

## THV - THR 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







Features	Unit	THR1	THR2	THR3	THV1	THV2	THV3
Contact function	-	NC	NC	NC	NO	NO	NO
Temperature setting range	°C	-10/+50	0/+60	+20/+80	-10/+50	0/+60	+20/+80
Precision	°C			±	4		
Hysteresis	°C			-	7		
Max switching current							
250Vac resistive load (inductive load)	A			10	(1.6)		
125Vac resistive load (inductive load)	A			15	(2.5)		
Max. switching power in Vdc	W			3	0		
Temperature sensor type	-	Thermostatic bimetal					
Contact type	-	Snap action					
Contact resistance	mOhm	< 10					
Service life	cycles	> 100 000					
Electrical connections	-	2-pole terminal for 2.5 mm <sup>2</sup> wire					
Casing	-	PA6, UL94 VO self-estinguishing, light grey RAL 7035					
Protection degree EN60529	-			IP:	20		
Operating temperature	°C (°F)			-25/+80 (	-13/+176)		
Storage temperature	°C (°F)	-45/+80 (-49/+176)					
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022					
Installation position	-	Variable					
Conformity/Certifications	-	CE-UL <b>Wus</b> File n. E348803					
Dimensions HxWxD	mm	61x34x35					
Weight (with packaging)	kg			0.048	(0.055)		

## Accessories





Specifications, values and drawings are subject to change without notice.

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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	



Features	Unit	THE	V13	THRV22		THV	V22
Contact function	-	NC	NO	NC	NO	NO	NO
Temperature setting range	°C	-10/+50	+20/+80	0/+60	0/+60	0/+60	0/+60
Precision	°C			±	-4		
Hysteresis	°C				7		
Max switching current							
250Vac resistive load (inductive load)	A			10	(1.6)		
125Vac resistive load (inductive load)	A			15	(2.5)		
Max. switching power in Vdc	W			3	80		
Temperature sensor type	-	Thermostatic bimetal					
Contact type	-	Snap action					
Contact resistance	mOhm	< 10					
Service life	cycles	> 100 000					
Electrical connections	-	2-pole terminal for 2.5 mm <sup>2</sup> wire					
Casing	-	PA6, UL94 VO self-estinguishing, light grey RAL 7035					
Protection degree EN60529	-	IP20					
Operating temperature	°C (°F)		-25/+80 (-13/+176)				
Storage temperature	°C (°F)	-45/+80 (-49/+176)					
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022					
Installation position	-	Variable					
Conformity/Certifications	-	CE-UL د 🕫 File n. E348803					
Dimensions HxWxD	mm			61x5	3x35		
Weight (with packaging)	kg			0.080	(0.09)		

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### Accessories



Specifications, values and drawings are subject to change without notice.





## 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.

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Features	Unit	THRF05	THVF35	THVF50	
Contact function	-	NC	NO	NO	
Temperature set (hysteresis)	°C	+5 (10)	+35 (10)	+50 (10)	
Precision	°C		±4		
Max switching current					
240Vac resistive load (inductive load)	A		5 (1.6)		
120Vac resistive load (inductive load)	A		10 (2.0)		
Max. switching power in Vdc	W		30		
Temperature sensor type	-	Thermostatic bimetal			
Contact type	-	Snap action			
Contact resistance	mOhm	< 10			
Service life	cycles	> 100.000			
Electrical connections	-	2-pole terminal for 2.5 mm <sup>2</sup> wire			
Casing	-	PA6, UI	94 VO self-estinguishing, light grey	RAL 7035	
Protection degree EN60529	-		IP20		
Operating temperature	°C (°F)		-40/+80 (-40/+176)		
Storage temperature	°C (°F)	-45/+80 (-49/+176)			
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022			
Installation position	-	Variable			
Conformity/Certifications	-	CE			
Dimensions HxWxD	mm	43x27x35			
Weight (with packaging)	kg		0.024 (0.056 - 2pcs x pack)		

#### Accessories

DIN rail bracket

THRF THVF 43 35 ЪЦ ÓÓ 2 2 1 1 Filter fan Heater L1 L2 27 Signal device N1 N2



Specifications, values and drawings are subject to change without notice.

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## **THS** THERMOSTAT CHANGE-OVER CONTACT WITH LOW HYSTERESIS



Features	Unit	THS2	
Contact function	-	Change over contact	
Temperature setting range	°C	0 / +60	
Precision	°C	±3	
Hysteresis	°C	1	
Max switching current			
NC 100-250VAC (inductive load cos phi 0.6)	А	10 (2)	
NO 100-250VAC (inductive load cos phi 0.6)	A	5 (2)	
Max. switching power in Vdc	W	30	
Temperature sensor type	-	Thermostatic bimetal	
Service life	cycles	> 100 000	
Electrical connections	-	4-pole terminal for 2.5 mm <sup>2</sup> wire	
Casing	-	PA6, UL94 VO self-estinguishing, light grey RAL 7035	
Protection degree EN60529	-	IP20	
Operating temperature	°C (°F)	-40/+80 (-40/+176)	
Storage temperature	°C (°F)	-45/+80 (-49/+176)	
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022	
Installation position	-	Variable	
Conformity/Certifications	-	CE	
Dimensions HxWxD	mm	64x37x45	
Weight (with packaging)	kg	0.07 (0.08)	

## Accessories

DIN rail bracket

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# EUH hygrostat

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



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Features	Unit	EUH11	EUH22	
Power supply	V/Hz	115/50-60	230/50-60	
Relative Humidity setting range	RH%	20-90		
Relative Humidity Hysteresis	%	5		
Reaction time	sec	60		
Max switching current				
NO at 250Vac resistive load	A	10		
NO at 30Vdc resistive load	A	8		
NO at 240Vac motor load	Hp	1/2		
NO at 120Vac motor load	Hp	1/4		
NC at 250Vac resistive load	A	10		
NC at 30Vdc resistive load	A	8		
Contact type		Change over		
Contact resistance		< 10		
Service life	cycles	> 100 000		
Electrical connections	-	5-pole terminal for 2.5 mm <sup>2</sup> wire		
Optical signal	-	LED		
Casing	-	PA6, UL94 VO self-estinguishing,	light grey RAL 7035	
Protection degree EN60529	-	IP20		
Operating / Storage temperature	°C (°F)	-40/+80 (-40/+176)		
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022		
Installation position	-	Vertical		
Conformity/Certifications	-	CE		
Dimensions HxWxD	mm	69x53x50		
Weight (with packaging)	kg	0.11 (0.12)		

#### Accessories

DIN rail bracket





Specifications, values and drawings are subject to change without notice.

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## **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.

Features	Unit	ETUH11	ETUH22	
Power supply	V/Hz	115/50-60	230/50-60	
Temperature setting range	°C	0 / +60		
Precision	°C	±1		
Temperature Hysteresis	°C	2		
Relative Humidity setting range	RH%	20-90		
Relative Humidity Hysteresis	%	5		
Reaction time	sec	60		
Max switching current				
NO at 250Vac resistive load	A	10		
NO at 30Vdc resistive load	A	8		
NO at 240Vac motor load	Hp	1/2		
NO at 120Vac motor load	Hp	1/4		
NC at 250Vac resistive load	A	10		
NC at 30Vdc resistive load	A	8		
Contact type		Change over		
Contact resistance		< 10		
Service life	cycles	> 100 000		
Electrical connection	-	5-pole terminal for 2.5	mm <sup>2</sup> wire	
Optical signal	-	LED		
Casing	-	PA6, UL94 VO self-estinguishing,	light grey RAL 7035	
Protection degree EN60529	-	IP20		
Operating / Storage temperature	°C (°F)	-40/+80 (-40/+176)		
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022		
Installation position	-	Vertical		
Conformity/Certifications	-	CE-UL 🕬 🕫 File n. E348803		
Dimensions HxWxD	mm	69x53x50		
Weight (with packaging)	kg	0.11 (0.12)		

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#### Accessories



Specifications, values and drawings are subject to change without notice.





## MUH **MECHANICAL HYGROSTAT**

Hygrostat for DIN 35 mm. rail mounting. Typically used to control enclosure heaters.



Features	Unit	МИН		
Relative Humidity setting range	RH%	20-90		
Relative Humidity Hysteresis	RH%	5 (max 10)		
Precision	RH%	$\pm 4$		
Max switching current				
NC at 240Vac resistive load	A	2.2		
NC at 120Vac resistive load	A	4.4		
NO at 240Vac resistive load	A	5		
NO at 120Vac resistive load	A	10		
Contact type	-	Change over		
Electrical connection	-	3-pole terminal for 2.5 mm <sup>2</sup> wire		
Casing	-	PA6, UL94 V0 self-estinguishing, light grey RAL 7035		
Protection degree EN60529	-	IP20		
Operating temperature	°C (°F)	-10/+50 (+14/+122)		
Storage temperature	°C (°F)	-45/+80 (-49/+176)		
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022		
Installation position	-	Vertical		
Conformity/Certifications	-	CE		
Dimensions HxWxD	mm	91x54x48		
Weight (with packaging)	kg	0.15 (0.17)		

## Accessories

DIN rail bracket

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Specifications, values and drawings are subject to change without notice.

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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)



Features	Unit	ETHM10	ETHM14	ETHDM10	ETHDM14
Power supply	V	200-240 VAC	20-30 VAC/DC	200-240 VAC	20-30 VAC/DC
Input	-		NTC (10	k - 25°C)	
Relay	-	1 SPDT o	utput (8A)	2 SPDT outpu	uts (16A-AC1)
Control	-		ON/	OFF	
Measurement range	°C		NTC -20	~ +60°C	
Sampling rate	Hz	12			
Symmetric hysteresis	-	Adjustable from +1 to +5°C on both outputs			uts
Operating temperature	°C (°F)		-20/+65	(-4/+149)	
Operating humidity (no condensate)	RH%		30 ~	- 95	
Housing	-		self-extinguishing	g plastic UL94V0	
Dimensions HxWxD	mm	17.5x64x98mm -	1 Din rail module	35x64x98mm - 2	2 Din rail module
Connessions	-	2.5 mm <sup>2</sup> screw terminal block			
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022			
Conformity/Certifications	-	CE			
Weight (with packaging)	Kg	0,045	(0,055)	0,070	(0,090)



The ETHDM10 and ETHDM14 are factory equipped with an integral NTC on the thermostat (terminals 1-2) and a bridge between terminals 2 and 1A.

In this confi guration the two set points of outputs OUT1 and OUT2 will refer to the temperature measured by the integrated NTC probe.

Replacing the bridge between terminals 2 and 1A with a second NTC probe, output OUT1 will be controlled by the temperature measured at NTC probe 1 (on the thermostat), output OUT2 will be controlled by the temperature measured at NTC probe 2 (terminals 2 and 1A).









# ETH - ETHD TEMPERATURE CONTROLLERS

Compact Size - 1 DIN Module (17,5mm) or 2 DIN modules (35mm) Supply 10-30AC/DC or 200-240VAC Din rail mounting Digital adjustment of tempearture (2 red digit) Appropriate for temperature control inside electric panel (fan and resistor control) NTC probe input 1 or 2 relay outputs



Features	Unit	ETH10	ETH14	ETHD10	ETHD14
Power supply	V	200-240 VAC	10-30 VAC/DC	200-240 VAC	10-30 VAC/DC
Input	-		NTC (10	k - 25°C)	
Relay	-	1 SPDT outp	ut (10A-AC1)	2 SPDT outpu	uts (10A-AC1)
Control	-		ON/	OFF	
Overall accuracy	%		+/- 0.5	full scale	
Display resolution	-		-	1	
Measurement range	°C	NTC -20 $\sim$ +65°C probe on the controller / NTC -35 $\sim$ +99°C external pro			9°C external probe
Sampling rate	Hz	12			
Display	-	2 red digit			
Parameters programming	-		by key	board	
Operating temperature	°C (°F)		-20/+65	(-4/+149)	
Operating humidity (no condensate)	RH%		30 -	- 95	
Housing	-		self-extingui	shing plastic	
Dimensions HxWxD	mm	17.5x64x98mm -	1 Din rail module	35x64x98mm - 2	2 Din rail module
Connessions	-	2.5 mm <sup>2</sup> screw terminal block			
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022			
Conformity/Certifications	-	CE			
Weight (with packaging)	Kg	0,045	(0,055)	0,070	(0,090)







# Fan speed controller

## **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.

Features	Unit	FSC		
Power supply	V/Hz	100-230/50-60		
Temperature setting range	°C	+20 / +60		
Fan speed setting range	%	0 - 100		
Speed controller	-	partialization of wave		
Input	-	NTC sensor		
Max. output fan	-	300 W (100-230/50-60Hz)		
Electrical connection	-	terminal for 2.5 mm <sup>2</sup> wire		
Optical signal	-	LED		
Casing	-	PA6, UL94 VO self-estinguishing, light grey RAL 7035		
Protection degree EN60529	-	IP20		
Operating / Storage temperature	°C (°F)	-10/+70 (+14/+158)		
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022		
Installation position	-	Vertical		
Conformity/Certifications	-	CE		
Dimensions HxWxD	mm	68x53x38		
Weight (with packaging)	kg	0.10 (0.11)		

#### Accessories

DIN rail bracket

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Specifications, values and drawings are subject to change without notice.

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# **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.)



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Features Bawar augulu		Unit	FS FSL		FSLA
Pov	ver supply	V/Hz	1ph 115-23	0/50-60 or 3pł	n 400/50-60
FUNCTIONS	Power on, Phase sequence,	Yes/No	Yes	Yes	Yes
	Phase loss				
	Signal	-	n° 3 LEDs, red	n° 3 LEDs, red	n° 3 LEDs, red
	Contact for lamp	Yes/No	No	Yes	Yes
	Contact type	-	-	NC	NC
	Max current	А	-	5	5
	Service life	Cycles	-	> 25.000	> 25.000
	Auxiliary Contact	Yes/No	No	No	Yes
	Contact type	-	-	-	Change over
	Max current	А	-	-	5
	Service life	Cycles	-	-	> 25.000
Pro	be extension	mm	Adjustable 11-16		6
Са	Casing		Poly-carbonate, Yellow		
Co	Connection on terminals		n. 6x4	n. 8x4	n. 11x4
Mc	ounting	-	Adjustable fixi	djustable fixing bracket 125 mm inte	
Pro	tection degree EN60529	-		ljustable fixing bracket 125 IP20	
Pro	Protection degree EIN60529 Protection class				
Op	erating/Storage temperature	°C(°F)	-10 +70 (+14 +158)/-20 +80(-4 +176)		
Installation position		-	Variable		
Dimensions HxWxD		mm	34x112x68 (+16)		
Weight (with packaging)		kg	0.15 (0.25)		
Package dimensions HxWxD		mm	46x145x88		
Conformity/Certifications		-	CE		







# **FIN** DOOR LIMIT SWITCH

Features	Unit	FINCOR	FINRIP
Contacts type	-	Zb type snap action (1NO+1NC)	
Rated current at 230V(400V) AC15	A	3.1(1.9)	
Protection degree EN60529	-	IP65	
Protection Class	-	II	
Operating temperature	°C (°F)	-25/+70 (-13/+158)	
Rated insulation voltage Ui	V	690	
Service life	Cycles	> 25.000	
Cable inlet	-	PG13,5 cable gland	
Mechnical lock	Yes/No	No	Yes
Dimensions HxWxD	mm	75x31x31	91x31x39
Weight (with packaging)	kg	0.04 (0.10)	0.05 (0.11)
Conformity/Certifications	-	CE EN60947-5-1, IEC 947-5-1	



Required on most enclosures for safety and operation of auxiliary circuits, such as switching on lamps or switching off ventilation/air conditioning when the door is open. FIN Limit switches can be equipped with the optional bracket FINSTAFF for fixing and positioning.

