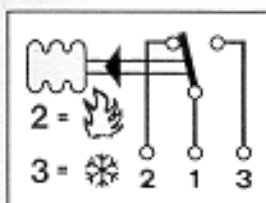


# Ex Industat

## Explosion-proof temperature controller

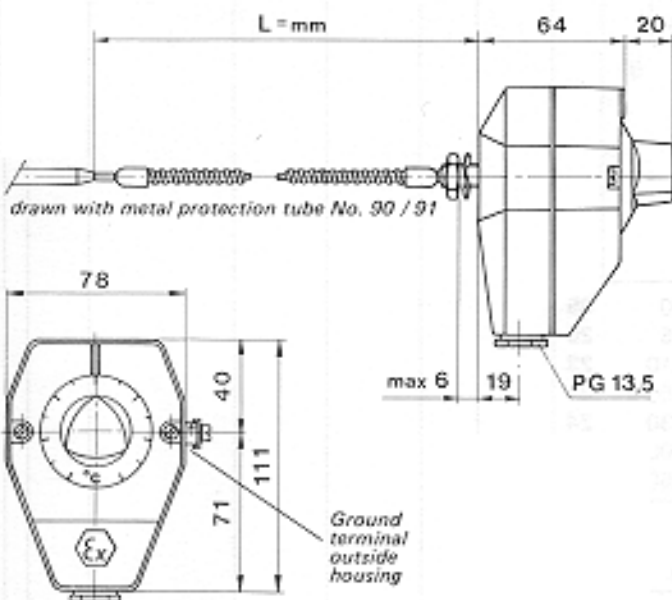
### for surface mounting

#### Connections



PTB Ex - 81 / 1078

#### Dimensions



#### Specifications

Temp. class	Range in °C	Sensor max. °C	Switch Typ	Switching differential K (°C)	Ambient temperature °C max.
T 6	-30 ... +40	45	91	~ 2,5	-30 ... +55
	-10 ... +25	60			
	0 ... +35	70			
	+15 ... +30	60			
	+10 ... +45	85			
	+10 ... +70	85			
T 5	+10 ... +80	100	91	~ 3,5	-30 ... +55
	+20 ... +85	100			
	-10 ... +35	70			
	-10 ... +80	85			
T 4	+ 5 ... +95	105	91	~ 5,5	-30 ... +55
	+20 ... +110	115			
	+20 ... +115	130			
T 3	+35 ... +175	200	91	~ 8,0	-30 ... +55
	+20 ... +230	250			
T 2	+20 ... +270	330	91	~ 10,0	-30 ... +55
	+40 ... +300	330			
T 1	+70 ... +350	380	91	~ 10,0	-30 ... +55

#### Single stage temperature controller

- ◆ Robust aluminium die cast housing, epoxy coated
- ◆ Protection IP 65
- ◆ Any mounting position possible
- ◆ Electrical connection to three pole terminal inside housing
- ◆ Internal or external set point adjustment
- ◆ Accuracy  $\pm 2\%$  of full scale
- ◆ Repeatability  $< \pm 0.5\%$  of full scale
- ◆ EEx ed II C T6



Type 414, 419

#### Microswitch ratings

Working category AC 1  
(IEC 158-1)

5 A to 250 V

Working category DC 1  
(IEC 158-1)

5 A to 30 V  
0.5 A to 125 V  
0.25 A to 250 V

#### Flame protection type

- EEx** European norm
- e** Improved security
- d** Pressure proof enclosure
- II** Electrical instrument for hazardous areas except firedamp protection
- C** Greatest gap length and smallest gap width
- T6** Max. surface temperature 85 °C (includes all classes T 1 to T6)

**Standard types** (see standard catalogue)

with switch 91 (5 A, 250 V), Mounting 27, Capillary length 2 m

Range in °C	Sensor	Set point adjustment internal	
		Order number	(Type 414)
-30 ... +40	422 (7 x 178 mm, Cu vern.)	EXS 40	
0 ... +35	422 (7 x 178 mm, Cu vern.)	EXS 35	
+5 ... +95	322 (7 x 128 mm, Cu vern.)	EXS 95	
+20 ... +150	322 (7 x 128 mm, Cu vern.)	EXS 150	
+20 ... +230	121 (7 x 88 mm, 1.4435)	EXS 230 S	
+70 ... +350	121 (7 x 88 mm, 1.4435)	EXS 350 S	

**Customized versions**

complete ordering reference

XXX . XX XX . XXX . XX . XXXX . XXXX . XX . XX ... L =

Type	External setting	normal	409																	
		compensated	404																	
	Internal setting	normal	419																	
		compensated	414																	
Switch	5 A bis 250 V			91																

Range in °C				
-30 ... +40	01		-10 ... +80	95
-10 ... +25	07		+5 ... +95	20
0 ... +35	09		+20 ... +110	23
+10 ... +45	11		+20 ... +150	31
+10 ... +80	13		+20 ... +230	24
+15 ... +30	17		+40 ... +300	53
-10 ... +35	94		+70 ... +350	54

**Sensor** (see also leaflet 1.1.20.1)

for range No.	mm φ	Cr/Ni 1.4306	Cr/Ni/Mo 1.4435	Copper	Copper nickel pl.	Copper chrom pl.
01, 07, 09 11, 13, 17	4.7 7 9	420	421	412 422 432	413 423 433	414 424 434
94, 95, 20 23, 31	4.7 7 9	310 320 330	311 321 331	312 322 332	313 323 333	314 324 334
24, 53, 54	4.7 7 9	110 120 130	111 121 131	112 122 132	113 123 133	114 124 134

<b>Mounting</b>	Possible No. with free capillary tube: <i>Dimensions and ordering reference see page 1.1.21.1</i>	10, 16, 17, 27
	Possible No. with protection tube mounting: <i>Dimensions and ordering reference see page 1.1.21.2</i>	12, 14, 18

<b>Protection tube</b>	for thermostats with free capillary tube	1.1.22.2 / 1.1.22.4
	for thermostats with direct protection tube mounting	1.1.22.1 / 1.1.22.3

**Protection tube length in mm** (see leaflets 1.1.22.1 to 1.1.22.4)

<b>Accessories</b>	Setpoint blocking (only for Types 414, 419)	15	Metal tube, Capillary tube protection	Ms nickel plated	90
			Metal tube, Capillary tube protection	1.4541 / 321	91
			PVC-Tube, Capillary tube protection		92

Capillary nuts see page 1.1.23.1

(to be added in random order)

**Capillary length L in mm** (upto 5000 mm) No indication if direct protection tube mounting is requested !