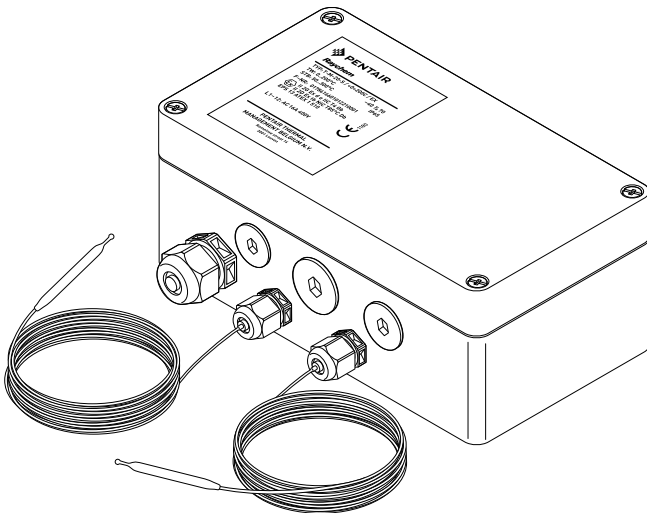


Raychem T-M-20-S/+X+Y/EX

SURFACE SENSING THERMOSTAT WITH SAFETY LIMITER FOR HAZARDOUS AREA



A surface sensing thermostat providing temperature control and temperature limit in hazardous areas.

The safety limiter prevents the heating system exceeding a preset maximum temperature should the control function fail to operate or an unsafe process temperature occur. The maximum rated voltage is 400 VAC. The switching current capacity is 16 A maximum via independent Ex d single pole change over micro switches with volt-free contacts.

The switches are mounted within an Ex e enclosure together with a spring-type terminal block for fast easy connection. The sensors are 3 meter long stainless steel fluid filled bulb and capillary.









The thermostat is delivered with Ex approved power cable glands and plugs and the entries offer the possibility for a variety of connections such as connecting M25 and M20 glands for direct heating cable entry or alarm output.

The thermostat with limiter is available in 3 temperature ranges: +0°C +120°C, +0°C +200°C and +50°C +300°C

GENERAL

	T-M-20-s/+0+120C/EX	T-M-20-S/+0+200C/EX	T-M-20-S/+50+300C/EX
Area of use	Hazardous area: Zone 1 or Zone 2 (Gas) or Zone 21 or Zone 22 (Dust) Ordinary		

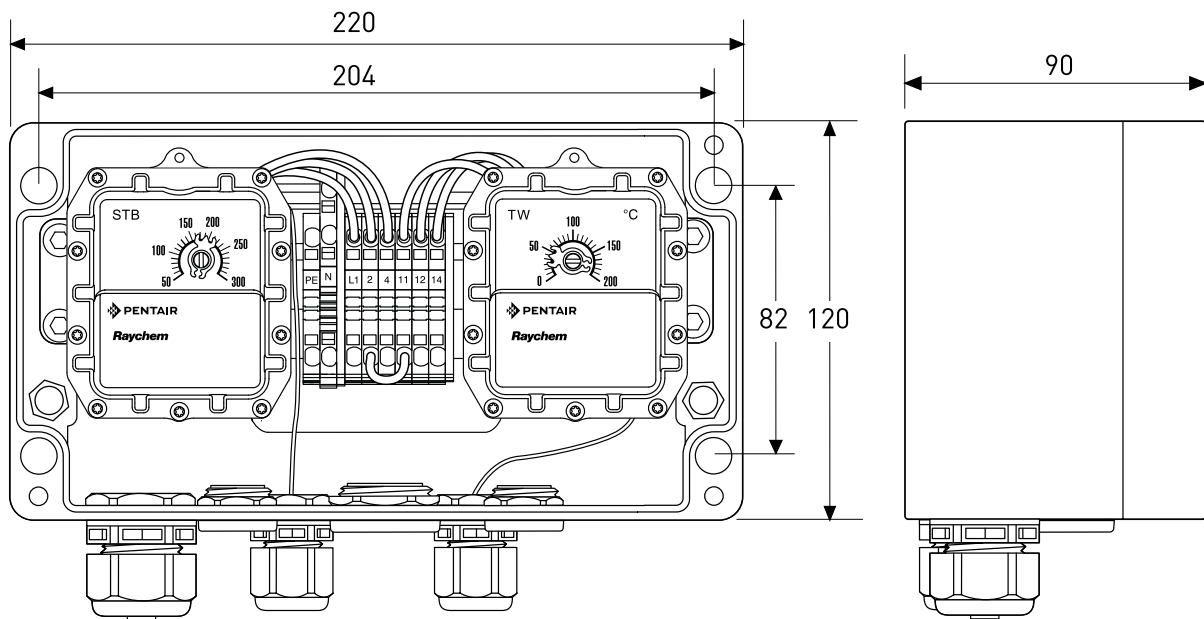
APPROVAL CERTIFICATION

	T-M-20-s/+0+120C/EX	T-M-20-S/+0+200C/EX	T-M-20-S/+50+300C/EX
Approval	EPS 13 ATEX 1 510  II 2G Ex d e IIC T4/T5/T6 Gb  II 2D Ex tb IIIC T85°C /T100°C/T130°C Db	EPS 13 ATEX 1 510  II 2G Ex d e IIC T4/T5/T6 Gb  II 2D Ex tb IIIC T85°C /T100°C/T130°C Db	EPS 13 ATEX 1 510  II 2G Ex d e IIC T4/T5/T6 Gb  II 2D Ex tb IIIC T85°C /T100°C/T130°C Db
EAC Ex	 TC RU C-BE.M1062.B.02849 1Ex d e IIC T4/T5/T6 Gb 1Ex tb IIIC T85°C/T100°C/T130°C Db	 TC RU C-BE.M1062.B.02849 1Ex d e IIC T4/T5/T6 Gb 1Ex tb IIIC T85°C/T100°C/T130°C Db	

PRODUCT SPECIFICATION

Parameter	Controller	+0°C to +120°C	+0°C to +200°C	+50°C to +300°C
Temperature setting	Limiter	+0°C to +120°C	+50°C to +300°C	+50°C to +300°C
Switching type		Single pole change over (SPDT) >100.000 cycles at I nom	Single pole change over (SPDT) >100.000 cycles at I nom	Single pole change over (SPDT) >100.000 cycles at I nom
Switching capacity		Maximum 16A at 400 Vac, resistive load	Maximum 16A at 400 Vac, resistive load	Maximum 16A at 400 Vac, resistive load
Hysteresis/Differential	Controller	max. 2.5% range, calibrated downwards	max. 2.5% range, calibrated downwards	max. 2.5% range, calibrated downwards
	Limiter	max 7% calibrated upwards	max. 7.5%, calibrated upwards	max. 7.5%, calibrated upwards
Setting		Inside enclosure	Inside enclosure	Inside enclosure
Reset limiter		Inside enclosure by means of a screwdriver		
Terminal size		4 mm ²	4 mm ²	4 mm ²
Terminal type		spring-type terminals	spring-type terminals	spring-type terminals
Ambient operating temp. range		-40°C to +70°C	-40°C to +70°C	-40°C to +70°C

DIMENSIONS (IN MM)



OUTPUT

PARAMETERS	T-M-20-s/+0+120C/EX	T-M-20-S/+0+200C/EX	T-M-20-S/+50+300C/EX
Control relay	Change-over switch	Change-over switch	Change-over switch
Limiter relay	Change-over switch with possibility for external alarm Capillary leakage detection system		

ENCLOSURE

Protection	IP65	IP65	IP65
Dimension	220 x 120 x 90 mm	220 x 120 x 90 mm	220 x 120 x 90 mm
Materials body and lid	Black, glass filled polyester enclosure	Black, glass filled polyester enclosure	Black, glass filled polyester enclosure
Lid fixing	4 captive screws, stainless steel	4 captive screws, stainless steel	4 captive screws, stainless steel
Entries	6 entries: 1 x M25 gland (Ø 8-17 mm): power supply 1 x M25 stopping plug: output to heating cables 2 x M20 stopping plug: output to heating cables (possibility to connect single conductor heating element) 2 x M20: capillary sensors		

TEMPERATURE SENSOR

Type		Fluid filled capillary, 3 m long	Fluid filled capillary, 2 m long	Fluid filled capillary, 2 m long
Dimensions	Controller	Ø 6 mm; length sensing element = 90 mm	Ø 6 mm; length sensing element = 72 mm	Ø 4 mm; length sensing element = 135 mm
	Limiter	Ø 6 mm; length sensing element = 58 mm	Ø 4 mm; length sensing element = 78 mm	Ø 4 mm; length sensing element = 78 mm
Material			stainless steel	stainless steel
Temperature exposure	Controller	-40°C +138°C	-40°C +230°C	-40°C +345°C
	Limiter	-40°C +138°C	-40°C +345°C	-40°C +345°C
Minimum bending radius		5 mm for capillary (not for sensor)	5 mm for capillary (not for sensor)	5 mm for capillary (not for sensor)

MOUNTING METHOD

Support bracket	SB-120, SB-125 or surface mounting via 4 fixing holes at 204 x 82 centres		
PN		SB-120	165886-000
		SB-125	1244-00603

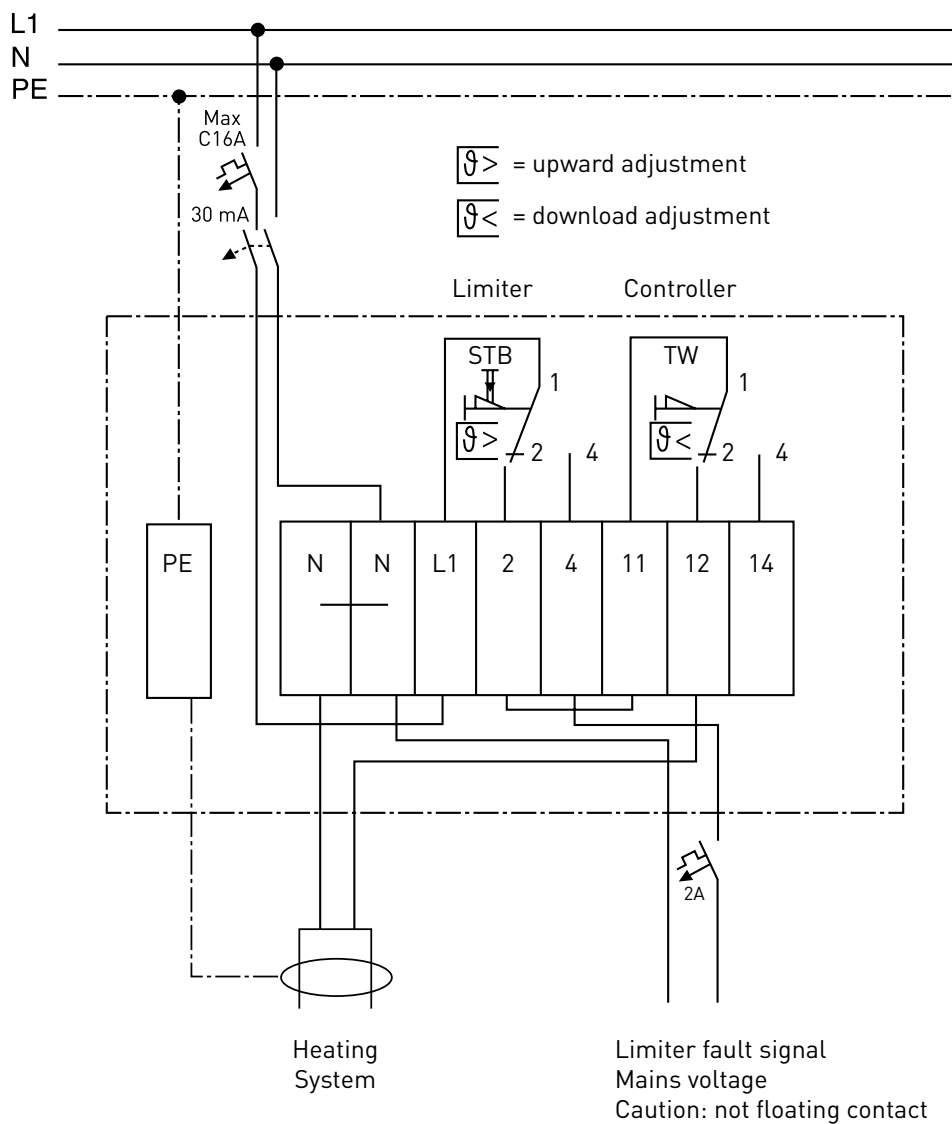
ORDERING DETAILS

Ordering references:	PN Number	Weight
T-M-20-S/+0+200C/EX	1244-013410	2 kg
T-M-20-S/+50+300C/EX	1244-013411	2 kg
T-M-20-S/+0+120C/EX	1244-016536	2 kg

MEANING OF REFERENCE: T-M-20-S/+X+Y/EX

- T = thermostat
- M = mechanical thermostat
- 20 = control thermostat + limiter
- S = surface sensing
- x = min temperature of control range
- y = max temperature of control range
- Ex = hazardous area

CONNECTION DETAILS





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