

Air Circuit Breakers Ex9A25



- Air circuit breakers, frame size A25
- Rated current up to 2500 A
- Rated operating voltage 690 V AC
- Breaking capacity Icu 65 and 85 kA
- Fixed and withdrawable versions
- Utilization category B acc. to EN 60947-2
- Arbitrary selection of tripping unit SU
- Compact and modular design
- Wide range of accessories

Air Circuit Breakers from Ex9A series are designed for power distribution protection on high demand installations such as industrial and commercial among others. Testing according IEC / EN 60947-2 standards ensures the required functionality and reliability for the higher power applications.

The Ex9A series are divided in four frame sizes according the characteristics of the installation, the divisions are as follow:

Ex9A16: from 630 A to 1600 A with breaking capacities from 55 kA to 65 kA.

Ex9A25: from 1000 A to 2500 A with breaking capacities from 65 kA to 85 kA.

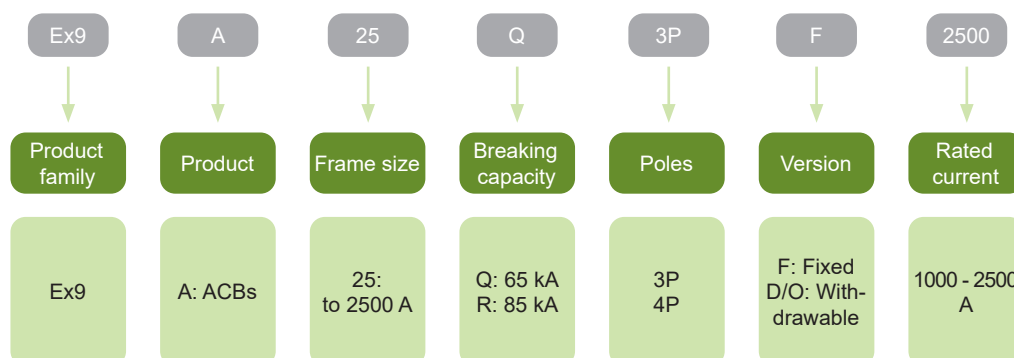
Ex9A32: from 2500 A to 3200 A with breaking capacities from 65 kA to 100 kA.

Ex9A40: from 3200 A to 4000 A with breaking capacities from 65 kA to 100 kA.

Ex9A devices are compatible with all the variants of Smart Units, giving the possibility to perfectly fit the smart functionalities to any current range, ACB construction and installation requirements.

Utilization category B circuit breakers.

Type Key



Air Circuit Breakers Ex9A25

- Fixed version
- Frame size A25
- Rated current up to 2500 A
- Rated short-circuit breaking capacity I_{cu} 65 and 85 kA
- Device body only, tripping unit must be selected separately
- In the scope of delivery: fixed Air Circuit Breaker body, full set of secondary terminals, tripping unit (according to the selection), door frame, main terminals mounted in horizontal position, alarm contacts
- Basic parameter setting range of tripping units SU (all versions):

$$I_r = 0.4 - 1 \times I_n$$

$$I_{sd} = 1.5 - 10 \times I_r$$

$$I_i = 2 - 15 \times I_n$$

Fixed version, $I_{cu} = 65$ kA at 415 V AC



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3P	1000 A	400-1000 A	2000-15000 A	112169	Ex9A25Q 3P F 1000	1
3P	1250 A	500-1250 A	2500-18750 A	112170	Ex9A25Q 3P F 1250	1
3P	1600 A	640-1600 A	3200-24000 A	112171	Ex9A25Q 3P F 1600	1
3P	2000 A	800-2000 A	4000-30000 A	112172	Ex9A25Q 3P F 2000	1
3P	2500 A	1000-2500 A	5000-37500 A	112173	Ex9A25Q 3P F 2500	1
4P	1000 A	400-1000 A	2000-15000 A	112179	Ex9A25Q 4P F 1000	1
4P	1250 A	500-1250 A	2500-18750 A	112180	Ex9A25Q 4P F 1250	1
4P	1600 A	640-1600 A	3200-24000 A	112181	Ex9A25Q 4P F 1600	1
4P	2000 A	800-2000 A	4000-30000 A	112182	Ex9A25Q 4P F 2000	1
4P	2500 A	1000-2500 A	5000-37500 A	112183	Ex9A25Q 4P F 2500	1

Fixed version, $I_{cu} = 85$ kA at 415 V AC



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3P	1000 A	400-1000 A	2000-15000 A	112189	Ex9A25R 3P F 1000	1
3P	1250 A	500-1250 A	2500-18750 A	112190	Ex9A25R 3P F 1250	1
3P	1600 A	640-1600 A	3200-24000 A	112191	Ex9A25R 3P F 1600	1
3P	2000 A	800-2000 A	4000-30000 A	112192	Ex9A25R 3P F 2000	1
3P	2500 A	1000-2500 A	5000-37500 A	112193	Ex9A25R 3P F 2500	1
4P	1000 A	400-1000 A	2000-15000 A	112199	Ex9A25R 4P F 1000	1
4P	1250 A	500-1250 A	2500-18750 A	112200	Ex9A25R 4P F 1250	1
4P	1600 A	640-1600 A	3200-24000 A	112201	Ex9A25R 4P F 1600	1
4P	2000 A	800-2000 A	4000-30000 A	112202	Ex9A25R 4P F 2000	1
4P	2500 A	1000-2500 A	5000-37500 A	112203	Ex9A25R 4P F 2500	1

Air Circuit Breakers Ex9A25

- Withdrawable version
- Frame size A25
- Rated current up to 2500 A
- Rated short-circuit breaking capacity I_{cu} 65 and 85 kA
- Device body only, tripping unit must be selected separately
- In the scope of delivery: withdrawable Air Circuit Breaker body, cassette, tripping unit (according to the selection), door frame, alarm contacts
- Cassete to be selected separately (ordered as premounted or separate delivery)
- Cassete equipped with full set of secondary terminals, mechanical device position indicator, safety shutters of main terminals
- Basic parameter setting range of tripping units SU (all versions):

$$\begin{aligned} I_r &= 0.4 - 1 \times I_n \\ I_{sd} &= 1.5 - 10 \times I_r \\ I_i &= 2 - 15 \times I_n \end{aligned}$$

Withdrawable version, $I_{cu} = 65$ kA at 415 V AC



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3P	1000 A	400-1000 A	2000-15000 A	112164	Ex9A25Q 3P D/O 1000	1
3P	1250 A	500-1250 A	2500-18750 A	112165	Ex9A25Q 3P D/O 1250	1
3P	1600 A	640-1600 A	3600-24000 A	112166	Ex9A25Q 3P D/O 1600	1
3P	2000 A	800-2000 A	4000-30000 A	112167	Ex9A25Q 3P D/O 2000	1
3P	2500 A	1000-2500 A	5000-37500 A	112168	Ex9A25Q 3P D/O 2500	1
4P	1000 A	400-1000 A	2000-15000 A	112174	Ex9A25Q 4P D/O 1000	1
4P	1250 A	500-1250 A	2500-18750 A	112175	Ex9A25Q 4P D/O 1250	1
4P	1600 A	640-1600 A	3600-24000 A	112176	Ex9A25Q 4P D/O 1600	1
4P	2000 A	800-2000 A	4000-30000 A	112177	Ex9A25Q 4P D/O 2000	1
4P	2500 A	1000-2500 A	5000-37500 A	112178	Ex9A25Q 4P D/O 2500	1

Withdrawable version, $I_{cu} = 85$ kA at 415 V AC



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3P	1000 A	400-1000 A	2000-15000 A	112184	Ex9A25R 3P D/O 1000	1
3P	1250 A	500-1250 A	2500-18750 A	112185	Ex9A25R 3P D/O 1250	1
3P	1600 A	640-1600 A	3600-24000 A	112186	Ex9A25R 3P D/O 1600	1
3P	2000 A	800-2000 A	4000-30000 A	112187	Ex9A25R 3P D/O 2000	1
3P	2500 A	1000-2500 A	5000-37500 A	112188	Ex9A25R 3P D/O 2500	1
4P	1000 A	400-1000 A	2000-15000 A	112194	Ex9A25R 4P D/O 1000	1
4P	1250 A	500-1250 A	2500-18750 A	112195	Ex9A25R 4P D/O 1250	1
4P	1600 A	640-1600 A	3600-24000 A	112196	Ex9A25R 4P D/O 1600	1
4P	2000 A	800-2000 A	4000-30000 A	112197	Ex9A25R 4P D/O 2000	1
4P	2500 A	1000-2500 A	5000-37500 A	112198	Ex9A25R 4P D/O 2500	1

Air Circuit Breakers Ex9A25

Cassete for Ex9A25 withdrawable ACBs

- Safety shutters of main terminals connectors in the scope of delivery
- Equipped with full set of secondary terminals and mechanical device position indicator
- Delivered with main terminals in horizontal position



Version	Poles	Rated current I_n	Article No.	Type	Packing
Premounted	3P	1600 A	112204	+CAS 12 3P 1000-1600	1
Premounted	3P	2500 A	112205	+CAS 12 3P 2000-2500	1
Premounted	4P	1600 A	112206	+CAS 12 4P 1000-1600	1
Premounted	4P	2500 A	112207	+CAS 12 4P 2000-2500	1
Separately orderable	3P	1600 A	112208	CAS 12 3P 1000-1600	1
Separately orderable	3P	2500 A	112209	CAS 12 3P 2000-2500	1
Separately orderable	4P	1600 A	112210	CAS 12 4P 1000-1600	1
Separately orderable	4P	2500 A	112211	CAS 12 4P 2000-2500	1

Technical Data Ex9A25

Air Circuit Breakers up to 2500 A

General parameters

Arbitrary choice of tripping unit +SU

Suitable for commercial as well as industrial applications

I_r can be set in range $(0.4 — 1.0) \times I_n$

I_{sd} can be set in range $(1.5 — 10) \times I_r$

I_i can be set in range $(2 — 15) \times I_n$

Internal accessories

Smart Unit - basic analysis Current measurement	+SU30A	112306 — 112307
	+SU40A	112309 — 112310
Smart Unit - Power measurement Current, voltages and power measurement	+SU30P	112294 — 112386
	+SU40P	112297 — 112389
Smart Unit - Advanced analysis Current, voltage, power, Harmonics analyzer	+SU30H	112300 — 112392
	+SU40H	112303 — 112395
Auxiliary contact unit	AX12	112400 — 112403
Signal contact unit	Premounted	Premounted
Closing releases	XF12	112432 — 112437
Shunt trip releases	SHT12	112418 — 112423
Undervoltage releases	UVT12	112446 — 112451
Motor drive operator	MD12	112460 — 112465
Key lock	KLK12	112475 — 112477
Position indicator	+EF12	112508
Pushbutton lock	+VBP12	112510

External accessories

Phase barriers - Fixed	PHS12	112496, 112497
Phase barriers - Withdrawable	DPS12	112490, 112491
Connection terminal plates	TEX11	112478 — 112485
Mechanical interlocks	IPA12	112502, 112505

Accessories marked with " + " in this list must be preordered together with the circuit breaker, since separate purchase is not allowed due to mechanical / software adaptation requirements

In any case, it is recommended to directly communicate with the technical +Support or your representative sales engineer in order to confirm all the possible configurations and additional personalizations of the selected product

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Air Circuit Breakers up to 2500 A

Electrical parameters

	Ex9A25Q	Ex9A25R
Tested according to	IEC / EN 60947-2	
Rated operational voltage U_e	220 / 380 / 400 / 415 / 440 / 525 / 660 / 690 V AC	
Rated insulation voltage U_i	1000 V	
Rated impulse withstand voltage U_{imp}	12 kV	
Rated current I_n at 40°C	1000 / 1250 / 1600 / 2000 / 2500 A	
Rated frequency f	50 / 60 Hz	
Rated ultimate short-circuit breaking capacity I_{cu}	65 kA / 415 V 65 kA / 690 V	85 kA / 415 V 65 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	65 kA / 415 V 65 kA / 690 V	85 kA / 415 V 65 kA / 690 V
Rated short-circuit making capacity I_{cm}	143 kA / 415 V 84 kA / 690 V	187 kA / 415 V 105 kA / 690 V
Rated short-circuit withstand current I_{cw} for 1s	65 kA / 415 V 65 kA / 690 V	85 kA / 415 V 65 kA / 690 V
Poles	3P / 4P	
Breaking operation time	20 — 30 ms	
Closing operation time	< 70 ms	
Electrical service life	8000 operation cycles / 415 V 4000 operation cycles / 690 V	
Mechanical service life	15000 operation cycles without maintenance	
Utilization category	B	
Line voltage connection	arbitrary above or below (with external power supply for SU)	

Mechanical parameters

	fixed	withdrawable
Device width (3P / 4P)	364 mm / 459 mm	377 mm / 472 mm
Device height	393.5 mm	430 mm
Device depth	298 mm	406 mm
Degree of protection	IP40	
Ambient temperature	-25°C — +60°C	
Storage temperature	-40°C — +85°C (without SU) -25°C — +75°C (with SU)	
Altitude without derating	< 2000 m	
Relative humidity	< 50 %	
Average relative humidity	< 90 %	
Installation category	IV (main circuit) / III (secondary circuit)	
Pollution degree	3	
Weight (3P / 4P)	42 kg / 55 kg	86 kg / 106 kg (including cassette)

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Air Circuit Breakers up to 2500 A

Power dissipation at 3P device

Rated current [A]	Fixed version	Withdrawable version
1000 A	124 W	237 W
1250 A	161 W	293 W
1600 A	232 W	435 W
2000 A	266 W	500 W
2500 A	300 W	560 W

Temperature derating

T [°C]	$I_u(T)$ [A]				
	$I_n = 1000$ A	$I_n = 1250$ A	$I_n = 1600$ A	$I_n = 2000$ A	$I_n = 2500$ A
-25 — +40	1000	1250	1600	2000	2500
45	1000	1250	1600	2000	2500
50	1000	1250	1600	2000	2400
55	1000	1200	1500	1900	2350
60	950	1150	1400	1750	2250

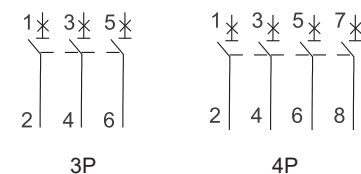
Altitude derating

Altitude	2000 m	3000 m	4000 m	5000 m
Impulse withstand voltage U_{imp}	3500 V	3000 V	2500 V	2000 V
Insulation voltage U_i	1000 V AC	800 V AC	700 V AC	600 V AC
Rated voltage U_e	690 V AC	580 V AC	500 V AC	400 V AC
Rated uninterrupted current I_u	$1 \times I_u(T)$	$0.96 \times I_u(T)$	$0.91 \times I_u(T)$	$0.87 \times I_u(T)$

Secondary terminals

Secondary terminals	screw type
Terminals capacity	0.5 — 1.2 mm ²

Main terminals wiring diagrams



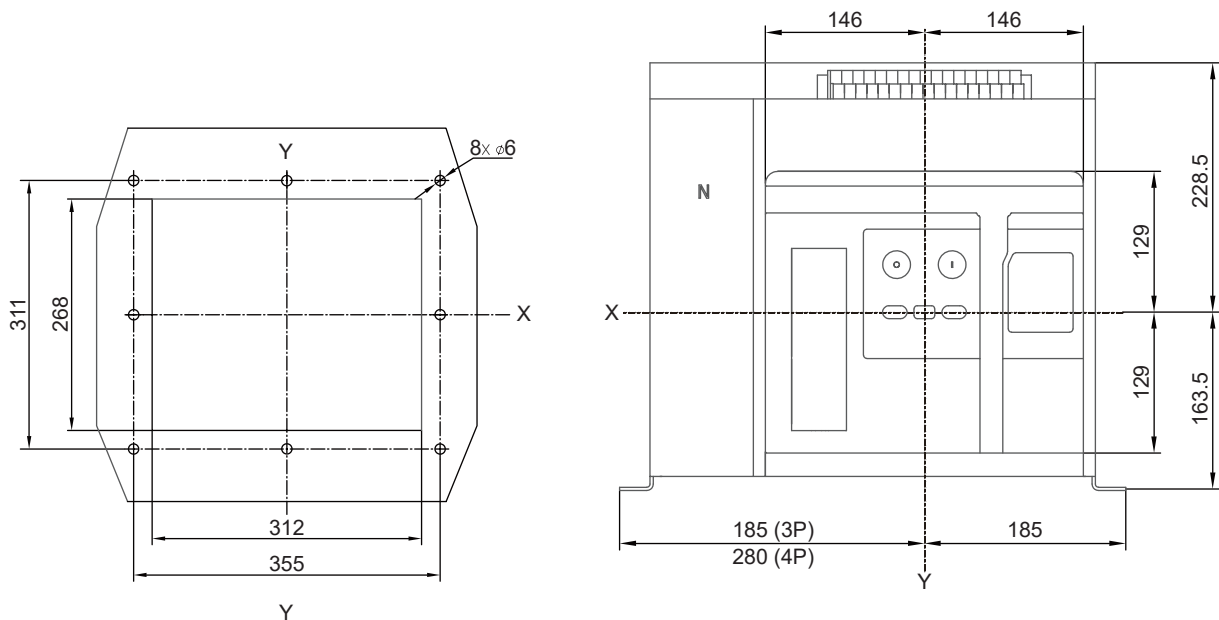
Technical Data Ex9A25

Air Circuit Breakers up to 2500 A

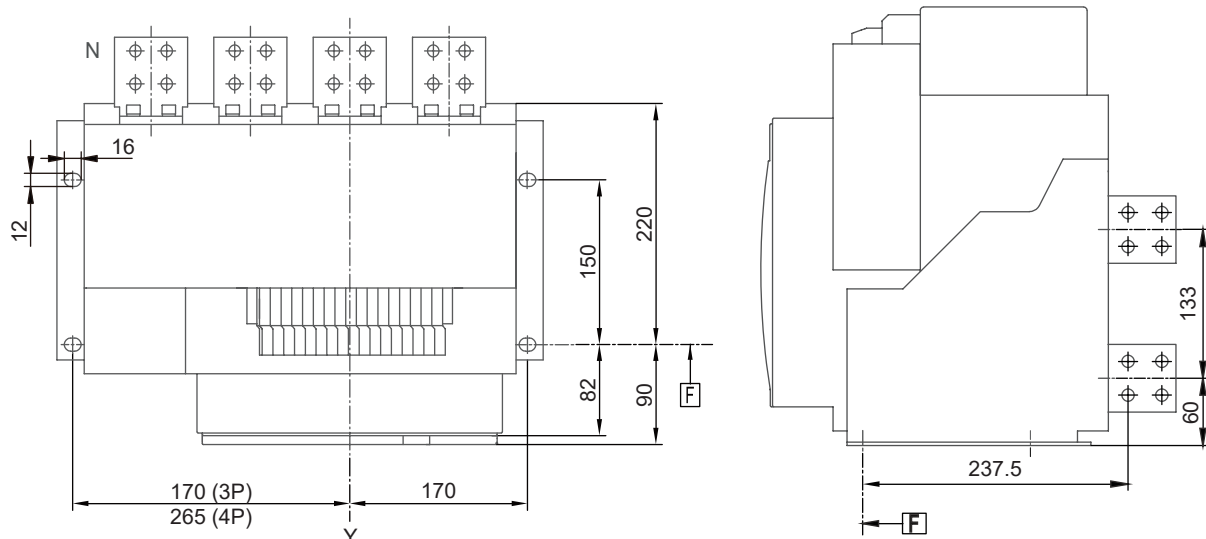
Dimensions - fixed version

Front dimensions

mm



Installation dimensions



X, Y - door cut-out centering
F - Mounting screw reference point

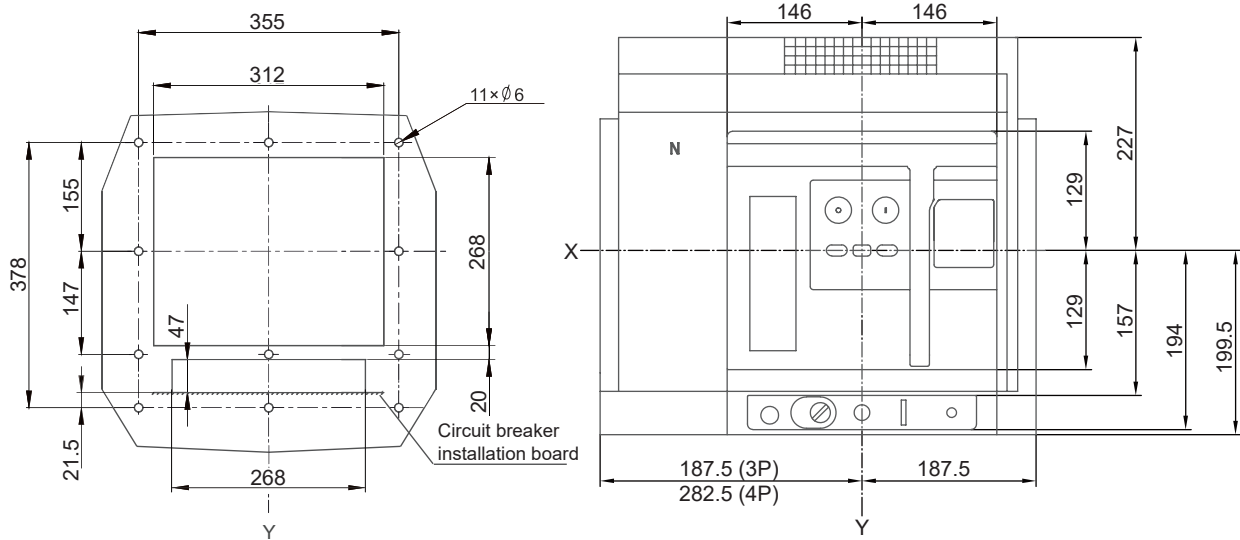
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Air Circuit Breakers up to 2500 A

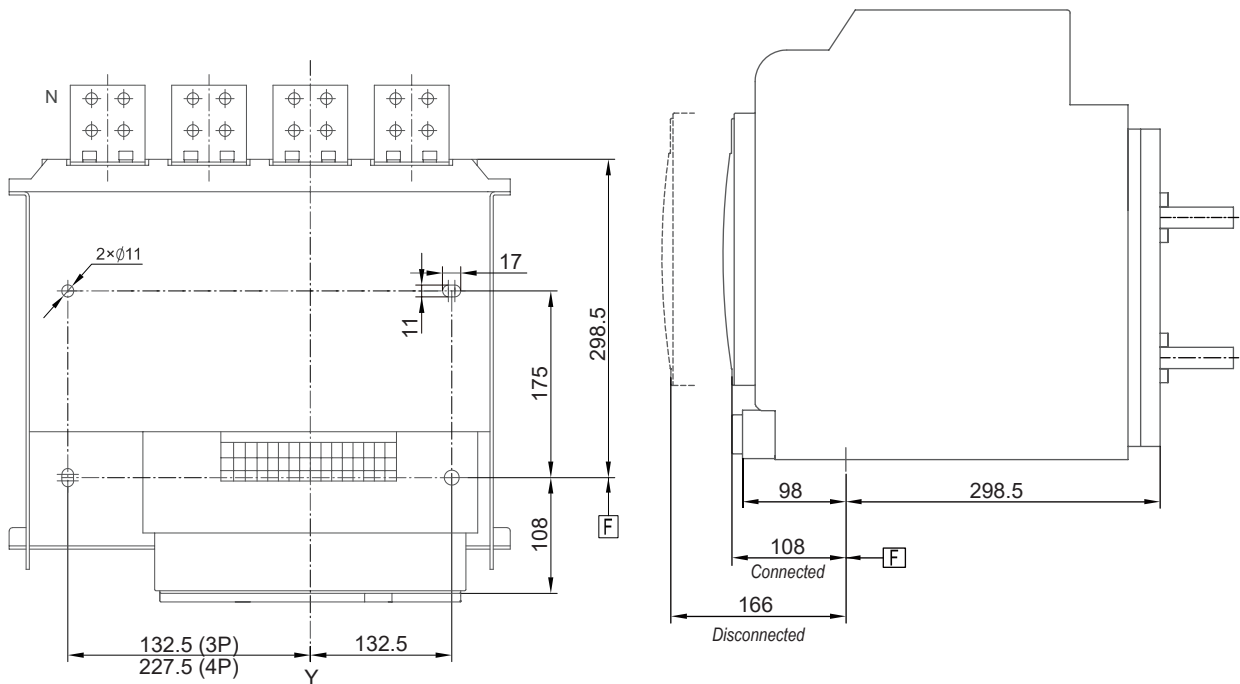
Dimensions - withdrawable version

Front dimensions

mm



Installation dimensions



X, Y - door cut-out centering
F - Mounting screw reference point

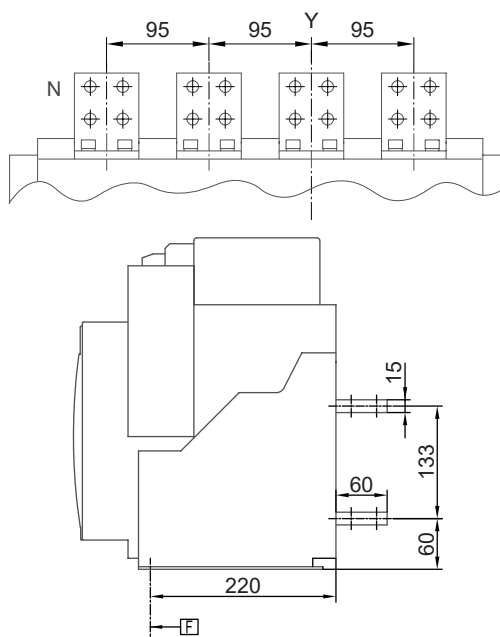
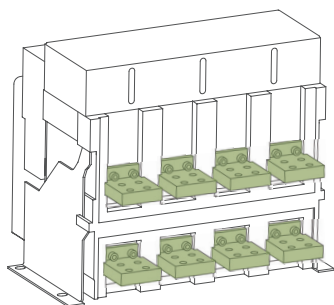
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Air Circuit Breakers up to 2500 A

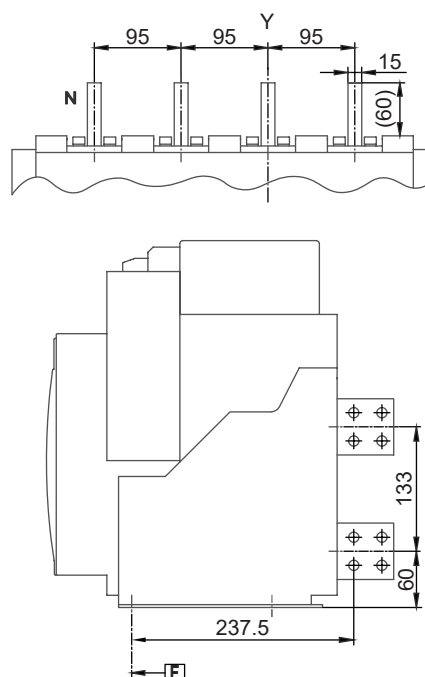
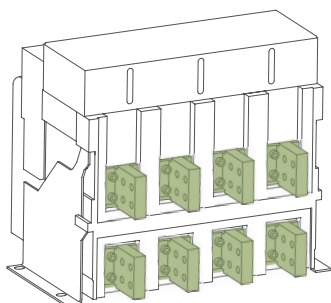
Power connectors dimensions 1000 — 1600 A (Fixed)

Horizontal connection

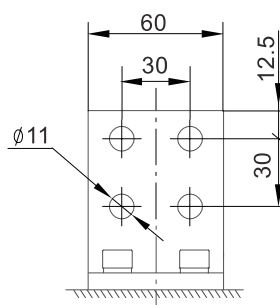
mm



Vertical connection



Horizontal / Vertical Power connector

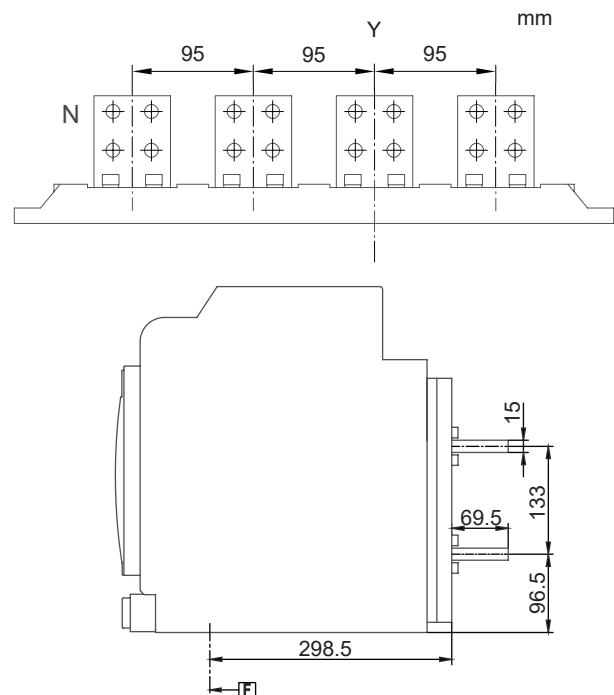
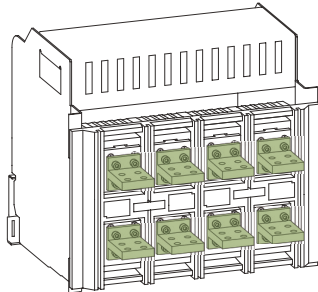


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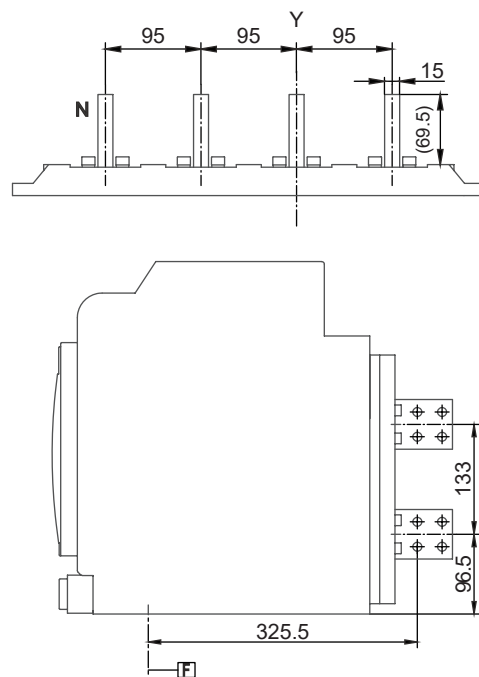
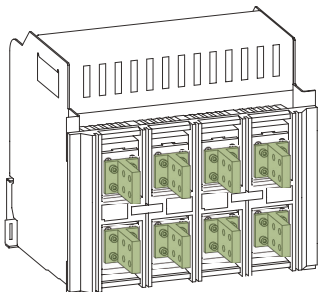
Air Circuit Breakers up to 2500 A

Power connectors dimensions 1000 — 1600 A (Withdrawable)

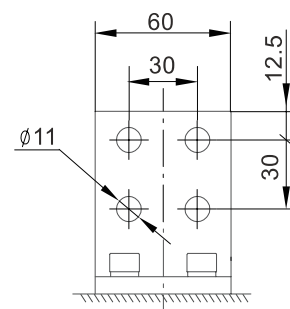
Horizontal connection



Vertical connection



Horizontal / Vertical Power connector



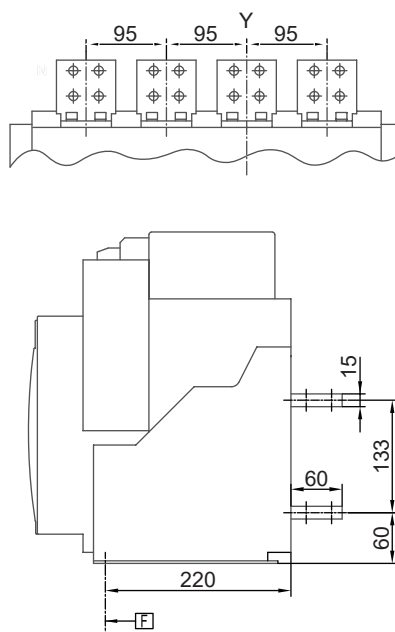
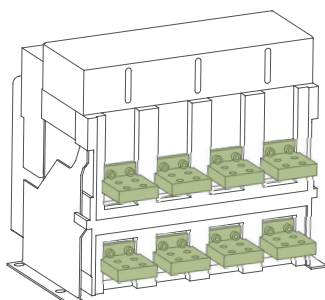
Technical Data Ex9A25

Air Circuit Breakers up to 2500 A

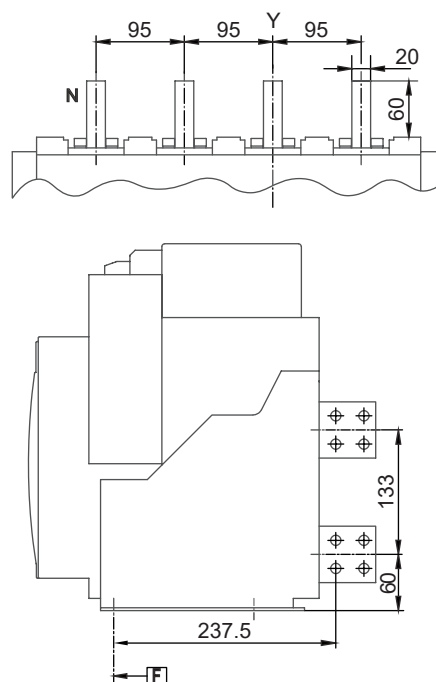
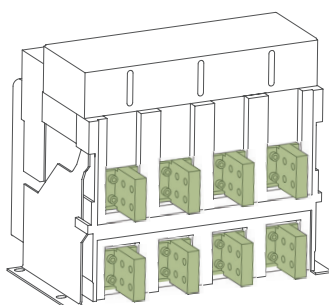
Power connectors dimensions 2000 — 2500 A (Fixed)

Horizontal connection

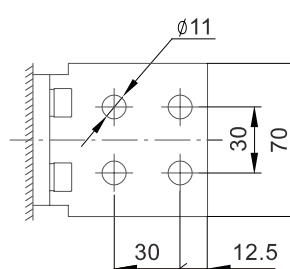
mm



Vertical connection



Horizontal / Vertical Power connector

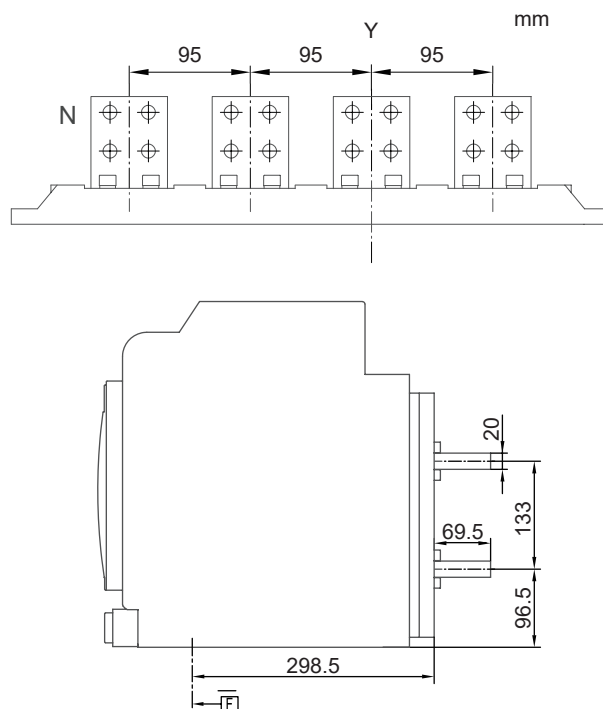
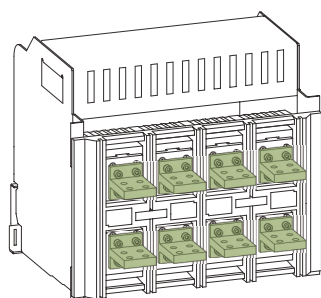


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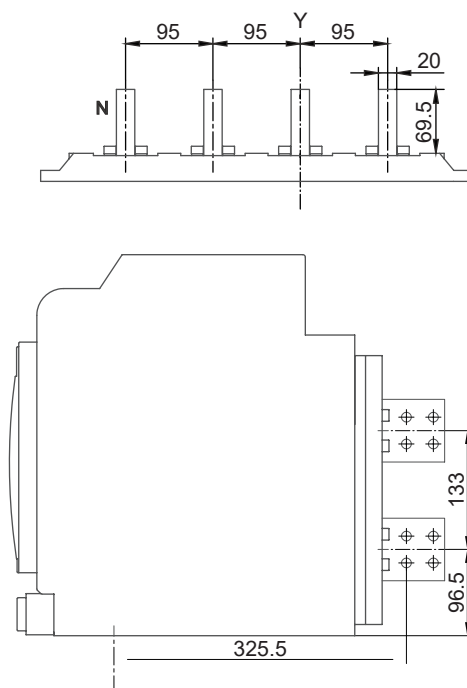
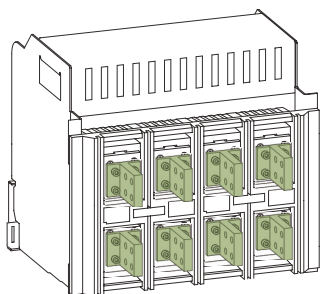
Air Circuit Breakers up to 2500 A

Power connectors dimensions 2000 — 2500 A (Withdrawable)

Horizontal connection



Vertical connection



Horizontal / Vertical Power connector

