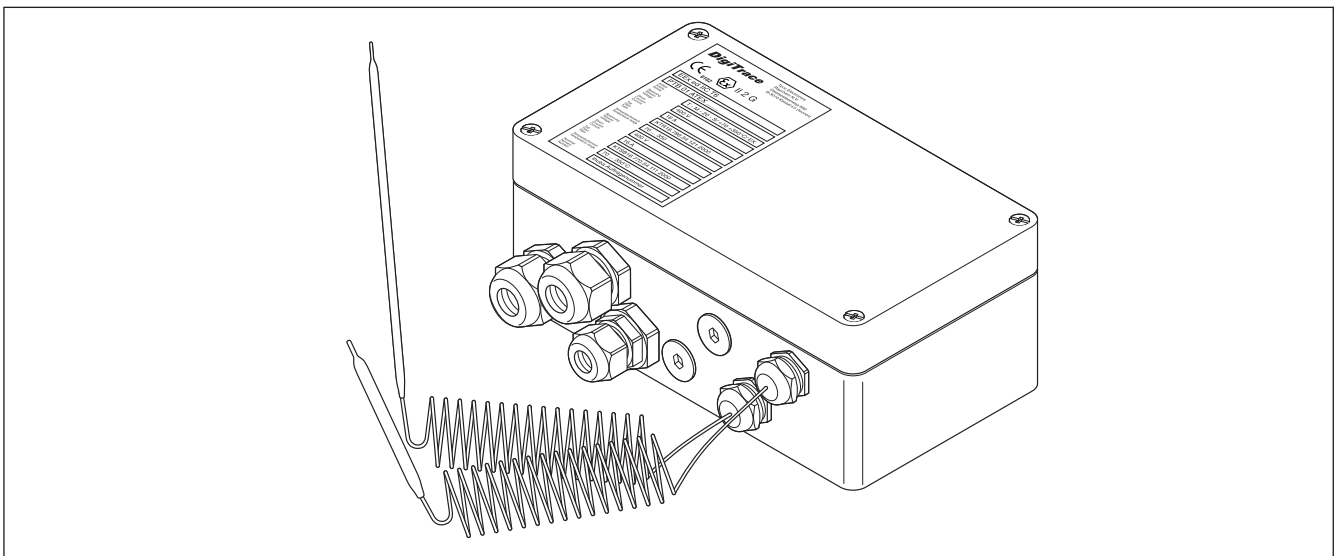


Ex Surface sensing thermostat with safety limiter for hazardous area (Zone 1, Zone 2)

A surface sensing thermostat providing temperature control and temperature limit in hazardous areas. The high limit cut out 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 independ-

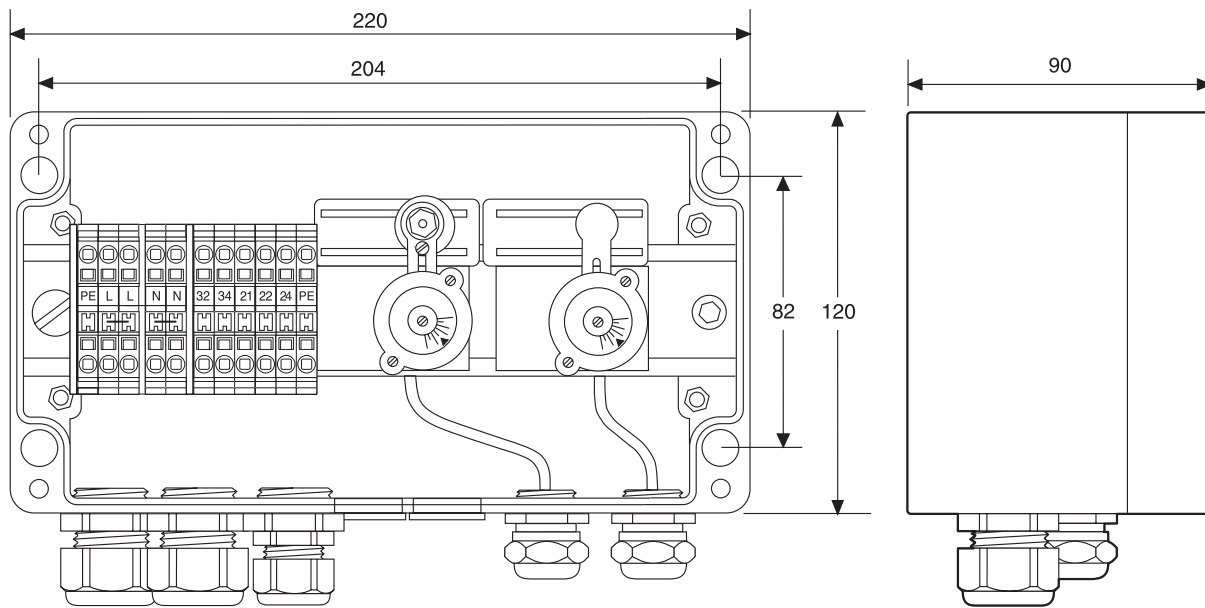
ent EEx d single pole change over micro switches with volt-free contacts. The switches are mounted within an EExe enclosure together with a cage clamp terminal block for fast easy connection. The sensors are 2 meter long stainless steel fluid filled bulb and capillary. The thermostat is delivered with EEx approved power cable glands and plugs

and the entries offer the possibility for a variety of connections such as: looping the power supply (daisy chaining) in order to save junction boxes, possibility to connect M25 and M20 glands for direct heating cable entry, alarm output. The thermostat with limiter is available in 2 temperature ranges: +5°C +215°C and +70°C +350°C



		T-M-20-S/+5+215C/EX	T-M-20-S/+70+350C/EX
General			
Area of use		Hazardous area: Zone 1 or Zone 2 (Gas) or Zone 21 or Zone 22 (Dust) Ordinary	
Approval certification		PTB 01 ATEX 1075 Ex II 2 G EEx ed IIC T6 Ex II 2 D IP 65 T80°C	PTB 01 ATEX 1075 Ex II 2 G EEx ed IIC T6 Ex II 2 D IP 65 T80°C
Product specification			
Max rated voltage (nom)		400 VAC	400 VAC
Temperature setting	Controller Limiter	+5°C to +215°C +40°C to +300°C	+70°C to +350°C +70°C to +350°C
Switching type		Single pole change over (SPDT) >100.000 cycles at I nom >50.000 cycles at 5 x I nom	Single pole change over (SPDT) >100.000 cycles at I nom >50.000 cycles at 5 x I nom
Switching capacity		Max 16 A at 400 VAC, resistive load	Max 16 A at 400 VAC, resistive load
Hysteresis/ Differential	Controller Limiter	<= 6 K <= 4 K	<= 6 K <= 4 K
Setting		Inside enclosure	Inside enclosure
Reset limiter		Inside enclosure by means of a screwdriver	
Terminal size		4 mm ²	4 mm ²
Terminal type		cage clamp terminals	cage clamp terminals
Ambient operating temp. range		-30°C to +80°C	-30°C to +80°C

Dimensions (in mm)



	T-M-20-S/+5+215C/EX	T-M-20-S/+70+350C/EX
Output parameters		
Control relay	Change-over switch	Change-over switch
Limiter relay	Change-over switch with possibility for external alarm Capillary leakage detection system	
Enclosure		
Protection	IP65	IP65
Dimension	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
Lid fixing	4 captive screws, stainless steel	4 captive screws, stainless steel
Entries	7 entries: 1 x M25 gland (Ø 8-17 mm): power supply 1 x M25 gland with plug (Ø 8-17 mm): daisy chaining of power 1 x M25 reducer M25/M20 incl. M20 gland with plug (Ø 5-13 mm): output to heating cable or alarm output 2 x M20 plug: output to heating cables (possibility to connect single conductor heating element) 2 x M20: capillary sensors	
Temperature sensor		
Type	Fluid filled capillary, 2 m long	Fluid filled capillary, 2 m long
Dimensions:	Controller Limiter	Controller Limiter
	Ø 7 mm; length sensing element = 88 mm Ø 4.7 mm; length sensing element = 191 mm	Ø 7 mm; length sensing element = 88 mm Ø 4.7 mm; length sensing element = 191 mm
Material	1.4435 stainless steel	1.4435 stainless steel
Exposure temperature	Controller Limiter	Controller Limiter
	-30°C +250°C -30°C +330°C	-30°C +380°C -30°C +380°C
Minimum bending radius	10 mm for capillary (not for sensor)	10 mm for capillary (not for sensor)
Mounting method		
Support bracket	SB-120 or surface mounting via 4 fixing holes at 204 x 82 centres	
PN	165886-000	

Ordering details

Ordering references:	PN Number:	Weight:
T-M-20-S/+5+215C/EX	576404-000	2 kg
T-M-20-S/+70+350C/EX	655212-000	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

