITY ELECTRICAL PROTECTION - Lightning Protection
• Conventional Lightning Protection Equipment

CONVENTIONAL LIGHTNING PROTECTION EQUIPMENT

Item	Price
CU Tape Bare 25X3MM (25 MT COIL)	POA
CU Tape PVC Covered 25X3MM Grey (25 MT COIL)	POA
25x3 DC Tape Clip Non Metallic For Bare Tape	POA
25x3 DC Tape Clip Non Metallic For PVC Covered Tape Grey	POA
Square Tape Clamp	POA
Inspection Pit Concrete	POA
Rod,Copperbond,5/8X1200,Extending,Threaded 14.2MM	POA
Rod To Tape Clamp	POA
Coupler For Threaded Ground Rod	POA
Driving Stud	POA
Cu, B-Bond	POA
Test Clamp	POA
Denso Tape	POA

Graphic for demonstration purposes only

DYNASPHERE LIGHTNING PROTECTION SYSTEM (UL96) "SYSTEM 3000"

Item	Price
Dynasphere, MKIV, SS	POA
Insulated 2m Mast Black	POA
Inline Coupling	POA
6m Mast	POA
Stainless Steel Offset Bracket	POA
Stainless Steel Cable Tie	POA
Lightning Event Counter	POA
Ericore Downconductor, 50mm2, 36mm	POA
Factory Termination - Ericore	POA
Termination Kit, Lower, Ericore	POA
Conductive Saddles e2	POA
Fixings for Conductive Saddles	POA
Inspection Pit Concrete	POA
Prefabricated Crowfoot	POA
5/8 x 1200 Copperbond Rod Extending	POA
Earth Bar for Pit	POA
5/8 Driving Stud	POA
51 x 12mm Rod to Tape Clamp	POA
Ground Agent - Gem - 11.5kgs	POA

Graphic for demonstration purposes only

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EXAMPLE:
SMALL VOLUME
SOLVENT HANDLING
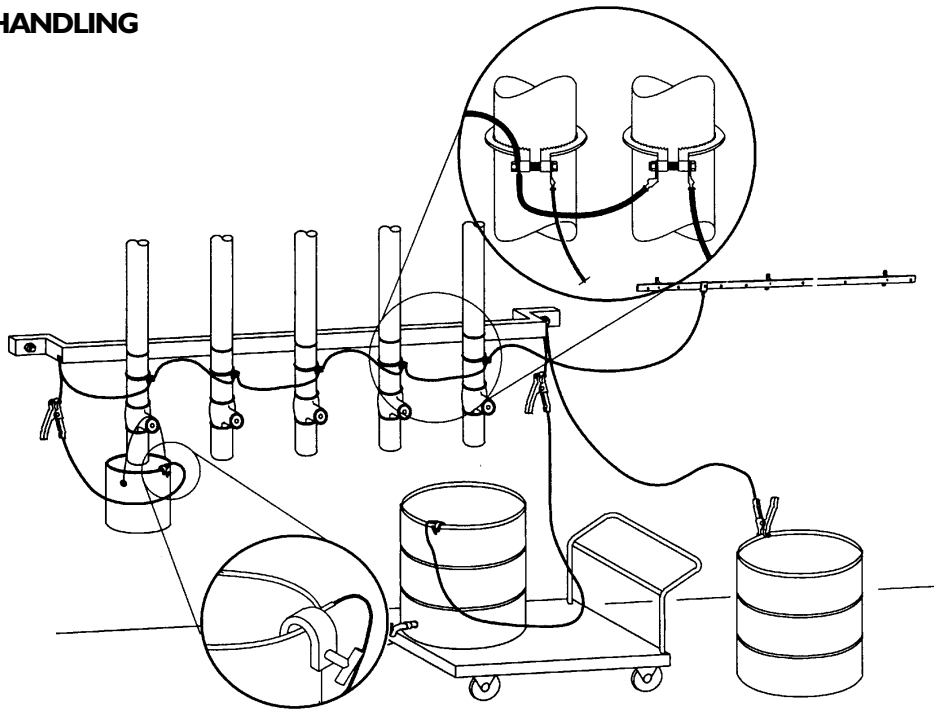
STATIC BONDING & GROUNDING

Bonding and grounding are very effective techniques for minimising the likelihood of ignition from static electricity. A bonding system connects various pieces of conductive equipment together to keep them at the same potential. Static sparking cannot take place between objects that are at the same potential. Grounding is a special form of bonding in which conductive equipment is connected to an earthing electrode or to the building grounding system in order to prevent sparking between conductive equipment or ground.

EARTH RESISTIVITY TESTING

As part of our lightening protection plan which incorporates lightning protection designs for buildings, open areas, we now offer an earth resistivity testing service. For the efficient performance of a lightning protection system it is essential that a low impedance ground be provided to facilitate the dissipation of the lightning energy into the ground.

As soil and soil conditions vary greatly from region to region, soil (earth) resistivity will also vary significantly. It is essential that an accurate soil reading is achieved. This will enable you to design the grounding system best suited for the soil condition.

Our earth resistivity service is priced on application.

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FACILITY ELECTRICAL PROTECTION - Earthing Equipment

AIR TERMINALS
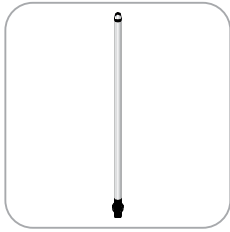
Meets BS1432 C101/BS2897/AS1567

Reference code	Part No.	ø mm	L mm		Unit weight kg	Price
••• Copper						
CAR0510	711080	10	500	1	0,480	POA
CAR0515	711090	16	500	1	0,750	POA
CAR1010	711100	10	1000	1	1,100	POA
CAR1015	711110	16	1000	1	1,510	POA
CAR2015	711010	16	2000	1	3,000	POA
••• Aluminium						
AAR0510	711050	10	500	1	0,190	POA
AAR1010	711060	10	1000	1	0,380	POA
AAR0515	710020	16	500	1	0,265	POA
AAR1015	711070	16	1000	1	0,530	POA

MULTIPLE POINT AIR TERMINAL
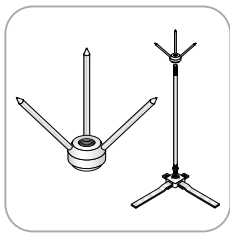
**Meets BS1432 C101/BS1400
BS2897/BS2874/AS1567**

Reference code	Part No.	ø mm	L mm		Unit weight kg	Price
CMPR	711120	16	500	1	1,200	POA

AIR TERMINALS BASES
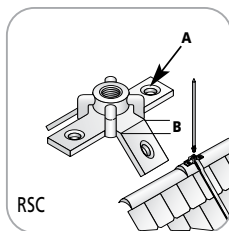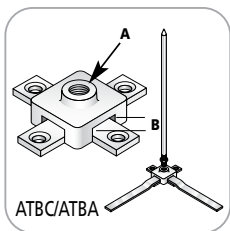
**Meets
BS1400/BS1471
AS1866/AS1567**

ATBC/ATBA

RSC

Reference code	Part No.	A mm	B mm		Unit weight kg	Price
••• Copper						
ATBC10	711150	10	25	1	0,500	POA
ATBC15	711160	16	25	1	0,500	POA
RSC115	711170	16	31	1	1,700	POA
••• Aluminium						
ATBA10	711130	10	25	1	0,160	POA
ATBA15	711140	16	25	1	0,160	POA

AIR TERMINAL TO TAPE COUPLING/BRACKETS

70 mm L 25mm Ø 16.5mm
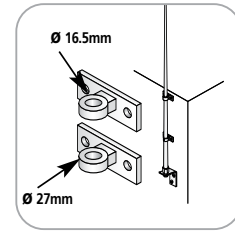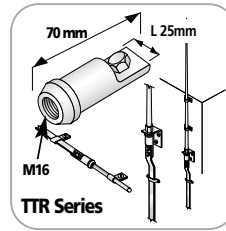
**Meets
BS1400/BS149
BS2897/AS1567**

M16

TTR Series

Ø 27mm

Reference code	Part No.	Material		Unit weight kg	Price
••• Threaded rod to tape coupling					
TTRC16	711210	Copper	1	0,230	POA
TTRA16	711200	Aluminium	1	0,080	POA
••• Rod brackets					
CBR015	711190	Copper	2	0,900	POA
ABR015	711180	Aluminium	2	0,280	POA

SIMPLE AIR TERMINAL

Meets NFC-17100

Extension Masts

L 2m
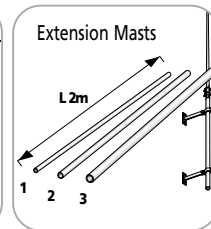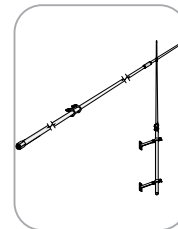
Air Terminal height (m)	Number of mast
2,40	0
4,15	1 (ER1)
5,90	2 (ER1+ER2)
7,65	3 (ER1+ER2+ER3)

Reference code	Part No.	Lightning Rod height	Ømm		Unit weight kg	Price
••• Chrome - nickel plated copper						
ASL-240-CC	101700	2,40 m	30	1	3,750	POA

Reference code	Part No.		Ømm		Unit weight kg	Price
••• Galvanized steel extension masts						
ER1-2000	101920		33	1	13,800	POA
ER2-2000	101930		36	1	14,200	POA
ER3-2000	101940		42	1	15,000	POA

TRIPOD FOR MAST OR SIMPLE AIR TERMINAL

Meets NFC-17100/NFC-17102

ø int. maxi 50 mm

800 mm

385 mm
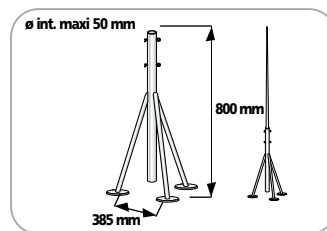
Reference code	Part No.	Nr of masts		Unit weight kg	Price
••• Galvanized steel					
TFS 800	101950	0-3	1	8,280	POA

FACILITY ELECTRICAL PROTECTION - Earthing Equipment

WATERPROOF CONE/AERIAL SPARK GAP

6-50mm Ø
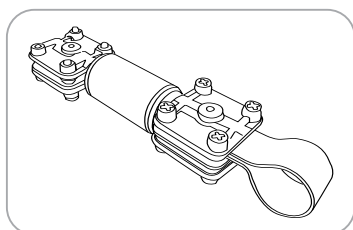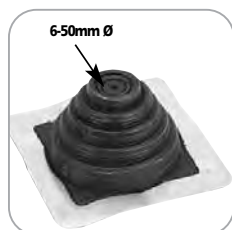
Reference code	Part No.		Unit weight kg	Price
WPC	702230	1	0,070	**POA**
SG-AERIAL-302	702285	1	0,500	**POA**

SET OF TWO 54 cm BRACKETS

Meets NFC-17100/NFC-17102

550 mm   670 mm

38-77 mm
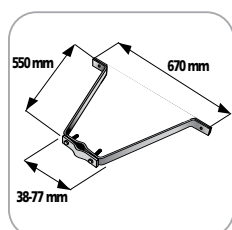
Reference code	Part No.		Unit weight kg	Price
LSEB 4554	702180	1 pair	10,5	**POA**

BRACKETS FOR MAST OR AIR TERMINAL

Meets NFC-17100
NFC-17102

280 mm
40 mm
90 mm   120 mm
Ø 28-55mm
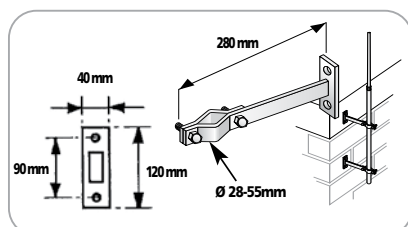
Reference code	Part No.		Unit weight kg	Price
• • • Galvanized steel				
ALOF1-GS	702175	1	1,500	**POA**

X-SHAPED BRACKET

Meets NFC-17100/NFC-17102

Reference code	Part No.	Description	Admissible ø mm		Unit weight kg	Price
ACF-2-GS	103100	Set of 2 Fasteners	30 to 50	1	2,10	**POA**

STRIKING RODS
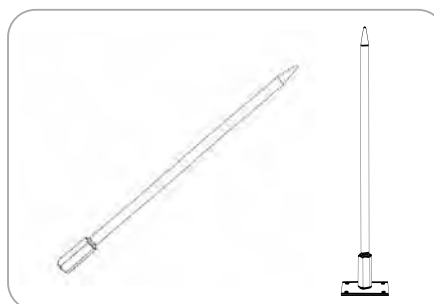
Meets NFC-17100

Reference code	Part No.	Lightning rod height		Unit weight kg	Price
• • • Chrome - nickel plated copper					
ARC-2205-CNC	101900	0,50m	1	0,550	**POA**
ARC-2210-CNC	101910	1m	1	0,800	**POA**
• • • Stainless steel					
ARC-2205-SS	102000	0.50m	1	0,500	**POA**
ARC-2210-SS	102010	1m	1	0,750	**POA**

AIR TERMINAL BASES AND FASTENERS

102350   102400   102410

102460   102500   702165
102450
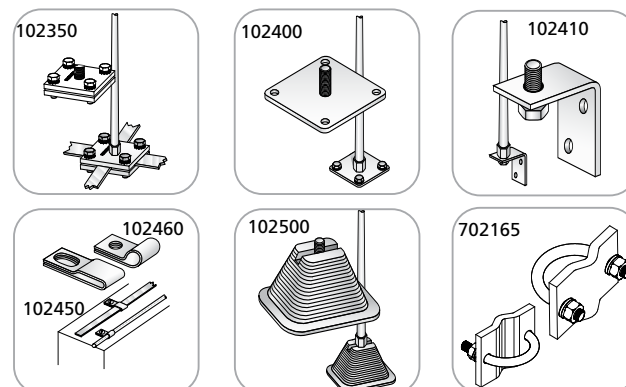
Reference code	Part No.	Description		Unit weight kg	Price
ASB-TCA	102350	Base rod support and cross-over	1	0,250	**POA**
ASP-100-TS	102400	Support plate	1	0,430	**POA**
ASA-TB	102410	Angle support plate	1	0,200	**POA**
ABFF-6530-TC	102450	For flat conductor (30x2)	1	0,070	**POA**
ABFR-6530-TC	102460	For round conductor (8mmø)	1	0,050	**POA**
ASFR-C	102500	Cement block support	10	1,000	**POA**
TMC-SS	702165	Tape to Mast Clamp	1	0,200	**POA**

FASTENERS FOR AIR TERMINAL

Meets NFC-17100
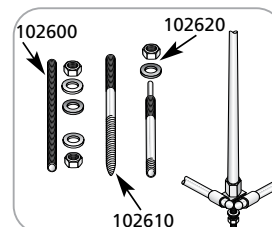
102600   102620
102610

Reference code	Part No.	Description		Unit weight kg	Price
ATR-10-SS	102600	M10 threaded rod, 100 mm long	10	0,080	**POA**
ACB-10-SS	102610	Supporting anchor bolt* Angle support plate	10	0,060	**POA**
AEM-10-SS	102620	Expanding support pin, M10 85 mm long, drilling depth 60 mm	10	0,040	**POA**

*Supplied with impermeable collar

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FACILITY ELECTRICAL PROTECTION - Earthing Equipment

PUDDLE FLANGES

Meets
BS1432C101/BS2897

150 mm
3mm
150 mm
450 mm
ø 5/8"
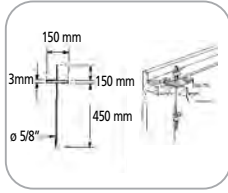
Reference code	Part No.	Material		Unit weight kg	Price
PFC001	710290	Copper	1	-	POA
PFA001	710295	Aluminium	1	-	POA

DC TAPE CLIPS
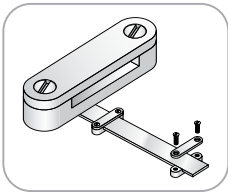
Meets BS1400/BS1471/BS2874
BS2897/AS1567

Reference code	Part No.	Description		Unit weight kg	Price
• • • Copper					
DCC203	711630	for 20x3 bare copper tape	50	0,050	POA
DCC253	711220	for 25x3 bare copper tape	50	0,070	POA
DCC254	711640	for 25x4 bare copper tape	50	0,070	POA
DCC256	711230	for 25x6 bare copper tape	50	0,080	POA
DCC313	711650	for 31x3 bare copper tape	25	0,090	POA
DCC316	711660	for 31x6 bare copper tape	25	0,090	POA
DCC383	711670	for 38x3 bare copper tape	25	0,120	POA
DCC385	711680	for 38x5 bare copper tape	25	0,130	POA
DCC386	711690	for 38x6 bare copper tape	25	0,014	POA
DCC503	711700	for 50x3 bare copper tape	25	0,015	POA
DCC504	711710	for 50x4 bare copper tape	25	0,015	POA
DCC506	711240	for 50x6 bare copper tape	25	0,160	POA
DCC600	711250	for 25x3 PVC covered Cu tape	50	0,100	POA
DCC605	711260	for 25x6 PVC covered Cu tape	50	0,130	POA
DCC610	711270	for 50x6 PVC covered Cu tape	25	0,260	POA
• • • Aluminium					
DCA253	711730	for 25x3 bare aluminium tape	50	0,030	POA
DCA256	711740	for 25x6 bare aluminium tape	50	0,080	POA
DCA506	711750	for 50x6 bare aluminium tape	25	0,050	POA
DCA600	711760	for 25x3 PVC covered Al. tape	25	0,040	POA

BARE TAPE CLIPS
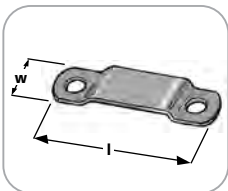
Meets BS2870/BS1471

w
l

Reference code	Part No.	Description	l mm	w mm		Unit weight kg	Price
• • • Copper							
TAPC203	711560	for 20x3 bare copper tape clip	40	15	25	0,500	POA
TAPC253	711570	for 25x3 bare copper tape clip	40	15	25	0,500	POA
TAPC506	711590	for 50x6 bare copper tape clip	69	15	25	0,800	POA
• • • PVC Covered Copper							
TAPC254	711580	for 25x3 PVC covered copper tape clip	44.5	15	25	0,500	POA
• • • Aluminium							
TAPA203	711540	for 20x3 bare aluminium tape clip	40	15	25	0,100	POA
TAPA253	711550	for 25x3 bare aluminium tape clip	40	15	25	0,100	POA

NON METALLIC DC TAPE CLIPS
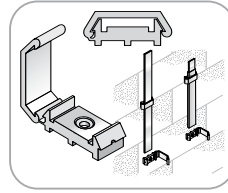
Meets BS1400/BS1471

Reference code	Part No.	Colour		Unit weight kg	Price
• • • For use with 25x3 bare Cu/Al tape					
PDC253BN	711280	Brown	50	0,01	POA
PDC253GY	711290	Grey	50	0,01	POA
• • • For use with 50x6 bare Cu/Al tape					
PDC506BL	711360	Black	50	0,02	POA
• • • For use with 25x3 PVC covered Cu/Al tape					
PDC25WH	711350	White	50	0,01	POA
PDC25BN	711310	Brown	50	0,01	POA
PDC25BL	711300	Black	50	0,01	POA
PDC25GN	711320	Green	50	0,01	POA
PDC25GY	711330	Grey	50	0,01	POA
PDC25ST	711340	Stone	50	0,01	POA

SLATE HOLDFAST NON METALLIC
DC CLIP & GLAZING BAR HOLDFAST

HF

GB
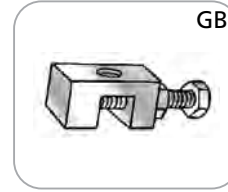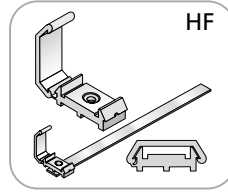
Meets
BS1400
BS2874

Reference code	Part No.	Colour		Unit weight kg	Price
• • • For 25x3 bare tape					
HF250BN	711800	Brown	50	0,020	POA
HF250GY	711810	Grey	50	0,020	POA
• • • For 25x3 PVC covered tape					
HFP253BN	711820	Brown	50	0,020	POA
HFP253GY	711830	Grey	50	0,020	POA
HFP253ST	711840	Stone	50	0,020	POA

GLAZING BAR HOLDFAST

Meets BS1400/BS2874

Reference code	Part No.		Unit weight kg	Price
• • • Copper				
GBH C	710300	5	-	POA
• • • Aluminium				
GBH A	710305	5	-	POA

ONE HOLE CABLE CLIP
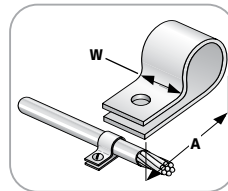
Meets BS2879/BS1474

w
A

Reference code	Part No.	ø mm	A mm	W mm		Unit weight kg	Price
• • • Copper							
PC008C	711380	8	28	10	50	0,01	POA
PC010C	711390	10	42	15	50	0,01	POA
• • • Aluminium							
PC008A	711370	8	28	10	50	0,01	POA
PC010A	711040	10	42	15	50	0,01	POA

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PLATE TYPE TEST CLAMP
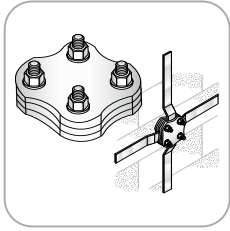
Meets BS1400

Reference code	Part No.	Description		Unit weight kg	Price
• • • Copper					
PCT400	711450	26x12 mm	1	0,60	**POA**

SQUARE TAPE CLAMP
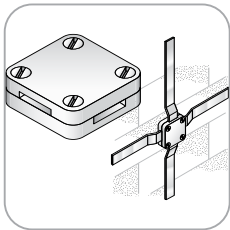
Meets BS1471/BS2874/BS1400

Reference code	Part No.	Description		Unit weight kg	Price
• • • Copper					
STC253	711410	25x3 mm	5	0,200	**POA**
STC256-506	711425	25x6 mm to 50x6 mm	5	0,770	**POA**
• • • Aluminium					
STA253	711400	25x3 mm	5	0,090	**POA**

BI-METALLIC CONNECTORS

711490 711500 711480
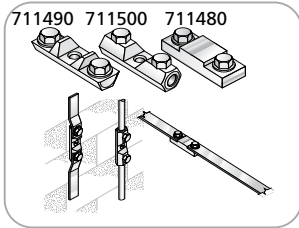
Meets BS970/BS1471/BS2874

Reference code	Part No.	Description		Unit weight kg	Price
• • • Stainless Steel					
BIM800	711490	25x3 mm	5	0,200	**POA**
BIM900	711500	round max 8 mm	5	0,200	**POA**
• • • Copper / Aluminium					
BIM700	711480	25x3 mm	5	0,190	**POA**

OBLONG TEST OR JUNCTION CLAMP

Meets BS1471
BS2874/BS1400

8 mm

26 mm

Reference code	Part No.	Description		Unit weight kg	Price
• • • Copper					
OCB268	711440	26x8 mm	2	0,290	**POA**
• • • Aluminium					
OBA268	711430	26x8 mm	2	0,100	**POA**

PROTECTIVE SLEEVE FOR DOWN CONDUCTOR
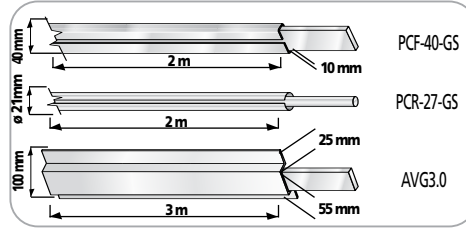
Meets
BS1449-1
BS970
AS1397
NFC-17100
NFC-17102

40 mm · 2 m · 10 mm · PCF-40-GS
Ø 21 mm · 2 m · PCR-27-GS
100 mm · 3 m · 25 mm · 55 mm · AVG3.0

Reference code	Part No.	Description		Unit weight kg	Price
• • • Galvanized					
PCF-40-GS	102800	Protective sleeve for down conductors	1	1	**POA**
PCR-21-GS	102850	Protective sleeve for round down conductors	1	0,90	**POA**
AVG3.0	711030	Anti vandal guard	1	2,90	**POA**

BRASS SUPPORT FOR DOWNCONDUCTOR

Meets NFC-17100/NFC-17102

52 mm · 17 mm · 50 mm
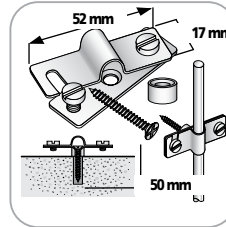
Reference code	Part No.		Unit weight kg	Price
SR	545260	50	0,027	**POA**

ANCHOR WITH LEAD PIN
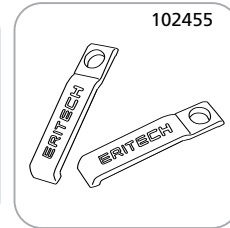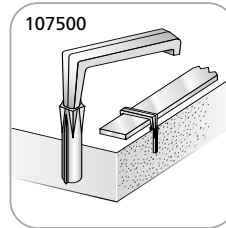
107500 · 102455

Meets NFC-17100/NFC-17102

Reference code	Part No.	Description		Unit weight kg	Price
• • • Galvanized					
SDH-3-GI	107500	with lead pin	50	0,021	**POA**
PC302GS	102455		1	0,010	**POA**

MULTIPURPOSE CLAMP

Meets NFC-17100/NFC-17102

56 mm
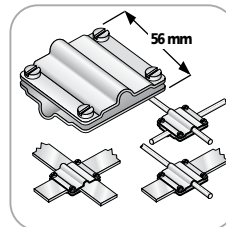
Reference code	Part No.	Material		Unit weight kg	Price
• • • Round 8 mm max or tape 30 mm max					
CCFR-308	545270	Brass	25	0,150	**POA**
CCS-308	545170	Stainless steel	25	0,150	**POA**
CCG-308	545180	Galvanized steel	25	0,150	**POA**

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EARTH TESTING CLAMP
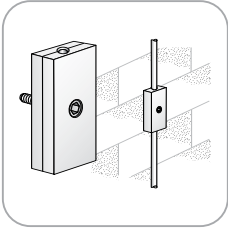
Meets NFC-17100/NFC-17102

Reference code	Part No.		Unit weight kg	Price
• • • For Round max 10 mm or flat max 30 mm				
CCJ-70-CA	102700	1	0,4	**POA**

SUPPORT HOOKS FOR ROOF TILES
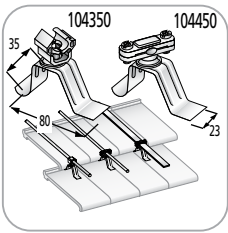
Meets NFC-17100/NFC-17102

Reference code	Part No.	Conductor		Unit weight kg	Price
• • • Plastic / Stainless steel 55 mm height					
R2-SRL-25	104350	6 mm Ø	50	0,038	**POA**
R2-SFT-25	104450	5-11 mm Ø or 30x2 mm	50	0,052	**POA**

SUPPORTS WITH ADJUSTABLE FASTENING PLATE
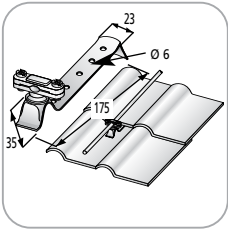
Meets NFC-17100/NFC-17102

Reference code	Part No.	Conductor		Unit weight kg	Price
• • • Plastic / Stainless steel 35mm height					
R1-SRL-25A6	104200	6 mm Ø	50	0,042	**POA**
R1-SFT-25	104300	5-11 mm Ø or 30x2 mm	50	0,042	**POA**

FIXOBAND
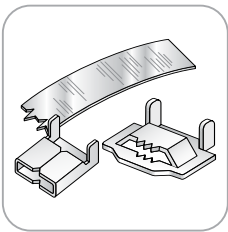
Reference code	Part No.	Description		Unit weight kg	Price
CEI20	591080	Stainless steel bonding	100	0,009	**POA**
FEI20	591230	Stainless steel buckle	50	0,104	**POA**
BEI20	591280	Stainless steel serrated buckle	100	0,017	**POA**
42014	591290	Fixoband Tool	1	1,800	**POA**

SUPPORT FOR HIP OR RIDGE TILES
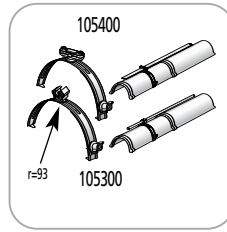
Reference code	Part No.	Conductor		Unit weight kg	Price
• • • Diameter 180-260 mm, plastic / stainless steel					
T1-SRL-25/6	105300	6 mm Ø	10	0,092	**POA**
T1-SFT-25	105400	5-11 mm Ø or 30x2 mm	10	0,105	**POA**

SUPPORT FOR ROUND CONDUCTOR
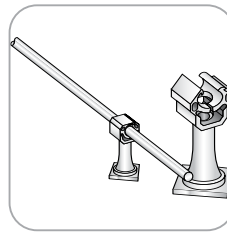
Reference code	Part No.	Conductor		Unit weight kg	Price
• • • Plastic 16 mm height					
SRL-23-N6	103700	6 mm Ø	50	0,008	**POA**
SRL-23-N8	103710	8 mm Ø	50	0,008	**POA**
SRL-23-N10	103720	10 mm Ø	50	0,008	**POA**

PLASTIC SUPPORT BLOCK

Meets NFC-17100/NFC-17102
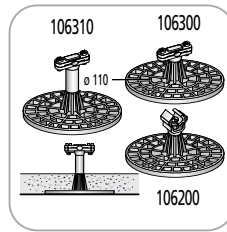
Reference code	Part No.	Conductor	H		Unit weight kg	Price
• • • Plastic						
SFRR-SRL-45/6	106200	6 mm Ø	45mm	10	0,014	**POA**
SFRR-SFT-45	106300	5-11 mm Ø or 30x2	45mm	10	0,028	**POA**
SFRR-SFT-65	106310	5-11 mm Ø or 30x2	65mm	10	0,029	**POA**

SLIDE RAIL FOR ROOF TILE OR TILE SLATE

Meets NFC-17100/NFC-17102
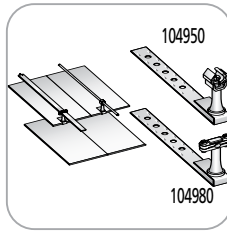
Reference code	Part No.	Conductor		Unit weight kg	Price
• • • Plastic / stainless steel 40mm height					
R6-SRL-40/6	104950	6 mm Ø	50	0,069	**POA**
R6-SFT-40	104980	5-11 mm Ø or 30x2	50	0,083	**POA**

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PLASTIC SUPPORT FOR DOWNCONDUCTOR
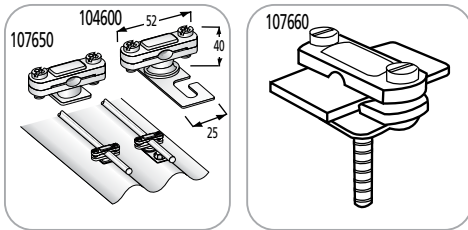
Meets NFC-17100/ NFC-17102

Reference code	Part No.	Conductor		Unit weight kg	Price
• • • Plastic					
SFT-23-N	107650	5-11 mm Ø or 30x2 mm	50	0,020	POA
SFTP-23-N	107660	5-11 mm Ø or 30x2 mm	50	0,020	POA
R3SFT-25	104600	5-11 mm Ø or 30x2 mm	50	0,037	POA

STAINLESS STEEL CLIP 30X2
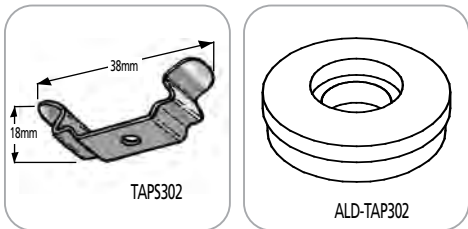
Meets NFC17100/ NFC-17102

Reference code	Part No.		Unit weight kg	Price
TAPS302	711620	100	0,002	POA
ALD-TAP302	711195	100	-	POA

BLOCKS FOR ROUND OR FLAT CONDUCTORS
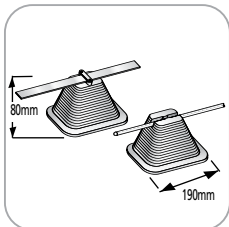
Meets NFC-17100/NFC-17102

Ref code	Part No.	Conductor	Fill		Unit weight kg	Price
SFR-BC-8	106030	8 mm Ø	Concrete	20	0,970	POA
SFT-BC	106080	5-11 mm Ø or 30x2	Concrete	20	0,982	POA
SFT-BE	106060	5-10 mm Ø or 30x2	Empty	100	0,100	POA

STRAIGHT CONNECTOR

Meets NFC-17100

Reference code	Part No.	Conductor		Unit weight kg	Price
• • • Galvanized steel					
CLR-10	101240	9 mm Ø	25	0,11	POA

T CONNECTOR

Meets NFC-17100

Reference code	Part No.	Material		Unit weight kg	Price
• • • 8 mm diam.					
CTR-10	101230	Galvanized	25	0,12	POA
CTR-8CU	710030	Copper	10	-	POA
CTR-8AL	710040	Aluminium	10	-	POA

CROSS CONNECTOR

Meets NFC-17100/NFC-17102

Reference code	Part No.	Material		Unit weight kg	Price
• • • 6-8 mm diam.					
CCR-68-S	101250	Stainless steel	25	0,48	POA
CCR-68-CU	101260	Copper	25	0,54	POA
CCR-68-GS	101265	Galvanized steel	25	-	POA

SLIDE FASTENER ROOFSTILE FOR CONDUCTORS

Meets NFC-17100/NFC-17102

Reference code	Part No.		Unit weight kg	Price
R7-SFT-20	702250	10	0,05	POA

HOT STICKING STRIP

Meets NFC-17100/NFC-17102

Reference code	Part No.		Unit weight kg	Price
HSF	702240	10	0,02	POA

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FACILITY ELECTRICAL PROTECTION - Earthing Equipment

COPPER CABLE
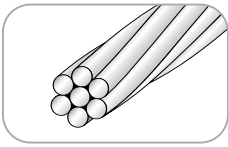
Meets BS125/BS6360/AS1746/
CEI1024-1/EN50164-2

WITHOUT INSULATION

Reference code	Part No.	Strand Description	Section mm²		Unit weight kg	Price
SC-EC-10	710880	7x1,45	10	50 m	0,12/m	POA
SC-EC-16	710890	7x1,60	16	50 m	0,13/m	POA
SC-EC-25	197900	7x2,14	25	50 m	0,23/m	POA
SC-EC-35	197910	7x2,52	35	50 m	0,31/m	POA
SC-EC-50	197920	19x1,78	50	50 m	0,46/m	POA
SC-EC-70	197930	19x2,14	70	50 m	0,62/m	POA
SC-EC-95	197940	19x2,52	95	50 m	0,85/m	POA
SC-EC-120	710900	37x2,00	120	50 m	1,03/m	POA
SC-EC-150	710920	37x2,25	150	50 m	1,33/m	POA
SC-EC-185	197950	37x2,50	185	50 m	1,61/m	POA

Minimum Order Quantity to Consider
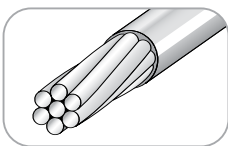
Meets (IC-EC) CEI 1024-1 - Meets (IC-ECH)
BS6004/6491X/AS1746/EN50164-2

WITH GREEN / YELLOW INSULATION

Reference code	Part No.	Strand Description	Section mm²		Unit weight kg	Price
• • •						
IC-EC-25	198000	204x0,395	25	50 m	0,27/m	POA
IC-EC-35	198010	286x0,395	35	50 m	0,37/m	POA
IC-EC-50	198020	408x0,395	50	50 m	0,53/m	POA
• • •						
IC-ECH-16	198130	7x1,60	16	50 m	-	POA
IC-ECH-25	198050	7x2,14	25	50 m	0,26/m	POA
IC-ECH-35	198060	7x2,52	35	50 m	0,36/m	POA
IC-ECH-50	198070	19x1,78	50	50 m	0,52/m	POA
IC-ECH-70	198080	19x2,14	70	50 m	0,72/m	POA
IC-ECH-95	198090	19x2,52	95	50 m	0,98/m	POA
IC-ECH-120	710980	37x2,03	120	50 m	1,16/m	POA
IC-ECH-150	710990	37x2,25	150	50 m	1,54/m	POA
IC-ECH-185	711100	37x2,52	185	50 m	2,10/m	POA
IC-ECH-240	710970	61x2,25	240	50 m	2,50/m	POA
IC-ECH-300	198100	61x2,52	300	50 m	3,13/m	POA

Minimum Order Quantity to Consider

BARE COPPER TAPE
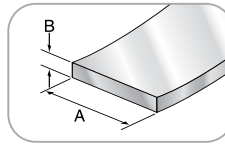
Meets BS1432 C101/AS1567/
NFC17-100/NFC17-102/
CEI1024-1/EN50164-2

Reference code	Part No.	Width (A)mm	Thick. (B)mm		Unit weight kg	Price
TC-EC-1215-30	710460	12	1,5	30 m	0,17/m	POA
TC-EC-1230-30	710470	12	3,0	30 m	0,33/m	POA
TC-EC-2015-30	710480	20	1,5	30 m	0,27/m	POA
TC-EC-2030-30	710490	20	3,0	30 m	0,53/m	POA
TC-EC-2515-30	710500	25	1,5	30 m	0,33/m	POA
TC-EC-2530-25	710515	25	3,0	25 m	0,67/m	POA
TC-EC-2530-50	710510	25	3,0	50 m	0,67/m	POA
TC-EC-2540-30	710520	25	4,0	30 m	0,89/m	POA
TC-EC-2560-15	710535	25	6,0	15 m	1,34/m	POA
TC-EC-3020-30	197650	30	2,0	30 m	0,53/m	POA
TC-EC-3160-30	710540	31	6,0	30 m	1,65/m	POA
TC-EC-3650-50	710545	36	5,0	50 m	1,61/m	POA
TC-EC-3850-10	710555	38	5,0	10 m	1,70/m	POA
TC-EC-3860-30	710560	38	6,0	30 m	2,04/m	POA
TC-EC-5030-30	710570	50	3,0	30 m	1,34/m	POA
TC-EC-5060-20	710580	50	6,0	20 m	2,64/m	POA

Minimum Order Quantity to Consider

TINNED COPPER TAPE
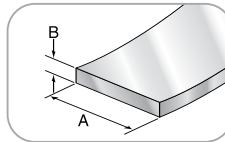
Meets BS1432C101/BS6746/
AS1567/NFC 17100/
NFC 17102/EN50164-2

Reference code	Part No.	Width (A)mm	Thick. (B)mm		Unit weight kg	Price
TC-ECT-2020-30	197700	20	2,0	30 m	0,36/m	POA
TC-ECT-2530-30	197720	25	3,0	30 m	0,67/m	POA
TC-ECT-3020-30	197710	30	2,0	30 m	0,53/m	POA
TC-ECT-3020-75	545200	30	2,0	75 m	0,53/m	POA
TC-ECT-4030-30	197970	40	3,0	30 m	1,06/m	POA
TC-ECT-4040-35	197975	40	4,0	35 m	1,42/m	POA

Minimum Order Quantity to Consider

PVC COVERED COPPER TAPE
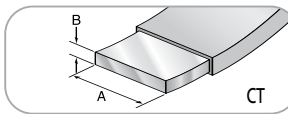
Meets BS1432C101/BS6746/
AS1567/EN50164-2

Reference code	Part No.	Colour	Dimensions AmmxBmm		Unit weight kg	Price
CTBL253-25	710595	Black	25x3,0	25 m	0,77/m	POA
CTBN253-25	710605	Brown	25x3,0	25 m	0,77/m	POA
CTGN253-25	710616	Green	25x3,0	25 m	0,77/m	POA
CTGY253-25	710645	Grey	25x3,0	25 m	0,77/m	POA
CTST253-25	710655	Stone	25x3,0	25 m	0,77/m	POA
CTWH253-25	710666	White	25x3,0	25 m	0,77/m	POA
CTYGN253-25	710667	Yell./Green	25x3,0	25 m	0,77/m	POA
CTGN256-30	710620	Green	25x6,0	30 m	1,55/m	POA
CTGN506-20	710630	Green	50x6,0	20 m	2,95/m	POA

Minimum Order Quantity to Consider

LSF COVERED COPPER TAPE   Meets BS1432 C101/BS6746/AS1567

Ref code	Part No.	Colour	Dimensions AmmxBmm		Unit weight kg	Price
LSF-253	710615	Green	25x3,0	50 m	0,77/m	POA

Minimum Order Quantity to Consider

RFE (REG FARRELL ENGINEERING LIMITED)
Unit 19, Oak Road Business Park, Western Ind Est, Dublin12.
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RFE
REG FARRELL
ENGINEERING LTD

LEAD COVERED COPPER TAPE

Meets BS1432 C101

Reference code	Part No.	Width (A)mm	Thick. (B)mm		Unit weight kg	Price
LCT-253	710625	25	3,0	50 m	2,56/m	POA

Minimum Order Quantity to Consider

PLAIN COPPER BARS

Meets BS1433/BS2874 C101
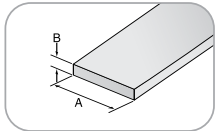
Reference code	Part No.	Dimensions mm		Unit weight kg	Price
HDB2003	710670	20x3x4000	1	2,14	POA
HDB2503	710680	25x3x4000	1	2,68	POA
HDB2506	710690	25x6x4000	1	5,34	POA
HDB3806	710700	38x6x4000	1	8,00	POA
HDB5006	710710	50x6x4000	1	10,68	POA
HDB5010	550900	50x10x4000	5	17,80	POA

Minimum Order Quantity to Consider

TINNED COPPER BAR

Meets BS1433/BS2874 C101

Reference code	Part No.	Dimensions mm		Unit weight kg	Price
THDB5060	710730	50x6x4000	1	10,68	POA

Minimum Order Quantity to Consider

SOLID COPPER ROUND CONDUCTOR
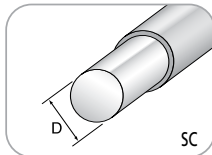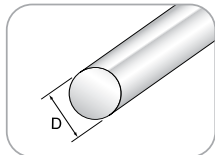
Meets BS1432C101/ AS1567/ NFC17100/ NFC17102/ EN50164-2

BARE SOLID COPPER ROUND CONDUCTOR

Reference code	Part No.	ø (D) mm	Cross Section		Unit weight kg	Price
RC-EC-6	198150	6	28,3	100 m	0,25/m	POA
RC-EC-8	198160	8	50,3	100 m	0,45/m	POA
RC-EC-8-3	545210	8	50,3	30 m	0,45/m	POA

TINNED SOLID COPPER ROUND CONDUCTOR

Meets BS1432 C101/AS1567/NFC 17100/NFC 17102/EN50164-2

Reference code	Part No.	ø (D)mm	Cross Section		Unit weight kg	Price
RC-ET-6	198200	6	28,3	100 m	0,25/m	POA
RC-ET-8	198210	8	50,3	100 m	0,45/m	POA

PVC COVERED SOLID COPPER ROUND CONDUCTOR ø 8 mm

Meets BS1432 C101/BS6746/AS1567/EN50164-2

Reference code	Part No.	Colours	Cross Section		Unit weight kg	Price
SCBL	710800	Black	50,3	50 m	0,49/m	POA
SCBN	710810	Brown	50,3	50 m	0,49/m	POA
SCGY	710820	Grey	50,3	50 m	0,49/m	POA
SCST	710830	Stone	50,3	50 m	0,49/m	POA

COPPER PLATES AND LATTICES / GRIDS

PC

WM

Mesh: 115 x 55 mm

EML

SRGB

Tape = 50 x 0,40 mm
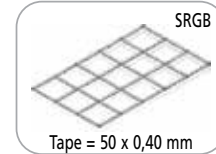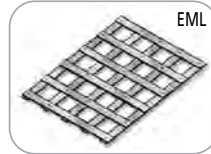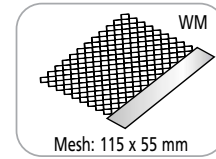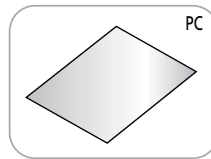
COPPER PLATES

Meets BS1432 C101/EN50164-2

Reference code	Part No.	Dimensions mm		Unit weight kg	Price
PC1.5-0606	710190	600 x 600 x 1,5	1	5,000	POA
PC3-0606	710200	600 x 600 x 3,0	1	9,600	POA
PC1.5-0909	710210	900 x 900 x 1,5	1	11,510	POA
PC2.-1020	504550	1000 x 2000 x 2	1	35,600	POA
PC3-0909	504590	900 x 900 x 3	1	21,630	POA

COPPER LATTICES AND GRIDS

Meets BS1432 C101

Reference code	Part No.	Dimensions mm		Unit weight kg	Price
EML663	710230	600 x 600 x 3	1	3,980	POA
EML993	710240	900 x 900 x 3	1	7,200	POA
WM3-2088-B	504500	8800 x 2000 x 3	1	54,000	POA
WM2-1030-B	504510	3000 x 1000 x 2	1	5,000	POA
WM3-1020-B	504520	2000 x 1000 x 3	1	5,400	POA
WM2-1020-B	504530	2000 x 1000 x 2	1	4,000	POA
• • • Galvanized steel					
WMS-1030-B	504540	3000 x 1000 x 3	1	8,700	POA

SIGNAL REFERENCE GRIDS

Reference code	Part No.	Length (m)	Width (m)	Spacing (m)		Unit weight kg	Price
SRGBC120	167900	36,57	2,44	0,60	1	86,18	POA
SRGBD100	167901	30,48	3,04	0,60	1	90,72	POA
SRGBE100	167902	30,48	3,65	0,60	1	104,33	POA
SRGBF100	167903	30,48	4,26	0,60	1	127,01	POA
SRGBG100	167904	30,48	4,87	0,60	1	145,15	POA

SIGNAL REFERENCE GRID CONNECTOR & BRACKET

SRGC46

SRGC46BR

Reference code	Part No.	Max. Size		Unit weight kg	Price
SRGC46	167905	Up to 25 mm² stranded	50	0,10	POA
SRGC46BR	167906	25 mm pedestal	10	0,13	POA

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FACILITY ELECTRICAL PROTECTION - Earthing Equipment

BARE ALUMINIUM TAPE
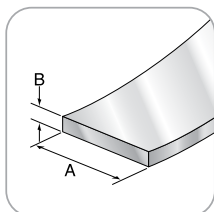
Meets BS2898/1350/AS1866/EN50164-2*

Reference code	Part No.	Width A mm	Thick B mm		Unit weight kg	Price
BAT-2030	710955	20	3	50 m	0,16/m	POA
FAT-253-50	710740	25	3	50 m	0,21/m	POA
BAT-2560	710960	25	6	50 m	0,41/m	POA
BAT-5060	710965	50	6	50 m	0,81/m	POA

Minimum Order Quantity to Consider

PVC COVERED ALUMINIUM TAPE
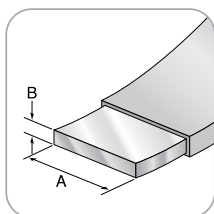
Meets BS2898/1350/AS1866/EN50164-2

Reference code	Part No.	Width A mm	Thick B mm	Colours		Unit weight kg	Price
ATBL253	710750	25	3	Black	50 m	0,30/m	POA
ATBN253	710760	25	3	Brown	50 m	0,30/m	POA
ATGY253	710770	25	3	Grey	50 m	0,30/m	POA
ATST253	710780	25	3	Stone	50 m	0,30/m	POA
ATWH253	710790	25	3	White	50 m	0,30/m	POA

BARE GALVANIZED STEEL TAPE
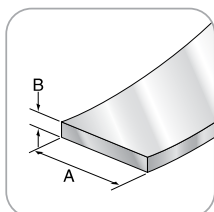
Meets DIN 48801 /NFC 17100/NFC 17102/
EN50164-2

Reference code	Part No.	Width A mm	Thick B mm		Unit weight kg	Price
30TC-HGSP-3035	197810	30	3,5	30 m	0,82/m	POA
70TC-HGSP-3035	197790	30	3,5	70 m	0,82/m	POA

BLACK STEEL TAPE
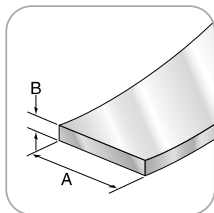
Meets EN50164-2

Reference code	Part No.	Cross-section mm²	Dimensions AxB mm		Unit weight kg	Price
TC-BR-253	140250	75	25x3	30 m	0,590/m	POA

BARE ALUMINIUM ROUND CONDUCTOR
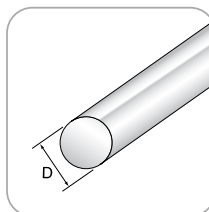
Meets BS2898/1350/AS1866/EN50164-2

Reference code	Part No.	Cross-section mm²	D ø mm		Unit weight kg	Price
RAW-8	198250	50,3	8	300 m	0,14/m	POA
ASCO8	711530	50,3	8	50 m	0,14/m	POA

PVC COVERED ALUMINIUM ROUND CONDUCTOR
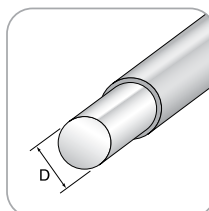
Meets BS2898/1350/AS1866/EN50164-2

Reference code	Part No.	Cross-section mm²	D ø mm	Colours		Unit weight kg	Price
SABL	710840	50,3	8	Black	50 m	0,18/m	POA
SABN	710850	50,3	8	Brown	50 m	0,18/m	POA
SAGY	710860	50,3	8	Grey	50 m	0,18/m	POA
SAST	710870	50,3	8	Stone	50 m	0,18/m	POA

BARE GALVANIZED ROUND CONDUCTOR
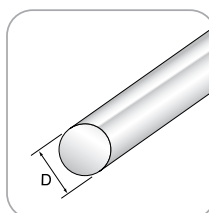
Meets NFC 17100/NFC 17102/EN50164-2

Reference code	Part No.	Cross-section mm²	D ømm		Unit weight kg	Price
RSCC-8	197860	50,3	8	100 m	0,400/m	POA
RSCC-10	197870	78,5	10	100 m	0,630/m	POA

FACILITY ELECTRICAL PROTECTION - Earthing Equipment

ERITECH® Copperbonded Pointed Ground Rods

- A uniform copper thickness provides better corrosion resistance in most soil conditions. Copperbonded rods last longer, drive easier and will not crack.

- Copper exteriors, molecularly bonded to nickel-sealed high-strength steel cores, exceed the requirements of ANSI®/UL® 467-1984 (ANSI C33.8-1972) and CSA®.

- Copper Coating: standard copper plating thickness exceeds UL and ANSI specs. of 0.254mm, conforms to KEMA 83C and EN50164-2 Norms.

- The rods exceed a tensile strength of 515,000 kPa and straightness tolerance of 8.3 x 10-4m/m.

- Extending rods may be extended with use of threadless couplers.
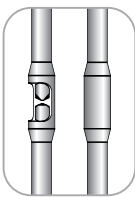
ERITECH® TYPE CC Threadless Couplings for Copperbonded Pointed Rods

- Enables ground rods to be driven deep quickly and easily without the risk of rod separation.
- Made of high-strength silicon bronze.
- Tapered so that when the rod is driven into the coupling, the two parts compress to form a conductive connection.

Type DH Tempered steel Driving Heads

Couplers
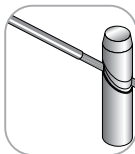
Earthrod Pigtail

ERITECH Copperbonded Sectional Ground Rods

- Copperbonded externally coupled ground rods have all the features of standard copperbonded rods plus cold-rolled threads at each end for joining with couplings.
- The cold-rolled threads of ground rods with their continuous unbroken grain flows are stronger than cut-threads.
- High-strength couplings are threaded bronze and chamfered at both ends for easy driving.
- Threaded coupling design allows for full contact of rod point with butt end of preceding rod. These high strength, corrosion-resistant couplings ensure low resistance copper-to-copper connections.

Couplers for threaded rods
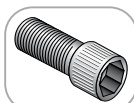
Steel driving studs for sectional ground rods

ERITECH solid copper and stainless steel threaded ground rods

Type SCR (solid copper)
- C101 to comply with BS2874 for solid copper ground rods.
- For use in highly corrosive soil conditions.
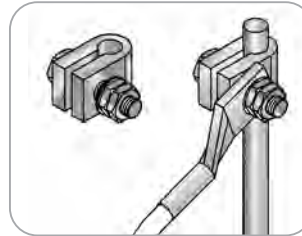
Rod to Cable Lug (Split Clamps)

- Manufactured in Gunmetal (LG2) and Naval Brass to comply BS1400, CZ112, BS2874
- Rod to Cable Lug clamps (threaded and unthreaded)
- Permits easy connection of ground conductors to both threaded and unthreaded ground rods

Type SSR (Stainless steel)
- BS 970 - (A2 grade)

ERITECH® Ground Rod Driver

This one tool enables driving of rods to ground level, without heavy sledge-hammers or ladders and without deforming the end of the rod. Heavy-duty steel construction provides robustness and excellent driving force, while the soft rubber ergonomic grip provides user comfort.

The ERITECH® Ground Rod Driver from ERICO® is the simple, effective and affordable way to install ground rods.

The ERITECH® Ground Rod Driver includes driver body with soft rubber grip, insert for driving rods to ground level, and retaining collar which holds insert in place during storage.

- Usable on all types of round ground rods: copperbonded, galvanized, stainless steel
- 14,2 mm (5/8") and 17,2 mm (3/4") inserts are interchangeable with standard driver body to enable easy driving of standard rods.
- The driver will not deform the end of the rod, making connection of the ground conductor quick and easy
- Integral insert prevents driver from slipping off the rod near ground level.
- Convenient retaining collar holds the insert in the tool when not in use.
- Self-contained and easy to store.
- Saves time and money and dramatically reduces risks of employee injury.

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FACILITY ELECTRICAL PROTECTION - Earthing Equipment

ERITECH® Galvanized steel ground rods
- Zinc-coated exteriors are hot-dip galvanized for solid protection against corrosion.
- Surfaces are rigidly inspected to eliminate seams, slivers and other defects.

Galvanized steel compression coupler (threadless)

Driving Points
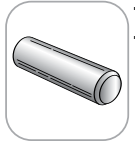
Type DH Tempered steel Driving head

Connecting Clamp

ERITECH® Type Cloverleaf profile European application only (Non-extensible)
- Galvanized thickness 150 µm according to UTE 66-400.
- Resistance: > 70 daN/mm²
- **Supplied with fitted splice socket.**

Type RG Round (Non-extensible)
- Resistance: > 70 daN/mm²
- **Supplied with fitted splice socket.**

ERITECH Type CG (X-Shaped Non-extensible)
- Steel quality DIN 17100
- Supplied with splice plate
- Compliant with DIN 48-452
- Zinc coating: minimum 55 µm, (average minimum 70 µm)
- Sections 50 x 50 x 3 and 50 x 50 x 5

ERITECH Type SG Round galvanized ground rods (Extensible)
- Steel quality DIN 17100
- Compliant with CEI 7/6
- Zinc coating: minimum 78 µm, (average minimum 86 µm)
- Resistance:> 70 daN/mm²
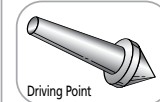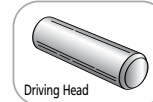
Driving Point   Driving Head

Driving Accessories for SG ground rods
- Steel quality DIN 17100
- Compliant with CEI 7/6
- Zinc coating: minimum 78 µm, (average minimum 86 µm)
- Resistance:> 70 daN/mm²

ERITECH Type SS Stainless steel ground rods (Extensible)
- Stainless steel Z30 C13
- Resistance:> 90/100 daN/mm²

Extensible Rod   Driving Head

EARTH RESISTANCE ANALYSER

Reference code	Part No.		Unit weight kg	Price
EARTH ANALYSER	702100	1	8,3	POA
EST101	702360	1	4,64	POA
EST201	702370	1	10,54	POA
EST301	702380	1	11,98	POA
ESTREELKIT500	702350	1	7,71	POA

Technical data available upon request.

GROUND ENHANCEMENT MATERIAL (GEM)

Developed in 1992, GEM Ground Enhancement Material is a superior conductive material that solves your toughest grounding problems.

GEM improves grounding effectiveness regardless of soil conditions. It is the ideal material to use in areas of poor conductivity such as rocky ground, mountain tops and sandy soil.

GEM is also the answer in situations where ground rods can't be driven. Or where limited land area makes adequate grounding difficult with conventional methods.

Once GEM is installed, it maintains its low resistance for the life of the project. GEM's performance is backed by rigorous independent tests and proven field experience.

FACILITY ELECTRICAL PROTECTION - Earthing Equipment

ERITECH® COPPERBONDED GROUND RODS STANDARD TYPE

Meets BS6651/C33,8
UL467/ASTM A37/
KEMA K83C/EN50164-2/BS7430
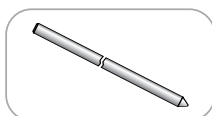
- Electrolytically copperbonded steel
- Copper coating min. 250u according to standard UL467

Reference code	Part No.	ø inches	Approx. ø mm	Nominal Length m	feet		Unit weight kg	Price
• • • Non extending								
1,2M38	155000	3/8	9	1,2	4'	5	0,650	POA
1,5M38	155010	3/8	9	1,5	5'	5	0,800	POA
2,1M38	155030	3/8	9	2,1	7'	5	1,100	POA
3,0M38	155050	3/8	9	3	10'	5	1,600	POA
• • • Extending								
1,2M12	155060	1/2	12,5	1,2	4'	5	0,800	POA
1,5M12	155070	1/2	12,5	1,5	5'	5	1,150	POA
2,1M12	155090	1/2	12,5	2,1	7'	5	1,600	POA
3,0M12	155110	1/2	12,5	3	10'	5	2,300	POA
1,2M58	155240	5/8	14,2	1,2	4'	5	1,500	POA
1,5M58	155250	5/8	14,2	1,5	5'	5	1,900	POA
2,1M58	155270	5/8	14,2	2,1	7'	5	2,650	POA
3,0M58	155290	5/8	14,2	3	10'	5	3,750	POA
1,2M34	155420	3/4	17,2	1,2	4'	5	2,150	POA
1,5M34	155430	3/4	17,2	1,5	5'	5	2,750	POA
2,1M34	155450	3/4	17,2	2,1	7'	5	3,800	POA
3,0M34	155470	3/4	17,2	3	10'	5	5,450	POA

DRIVING HEADS FOR COPPERBONDED POINTED RODS

Meets KEMA
K83C/BS6651/UL467/EN50164-2

Reference code	Part No.	Rod ø		Unit weight kg	Price
• • • Tempered steel					
DH12	158120	1/2"	5	0,158	POA
DH58	158130	5/8"	5	0,435	POA
DH34	158140	3/4"	5	0,226	POA

THREADLESS COUPLINGS FOR COPPERBONDED POINTED RODS

Meets KEMA K83C/BS6651/UL467/EN50164-2

- BR-brass couplers 58% Cu, typical mechanical resistance 6 micro-Ohms
- BZT-Copper couplers 99% Cu, typical mechanical strength 10kN, typical resistance 4 micro-Ohms

Reference code	Part No.	Rod ø		Unit weight kg	Price
• • • Bronze					
CC12F	158000	1/2"	5	0,108	POA
CC58	158010	5/8"	5	0,134	POA
CC34	158020	3/4"	5	0,202	POA
• • • Brass					
BR12	156650	1/2"	5	0,087	POA
• • • Copper					
BZT-12	156720	1/2"	5	0,102	POA

DRIVING POINTS FOR GROUND RODS
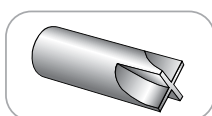
Reference code	Part No.	Rod ø		Unit weight kg	Price
• • • Tempered steel					
DT12	158060	1/2"	5	0,110	POA
DT58	158070	5/8"	5	0,156	POA
DT34	158080	3/4"	5	0,272	POA

ERITECH COPPERBONDED GROUND RODS THREADED TYPE, EXTENDING, WITH THREADED COUPLER

Meets BS6651/C33,8
UL467/ASTM A37/EN50164-2/BS7930
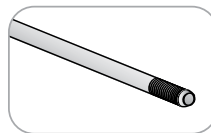
- Rolled thread to preserve copper coating

Reference code	Part No.	ø inches	Approx. ø mm	Nominal Length m	feet		Unit weight kg	Price
S1,2M916	155180	9/16	12,7	1,2	4'	5	0,800	POA
S1,5M916	155190	9/16	12,7	1,5	5'	5	1,150	POA
S2,1M916	155210	9/16	12,7	2,1	7'	5	1,600	POA
S3,0M916	155230	9/16	12,7	3	10'	5	2,300	POA
S1,2M58	155300	5/8	14,2	1,2	4'	5	1,500	POA
S1,5M58	155310	5/8	14,2	1,5	5'	5	1,900	POA
S2,1M58	155330	5/8	14,2	2,1	7'	5	2,650	POA
S3,0M58	155350	5/8	14,2	3	10'	5	3,750	POA
S1,2M34	155480	3/4	17,2	1,2	4'	5	2,150	POA
S1,5M34	155490	3/4	17,2	1,5	5'	5	2,750	POA
S2,1M34	155510	3/4	17,2	2,1	7'	5	3,800	POA
S3,0M34	155530	3/4	17,2	3	10'	5	5,450	POA

COUPLERS FOR THREADED RODS

Meets KEMA
K83C/BS6651/UL467/EN50164-2
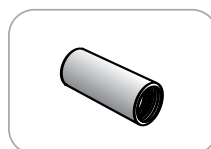
Reference code	Part No.	Rod ø		Unit weight kg	Price
• • • Brass					
SC916	158030	9/16"	5	0,104	POA
SC58	158040	5/8"	5	0,086	POA
SC34	158050	3/4"	5	0,172	POA

DRIVING STUD FOR THREADED RODS

Meets BS97/BS436
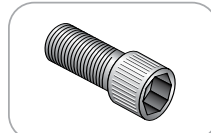
Reference code	Part No.	Rod ø		Unit weight kg	Price
• • • Tempered steel					
DS916	158090	9/16"	5	0,052	POA
DS58	158100	5/8"	5	0,074	POA
DS34	158110	3/4"	5	0,126	POA

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FACILITY ELECTRICAL PROTECTION - Earthing Equipment

ERITECH® DRIVING POINTS FOR GROUND RODS SG & SS
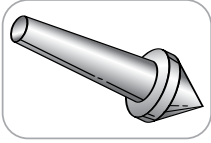
FOR GROUND RODS SG

Reference code	Part No.	Rod ø mm		Unit weight kg	Price
• • • Tempered steel					
DT-P137-1-20	158400	20	5	0,200	POA
DT-P167-25	158390	25	5	0,300	POA
DT-P187-30	158480	30	5	0,400	POA

FOR GROUND RODS SS

Reference code	Part No.	Rod ø mm		Unit weight kg	Price
• • • Tempered steel					
DT-P11-20-SS	158550	20	5	0,040	POA

ERITECH DRIVING HEAD FOR GROUND RODS SG & SS
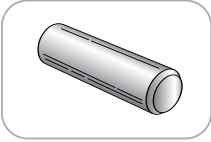
Reference code	Part No.	Rod ø mm		Unit weight kg	Price
• • • Tempered steel					
DH-TR167	158380	20-30	5	0,200	POA

ERITECH® CONNECTING FLANGES FOR TAPE
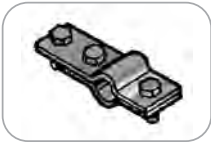
TO GROUND RODS SG

Reference code	Part No.	Rod ø mm		Unit weight kg	Price
• • • Hot-galvanized steel - Tape capacity 40x3					
MR127Z/20	158450	20	5	0,400	POA
MR137/25	158460	25	5	0,500	POA
MR187Z/30	158470	30	5	0,600	POA

TO GROUND RODS SS

Reference code	Part No.	Rod ø mm		Unit weight kg	Price
• • • Hot-galvanized steel - tape capacity 40x3					
MR127Z/20	158450	20	5	0,400	POA

ERITECH CONNECTING CLAMP FOR CABLE TO GROUNG RODS SG & SS

Reference code	Part No.	Rod ø mm		Unit weight kg	Price
• • • Copper/Steel - Cable capacity 70mm²					
S-136-20	158440	20	5	0,070	POA

ERITECH® GROUND ROD DRIVER

Reference code	Part No.	Description		Unit weight kg	Price
EGRD58	158500	1,5 m driver body with insert for up to 14,2 mm	1	10,420	POA
EGRD58L	158510	Replacement insert for 14,2 mm (5/8")	1	2,720	POA
EGRD34	158520	Driver body with insert for up to 17,2	1	10,420	POA
EGRD34L	158530	Replacement insert for 17,2 mm (3/4")	1	2,720	POA

ERITECH® SADDLE AND ROD CLAMPS

Meets BS1400

Reference code	Conductor range area (mm²)	ø mm
GUV16070	16-70	5,1-10,7
GUV70185	70-185	10,7-17,6

Reference code	Part No.	Nominal Rod ø mm		Unit weight kg	Price
• • • Gunmetal + Copper U bolt					
UB16	710370	16	10	0,200	POA
UB20	710380	20	10	0,200	POA
UB25	710390	25	10	0,210	POA
GUV16070	710400	10-20	5	0,390	POA
GUV70185	710410	16-20	5	0,390	POA

ERITECH® ROD TO TAPE DISCONNECT CLAMP (type A)

Meets BS1400
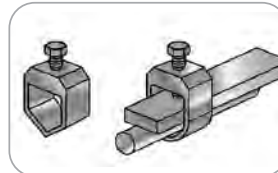
Reference code	Part No.	Clamp capacity A mm	B mm	Unit weight kg	Price
• • • Gunmetal					
RTC1	158410	26x12	16	0,160	POA
RTC3020	710345	31x10	20	-	POA
RTC2051	710350	51x12	20	0,310	POA
RTC2526	710360	26x10	25	0,230	POA

Note: Clamp capacity B mm column: RTC1=16, RTC3020=20, RTC2051=20, RTC2526=25; Unit weight kg column shows 10 for all rows; then weights.

ERITECH® CONNECTING SOCKETS FOR CABLE TO GROUND ROD

Reference code	Part No.	Rod ø mm	Cable capacity mm²		Unit weight kg	Price
• • • Cuproaluminium						
C142	158320	14,2	95	5	0,072	POA
C162	158330	16	95	5	0,068	POA
C174	158340	17,2	95	5	0,068	POA
C205	158350	20	95	5	0,098	POA

ERITECH ROD® TO CABLE CLAMPS (type C)
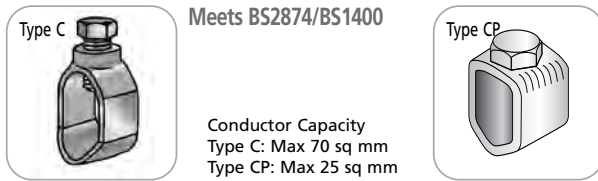
Meets BS2874/BS1400

Type C

Type CP

Conductor Capacity
Type C: Max 70 sq mm
Type CP: Max 25 sq mm

Reference code	Part No.	Rod ø in mm		Unit weight kg	Price
• • • Gunmetal					
C38	158150	9,0-9,0	5	0,026	POA
C12	158260	12,5-12,7	5	0,040	POA
C58	158160	12,5-15,0	5	0,084	POA
C34	158170	14,2-17,2	5	0,086	POA
C19	156900	14,2-19,0	5	0,085	POA
C20	156910	14,2-20,0	5	0,125	POA
C1	158250		5	0,110	POA
• • • Bronze		Cond. size cross section			
CP38	158155	Max 16 sq mm	50	0,04	POA
CP12	158265	Max 25 sq mm	50	0,09	POA
CP58	158165	Max 25 sq mm	50	0,10	POA
CP34	158175	Max 25 sq mm	50	0,13	POA

ERITECH® ROD TO TAPE LUG (SPLIT CLAMP)

Meets BS2874/BS1400

RCC10 SRC15 SRC20 RCC16

Reference code	Part No.	Description		Unit weight kg	Price
• • • Gunmetal					
RCC10	710420	9,5 mm plain split Clamp	10	0,090	POA
RCC16	710430	16 mm split Clamp (threaded)	10	0,340	POA
SRC15	710440	14,2-15 mm plain split Clamp (SCR) for solid copper rod	10	0,330	POA
SRC20	710450	20 mm split Clamp (SCR) for solid copper rod	10	0,300	POA

GROUND ENHANCEMENT MATERIAL GEM

Refer to page 184 for further information

Reference code	Part No.		Unit weight kg	Price
GEM	163670	1	11,500	POA

PREFABRICATED CROWSFOOT
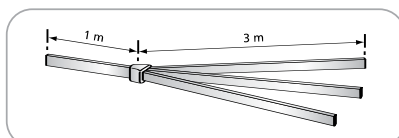
Reference code	Part No.	Rod ø in mm		Unit weight kg	Price
GF-302	503900	Tinned copper 30 x 2	1	5,500	POA

INSPECTION PITS

710180 103470 103450
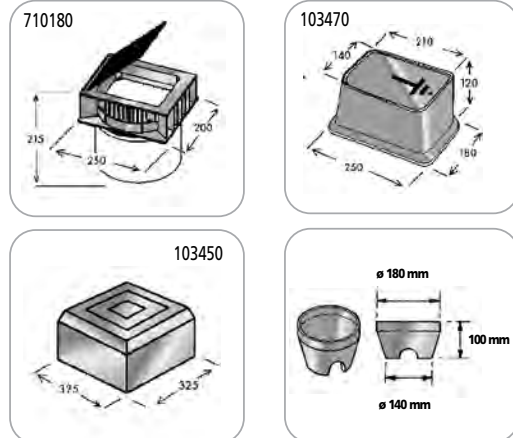
Reference code	Part No.	Material	Dimensions mm		Unit weight kg	Price
PIT03	710180	plastic	250x200x215	1	1,350	POA
IP-900-C	103450	concrete	325x325x145	1	27	POA
IP-R193x122MM	103470	Cast iron	210x140x120	1	7	POA
IP-SQ-180-CI	103480	Cast iron	ø180	1	2,400	POA

EARTH BARS FOR INSPECTION PITS
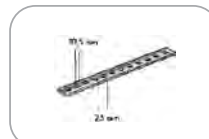
Reference code	Part No.	Dimensions & No. of holes	Designed to suit Earth Pit		Unit weight kg	Price
• • • Copper						
BEP25x5x300MM	545140	25x5x300 mm 12 holes	Concrete Earth Pit IP-900-C(103450)	1	0,300	POA
BEP25x5x200MM	545135	25x5x200 mm 8 holes	Plastic Earth Pit PIT03(710180)	1	0,260	POA
BEP25x5x150MM	545530	25x5x150 mm 6 holes	Cast Iron Earth Pit IPR193(103470) IP180(103480)	1	0,150	POA

TAPE METAL SUPPORT FOR FOUNDATIONS OR TRENCHES AND TAPE METAL WALL SUPPORT

107600 107550

TAPE METAL SUPPORT FOR FOUNDATIONS OR TRENCHES

• Keeps the tape in a vertical position

Reference code	Part No.	Rod height mm		Unit weight kg	Price
• • • Galvanized steel					
STBF-25-GS	107600	250	25	0,200	POA
STBF-40-GS	107610	400	25	0,340	POA

TAPE METAL WALL SUPPORT

Reference code	Part No.	Material		Unit weight kg	Price
• • • For tape below 6 mm thick					
SSF-6-GS	107550	Galvanized steel	25	0,130	POA
SSF-6-C	107560	Copper	25	0,140	POA

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TOWER EARTH CLAMP
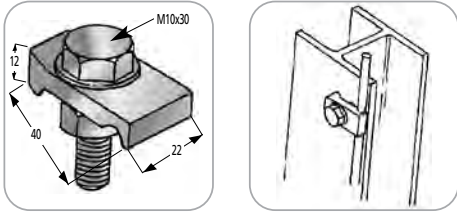
Reference code	Part No.		Unit weight kg	Price
• • • Copper - ø 8mm				
TECLP-8-CU	710050	10	0,090	POA
• • • Aluminium - ø 8mm				
TECLP-8-AL	710060	10	0,058	POA

B - BOND
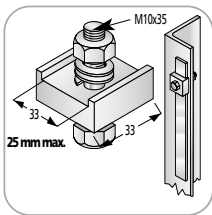
Meets BS1471/BS2874

Reference code	Part No.		Unit weight kg	Price
• • • Copper - suit 26 mm max tape width				
BBBC	710260	25	0,12	POA
• • • Aluminium - suit 26 mm max tape width				
ABBC	710250	25	0,60	POA

WATER PIPE BOND
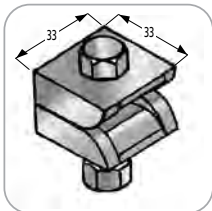
Meets BS1400

Reference code	Part No.		Unit weight kg	Price
• • • Copper				
BWPB	710310	20	0,12	POA
• • • Aluminium				
AWPB	710270	20	0,08	POA

WATERMAIN PIPE BOND
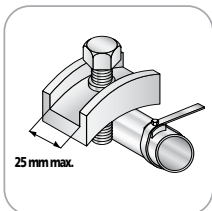
Meets BS1400/BS1471

Reference code	Part No.	ø mm		Unit weight kg	Price
• • • Copper					
WPB010	710320		5	0,26	POA

PIPE COLLARS
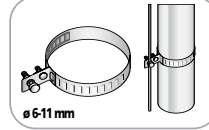
Meets BS1432 C101/BS970

ø 6-11 mm

Reference code	Part No.	ø min. / max.		Unit weight kg	Price
• • • Stainless steel - conductor, 6 to 11 mm					
SPC-5080-S	107000	50/80	10	0,147	POA
SPC-70120-S	107010	70/120	10	0,170	POA
SPC-130180-S	107020	130/180	10	0,214	POA
• • • Copper - conductor, 6 to 11 mm					
SPC-5080-C	107050	50/80	10	0,165	POA
SPC-70120-C	107060	70/120	10	0,191	POA
SPC-130180-C	107070	130/180	10	0,240	POA

FASTENERS FOR GUTTER RIM
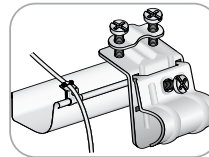
Meets NFC 17100/NFC 17102

Reference code	Part No.		Unit weight kg	Price
• • • Copper - conductor, 6 to 10 mm				
SGR-610-2	107230	10	0,067	POA

INSULATORS
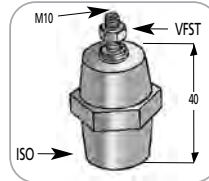
Reference code	Part No.		Unit weight kg	Price
ISO40M10	551520	25	0,102	POA
VFST10x40	593480	100	0,008	POA

EQUIPOTENTIAL BARS
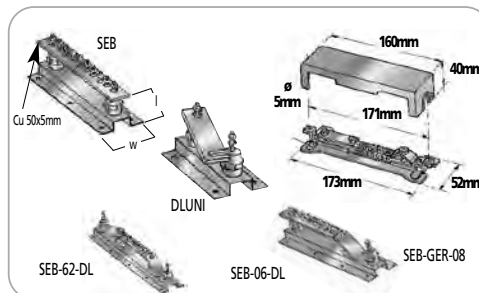
Meets
BS1433/BS2874
UL 94
NFF 1611 F2

Reference code	Part No.	Nr of terminals	Disconnect links	L mm	W	L		Unit weight kg	Price
DLUNI	545000	-	1	125	100	94	1	1,192	POA
SEB-06	545010	6	0	400	100	94	1	1,642	POA
SEB-06-DL	545020	6	1	475	100	94	1	2,400	POA
SEB-10	545030	10	0	600	100	94	1	2,312	POA
SEB-10-DL	545040	10	1	675	100	94	1	2,800	POA
SEB-62-DL	545130	6	2	550	100	94	1	3,200	POA
SEB-GER-08	545001	7 x 25 mm² 1 x tape 30 x 3,5 1 x 8 mm ø					10	0,314	POA

NB: terminals do include Nuts and Bolts

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FACILITY ELECTRICAL PROTECTION - Earthing Equipment

EQUIPOTENTIAL PLATE SET
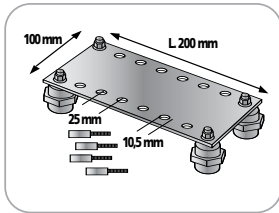
Meets UL 94/NFF 1611 F2

• 16 connection points

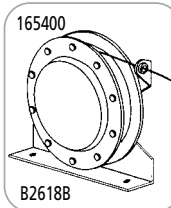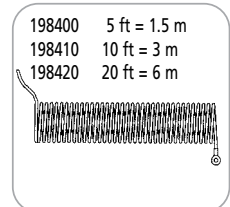| Reference code	Part No.		Unit weight kg	Price
• • • **Tinned copper 100 x 5**				
SEP	545190	1	1,02	**POA**

EARTH BLOCKS

EBL04
- 3 x ø 5,2 mm
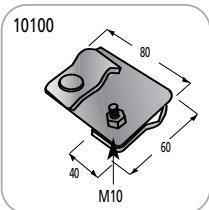- 1 x ø 6,5 mm

EBL08
- 6 x ø 5,2 mm
- 2 x ø 6,5 mm

Reference code	Part No.		Unit weight kg	Price
• • • **Tinned brass**				
EBL04	711460	10	0,090	**POA**
EBL08	711470	10	0,158	**POA**

DOUBLE CONNECTING PLATE

Supporting plate for the connection of round conductors, diameter 10 mm, or flat conductors up to 40 x 4 mm on rebars up to 24 mm ø.

Reference code	Part No.	Conductor	Rebar		Unit weight kg	Price
• • • **Galvanized steel**						
CPD-2440	101100	10 mm dia or 40x4	24 mm dia	25	0,340	**POA**

REBAR CLAMPS

Reference code	Part No.	Conductor	Rebar		Unit weight kg	Price
• • • **Galvanized steel**						
RC70	710325	8 mm dia	8-18 mm	1	0,340	**POA**
RC100	710335	8 mm dia	18-38 mm	1	0,780	**POA**
EK16	710355	25 mm²	25 mm-parallel	50	0,091	**POA**
EK17	710365	25 mm²	25 mm-perpendicular	50	0,091	**POA**

EARTH BOSS

Reference code	Part No.	Length mm	ø mm		Unit weight kg	Price
500-10-E-BOSS	710160	50	50	1	-	**POA**

STATIC EARTHING

Reference code	Part No.	Description		Unit weight kg	Price
B2610A	165410	Spring Clamp	1	0,144	**POA**
B2671A	165620	Aircraft Grounding Clamp	1	1,140	**POA**
A822SA111C-5	198400	Orange Coiled Cable, 5 ft (1.5 m)	1	0,450	**POA**
A822SA111C-10	198410	Orange Coiled Cable, 10 ft (3 m)	1	0,540	**POA**
A822SA111C-20	198420	Orange Coiled Cable, 20 ft (6 m)	1	0,820	**POA**
B2618B	165400	Cable Reel Assembly	1	3,150	**POA**
SEB001	710330	Static Earth Bar	1	0,260	**POA**

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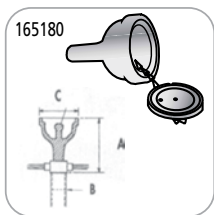
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FACILITY ELECTRICAL PROTECTION - Earthing Equipment

EYES BOLTS FOR COPPERBONDED GROUND RODS
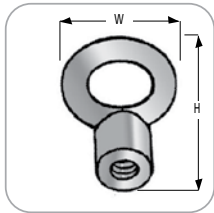
Reference code	Part No.	ø inch	W	H		Unit weight kg	Price
EBR-58	710140	5/8"	68	96	5	-	POA
EBR-34	710150	3/4"	68	96	5	-	POA

GROUNDING RECEPTACLES

165180

165220
165230

Meets BS1400

These receptacles provide earth connections for the frames of planes, ships, tankers trucks, etc. eliminating their electrostatic charge and obtaining equipotentiality with the surrounding earth.

Parts are copper alloy, connections to the earth circuit can be made with CADWELD®.

Reference code	Part No.	Attachment	Depth A	ø B	ø C		Unit weight kg	Price
B165	165180	Cast 3/4" ball	4 1/2"		2 3/4"	1	0,800	POA
B166	165220	Cast 3/4" rod	6 1/4"	4 3/4"	3 7/8"	1	2,100	POA
B167	165230	Cast 1-1/2" rod	7 1/4"	6 1/2"	4 3/4"	1	7,000	POA

DENSO TAPE (DT)

Reference code	Part No.			Unit weight kg	Price
DT510	1024	10 m x 50 mm	1	0,760	POA

POTENTIAL EQUALIZATION CLAMP (PEC)

Reference code	Part No.		Unit weight kg	Price
PEC100	702900	1	0,500	POA

OXIDE INHIBITING COMPOUND

Reference code	Part No.		Unit weight kg	Price
OXINHIBCOMP	710220	1	0,314	47.30

ERITECH COPPER BONDING STRAPS
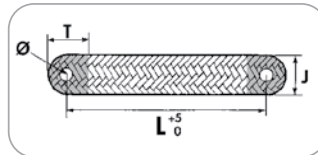
Part No.	Reference code	Intensity A	Thick. mm	Section mm²	L mm	Ø mm	J mm	T mm		Unit weight kg	Price
563540	MBJ 16-100-6	120	1.5	16	100	6,5	15	25	10	0,018	POA
556620	MBJ 16-100-8	120	1.5	16	100	8,5	15	25	10	0,018	POA
563550	MBJ 16-150-6	120	1.5	16	150	6,5	15	25	10	0,035	POA
556630	MBJ 16-150-8	120	1.5	16	150	8,5	15	25	10	0,035	POA
563300	MBJ 16-200-6	120	1.5	16	200	6,5	15	25	10	0,033	POA
556640	MBJ 16-200-8	120	1.5	16	200	8,5	15	25	10	0,033	POA
556650	MBJ 16-250-8	120	1.5	16	250	8,5	15	25	10	0,040	POA
563320	MBJ 16-300-6	120	1.5	16	300	6,5	15	25	10	0,05	POA
556660	MBJ 16-300-8	120	1.5	16	300	8,5	15	25	10	0,05	POA
556940	MBJ 16-500-8	120	1.5	16	500	8,5	15	25	10	0,082	POA
556670	MBJ 25-100-10	150	1.5	25	100	10,5	23	33	10	0,027	POA
556680	MBJ 25-150-10	150	1.5	25	150	10,5	23	33	10	0,039	POA
563340	MBJ 25-200-6	150	1.5	25	200	6,5	23	33	10	0,052	POA
556690	MBJ 25-200-10	150	1.5	25	200	10,5	23	33	10	0,052	POA
563430	MBJ 25-200-12	150	1.5	25	200	12,5	23	33	10	0,052	POA
556700	MBJ 25-250-10	150	1.5	25	250	10,5	23	33	10	0,064	POA
556710	MBJ 25-300-10	150	1.5	25	300	10,5	23	33	10	0,077	POA
556950	MBJ 25-500-10	150	1.5	25	500	10,5	23	33	10	0,013	POA
556720	MBJ 30-100-10	180	2	30	100	10,5	23	33	10	0,032	POA
556730	MBJ 30-150-10	180	2	30	150	10,5	23	33	10	0,047	POA
556740	MBJ 30-200-10	180	2	30	200	10,5	23	33	10	0,062	POA
556750	MBJ 30-250-10	180	2	30	250	10,5	23	33	10	0,075	POA
556760	MBJ 30-300-10	180	2	30	300	10,5	23	33	10	0,092	POA
556960	MBJ 30-500-10	180	2	30	500	10,5	23	33	10	0,155	POA
556770	MBJ 35-100-10	197	2.1	35	100	10,5	23	33	10	0,037	POA
556780	MBJ 35-150-10	197	2.1	35	150	10,5	23	33	10	0,054	POA
556790	MBJ 35-200-10	197	2.1	35	200	10,5	23	33	10	0,072	POA
556800	MBJ 35-250-10	197	2.1	35	250	10,5	23	33	10	0,089	POA
565000	MBJ 35-250-25	197	2.1	35	250	25,5	40	50	10	0,089	POA
556810	MBJ 35-300-10	197	2.1	35	300	10,5	23	33	10	0,110	POA
556970	MBJ 35-500-10	197	2.1	35	500	10,5	23	33	10	0,180	POA
556820	MBJ 50-100-10	250	2.5	50	100	10,5	28	38	10	0,052	POA
556830	MBJ 50-150-10	250	2.5	50	150	10,5	28	38	10	0,077	POA
563350	MBJ 50-200-6	250	2.5	50	200	6,5	28	38	10	0,12	POA
556840	MBJ 50-200-10	250	2.5	50	200	10,5	28	38	10	0,120	POA
563440	MBJ 50-200-12	250	2.5	50	200	12,5	28	38	10	0,120	POA
563360	MBJ 50-200-16	250	2.5	50	200	16,5	28	38	10	0,11	POA
563370	MBJ 50-200-18	250	2.5	50	200	18,5	28	38	10	0,11	POA
556850	MBJ 50-250-10	250	2.5	50	250	10,5	28	38	10	0,127	POA
556860	MBJ 50-300-10	250	2.5	50	300	10,5	28	38	10	0,153	POA
563390	MBJ 50-300-16	250	2.5	50	300	16,5	28	38	10	0,15	POA
563400	MBJ 50-300-18	250	2.5	50	300	18,5	28	38	10	0,14	POA
556980	MBJ 50-500-10	250	2.5	50	500	10,5	28	38	10	0,255	POA
563560	MBJ 50-500-12	250	2.5	50	500	12,5	28	38	10	0,255	POA

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FACILITY ELECTRICAL PROTECTION - Earthing Equipment

ERITECH® EARTH POINTS

- **FIG. 1:** CADWELD® mould ref. 197130 can be used to make CADWELD welded connection of 1 or 2 conductors (cross-section up to 50 mm² to the plate).

- **FIG. 2:** Steel bar attached at right angles to shank of earth plate by CADWELD welding.

- **FIG. 3:** Steel bar attached to end of earth plate by CADWELD welding.

- **FIG. 4:** 50 mm2 green: yellow insulated conductor attached to end of earth plate by CADWELD welding.

TYPE DB

TYPE B161 - B164
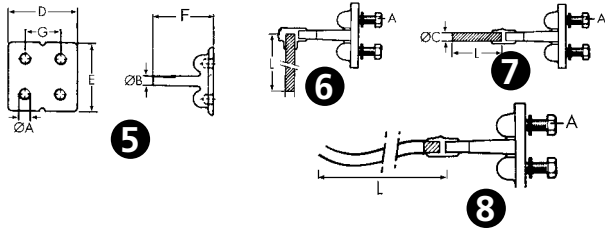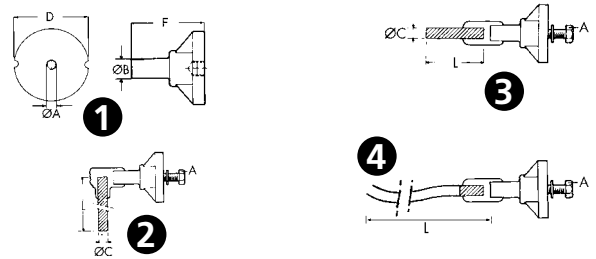
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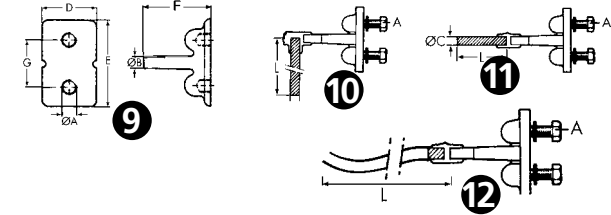
TYPE DB

Fig. No.	Reference code	Part No.	øA	øB mm	øC mm	øD mm	F mm	L mm		Unit weight kg	Price
1	DB-8A	166090	M8	12,7	-	30	50	-	5	0,090	POA
	DB-10A	166120	M10	16	-	50	55	-	5	0,300	POA
	DB-12A	166150	M12	16	-	50	55	-	5	0,305	POA
	DB-16A	166180	M16	16	-	50	55	-	5	0,400	POA
2	DB-8K	166100	M8	12,7	12	30	50	500	1	0,450	POA
	DB-10K	166130	M10	16	19	50	55	500	1	1,520	POA
	DB-12K	166160	M12	16	19	50	55	500	1	1,535	POA
	DB-16K	166190	M16	16	19	50	55	500	1	1,560	POA
3	DB-8KS	166110	M8	12,7	12	30	50	500	1	0,440	POA
	DB-10KS	166140	M10	16	19	50	55	500	1	1,520	POA
	DB-12KS	166170	M12	16	19	50	55	500	1	1,505	POA
	DB-16KS	166200	M16	16	19	50	55	500	1	1,540	POA
4	DB-10-C5005	166480	M10	-	50mm²	50	55	500	1	0,740	POA
	DB-10-C501	166490	M10	-	50mm²	50	55	1000	1	0,960	POA
	DB-10-C502	166500	M10	-	50mm²	50	55	2000	1	1,440	POA

TYPE B161-B164

	Reference code	Part No.	øA	øB mm	øC mm	øD mm	F mm	G mm	L mm		Unit weight kg	Price
5	B161-8A	166000	4xM8	14	-	65	42	30	-	1	0,435	POA
	B161-10B	166030	4xM10	14	-	65	42	30	-	1	0,455	POA
	B164-12A	166060	4xM12	10,7	-	85	75	44,5	-	1	0,770	POA
6	B161-8K	166010	4xM8	14	12	65	42	30	500	1	1,980	POA
	B161-10KA	166040	4xM10	14	12	65	42	30	500	1	1,040	POA
	B164-12K	166070	4xM12	10,7	12	85	75	44,5	400	1	1,080	POA
7	B161-8KS	166020	4xM8	14	12	65	42	30	500	1	1,980	POA
	B161-10KM	166050	4xM10	14	12	65	42	30	500	1	0,850	POA
	B164-12KS	166080	4xM12	10,7	12	85	75	44,5	400	1	1,100	POA
8	B161-10-C5005	166510	4xM10	-	50mm²	65	-	30	500	1	0,840	POA
	B161-10-C501	166520	4xM10	-	50mm²	65	-	30	1000	1	1,100	POA
	B161-10-C502	166530	4xM10	-	50mm²	65	-	30	2000	1	1,600	POA

TYPE B162

	Reference code	Part No.	øA	øB mm	øC mm	D mm	E mm	F mm	G mm	L mm		Unit weight kg	Price
9	B-162-12A	166210	2xM12	10,7	-	45	85	75	44,5	-	5	0,400	POA
10	B-162-12K	166220	2xM12	10,7	12	45	85	75	44,5	400	1	0,700	POA
11	B-162-12KS	162230	2xM12	10,7	12	45	85	75	44,5	400	1	0,700	POA
12	B-162-12-C5005	166540	2xM12	-	50mm²	45	85	75	44,5	500	1	0,820	POA
	B-162-12-C501	166550	2xM12	-	50mm²	45	85	75	44,5	1000	1	1,060	POA
	B-162-12-C502	166560	2xM12	-	50mm²	45	85	75	44,5	2000	1	1,560	POA

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CADWELD PLUS – LEADING TECHNOLOGIES IN EXOTHERMIC WELDING

• Current carrying capacity equal to or greater than that of the conductor
• Withstand repeated fault currents without failing during operation
• Permanent, molecular bond that will not loosen or corrode, resulting in a connection with a lifetime equal to that of the installation
• Join copper to copper, copper to galvanized or plain steel, copper to copper clad steel, copper to bronze/ brass/ stainless steel, steel to steel, etc.
• No external power or heat source required
• Quality Assurance Inspection is easy and visual
• Minimal installation training required
• Exceed requirements of "IEEE® Std 837- Std. for Qualifying Permanent Connections Used In Substation Grounding"

The ultimate welded connection that will never loosen, corrode or increase in resistance.

FACILITY ELECTRICAL PROTECTION - Exothermic Welding

CADWELD PLUS – LEADING TECHNOLOGIES IN EXOTHERMIC WELDING

4 Simple Steps for permanently Welded Electrical Connections

Polymeric Cover

CADWELD PLUS Package

Graphite Mold

Conductor

Igniter Strip

Tap Hole

Weld Cavity

LIGHTNING & SURGE PROTECTION FOR WIND TURBINES
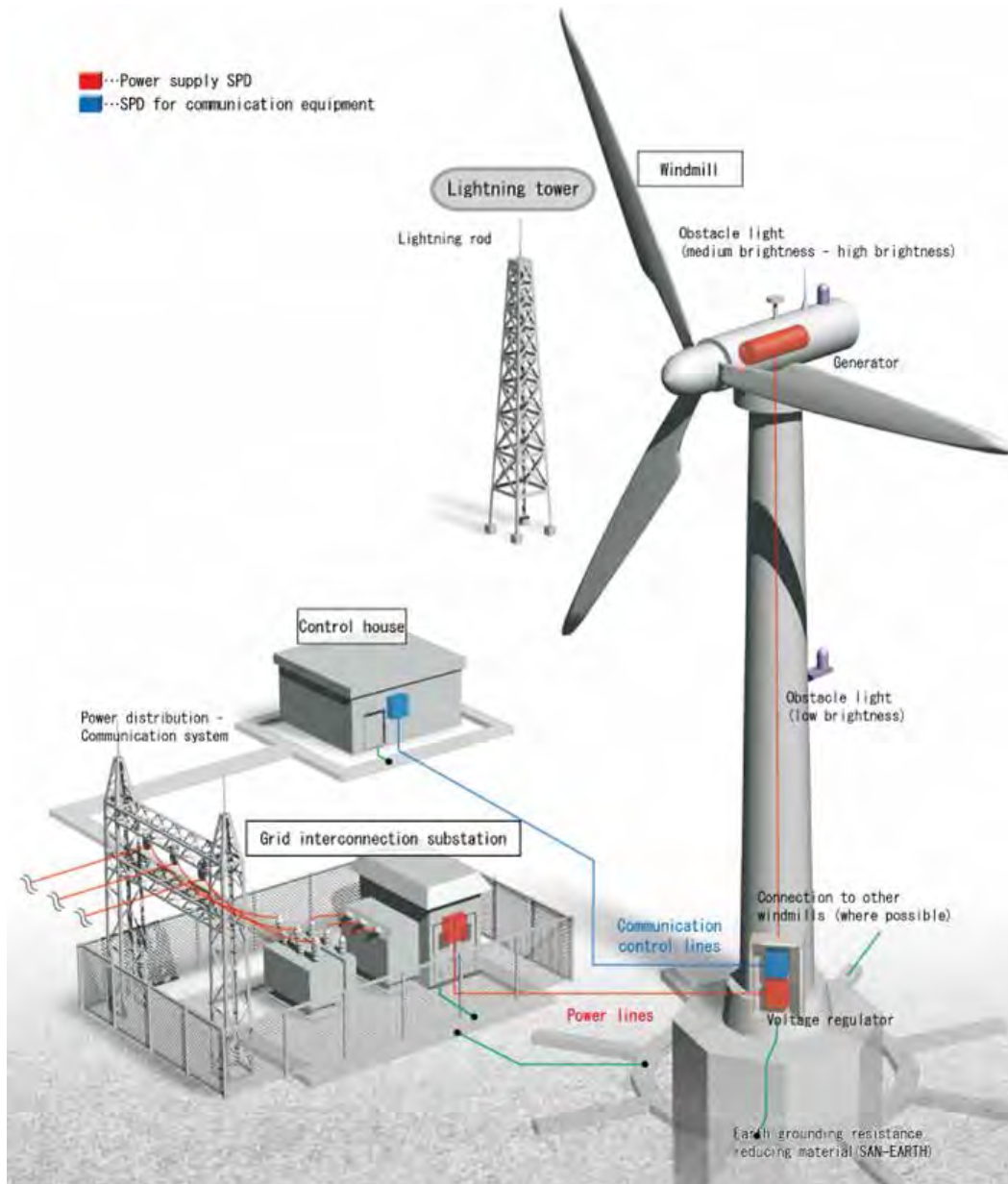
Graphic for demonstration purposes only

FACILITY ELECTRICAL PROTECTION

RFE have been involved in the lightning protection business for many years now offering products from leading international manufacturers ERICO , A.N. WALLIS and J.Propster. In cooperation with these companies RFE offer an expertise across a wide range of applications for Lightning Protection Design, Risk Assessment, Installation and Commissioning.

Using **dedicated software** our engineers can carry out an individual risk assessment to IS EN62305 for any type of installation and thereafter a complete design to the European standard or if required a design based on our unique ESE / Dynasphere lightning protection systems which can be seen on prestigious installations such as Farmleigh House in Dublin.

We offer advice on selection and installation of coordinated surge protection for all copper services entering or leaving your specific facility.

We carryout ground resistivity surveys and can address any poor soil conditions with the ERICO GEM product which Conforms to IEC 62561-7.

We provide both training and supply of the ERICO CADWELD Exothermically Welded Connection. These connections are specified by engineers and consultants for many industries and installed by contractors and site owners large and small all over the world. With Over 100,000,000 field-proven connections installed around the globe by very satisfied customers, the "ERICO CADWELD" name has become synonymous with "Exothermic Welding" from the classroom to the job site. ERICO CADWELD continues to maintain a reputation for electrically superior connections that will never loosen, break, or corrode in most environments.

Over the years we have worked on projects such as Intel, Microsoft, Luas and Roche Pharmaceuticals and together with our experience and highly qualified engineers can offer you an unrivalled package of product and support.

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DEGREES OF PROTECTION

• Degree of protection of the electrical equipment up to 1000Va.c.and 1500V d.c.

IP X_1 X_2
according to IEC 529 (1989) and EN 60529 (1991)

X_1	Protections of persons against contact with live parts. Protection of equipment against ingress of solid foreign bodies		
	CEE-symbol	Test	
0			None
1			Against access with hand and ingress of solid objects greater than 50 mm
2			Against access with finger and ingress of solid objects greater than 12 mm
3			Against access with tools and ingress of solid objects greater than 2.5 mm
4			Against access with wires of strips and ingress of solid objects greater than 1 mm
5			Complete protection against contact with live parts and ingress of harmful deposits of dust
6			Complete protection against contact with live parts and ingress of dust

IP X_1 X_2
according to IEC 529 (1989) and EN 60529 (1991)

X_2	Protections against ingress of liquids		
	CEE-symbol	Test	
0			None
1			Against vertically falling drops
2			Against drops of falling liquid at an angle up to 15^0 from the vertical
3			Against water falling in rain at an angle up to 60^0 from the vertical
4			Against water splashed from any direction (over 360^0)
5			Against water jets from any direction (over 360^0)
6			Against water projected in powerful jets as from heavy seas
7			Against immersion in water under defined conditions of pressure and time
8			Against continuous submersion in water

DEGREES OF PROTECTION

Degree of protection of the electrical equipment up to
1000Va.c.and 1500V d.c.

After 10 strokes, the enclosure
should show neither visible crack
of damage that might jeopardize
the protection degree IP X1 X2
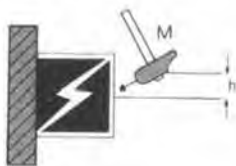
Protection against external mechanical damage

X₃	According to NBN C20-001		
	Impact strength		
	Hammer Mass (kg)	Fall (m)	Impact energy (J)
0.5	M = 0.15 kg	h = 0.1 m	0.2
1	M = 0.15 kg	h = 0.15 m	0.3
1.5	M = 0.15 kg	h = 0.2 m	0.4
2	M = 0.15 kg	h = 0.25 m	0.5
3	M = 0.25 kg	h = 0.2 m	0.6
4	M = 0.5 kg	h = 0.2 m	1
5	M = 0.5 kg	h = 0.4 m	2
6	M = 1.5 kg	h = 0.27 m	4
7	M = 1.5 kg	h = 0.4 m	6
8	M = 5 kg	h = 0.2 m	10
9	M = 5 kg	h = 0.4 m	20
10	M = 15 kg	h = 0.235 m	35
11	M = 15 kg	h = 0.4 m	60

Protection against external mechanical damage

K	According to EN 50102		
	Impact strength		
	Hammer Mass (kg)	Fall (m)	Impact energy (J)
00	*	*	*
01	M = 0.2 kg	h = 75 mm	0.15
02	M = 0.2 kg	h = 100 mm	0.2
03	M = 0.2 kg	h = 150 mm	0.35
04	M = 0.2 kg	h = 250 mm	0.5
05	M = 0.2 kg	h = 350 mm	0.7
06	M = 0.5 kg	h = 200 mm	1
07	M = 0.5 kg	h = 400 mm	2
08	M = 1.7 kg	h = 295 mm	5
09	M = 5 kg	h = 200 mm	10
10	M = 5 kg	h = 400 mm	20
	M = 10 kg	h = 500 mm	50

* = no protection

Explanation

The standard NBN C20-001/A was valid until April, 1997. The tables mentioned above are classified according to the impact energy. The IPxx-X3 values and the IK-values can not just be compared to each other, because there exists a difference between then form of the hammer and the number of tryouts. In that case, it is impossible to set up a conversion table. Notice that no value was defined to replace the IPxx-11. If a shock resistance recommendation. The IK-value is shown with a figure of two numbers to exclude the confusion with the IPxx-X3 value.

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RFE teams up with NOARK Electric, global supplier of cutting-edge low-voltage components

Mission Statement

RFE (Reg Farrell Engineering Limited) prides itself as a "Solution Provider" incorporating only high quality products. Our people are trained, qualified and well experienced engineers who are always willing to spend time with our customers to acquire a thorough understanding of their application. The result in all cases is a solution, which will meet technical as well as financial requirements of the customer. Our objectives are based on an on-going partnership with our customers.

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