



**PBTW-200-E**

Power connection junction box and fail-safe safety temperature monitor in a single enclosure. This configuration saves the expense of an additional enclosure and the installation productivity associated with a second device. Designed for applications where the power connection and switching device will be mounted directly on the pipe.

- Falling calibration to maintain the temperature during the process
- Turns on and off automatically whenever the temperature exceeds or drops below the setpoint value
- Pipe mountable on polymeric stand

**PBTW-300-E**

Power connection junction box and fail-safe safety temperature monitor in a single enclosure. This configuration saves the expense of an additional enclosure and the installation productivity associated with a second device. Designed for applications where the power connection will be mounted off the pipe.

- Falling calibration to maintain the temperature during the process
- Turns on and off automatically whenever the temperature exceeds or drops below the setpoint value
- Tankwall mountable on metallic stand

PBTW-200-E temperature monitors are ON/OFF thermostats in Ex e certified polyester enclosures. Mounted on the BARTEC PS-100-2 mounting stand, they are approved for the direct connection of BARTEC self-limiting heating circuits to the enclosure terminals.

The PBTW-200-E is designed for usage as an adjustable control thermostat for freeze protection and temperature maintenance applications on pipes. For tankwall mounting, PBTW-300-E is the device of choice. It comes with a galvanized steel bracket and mounting plate.

The PBTW-200-E and PBTW-300-E are available in three temperature control temperature ranges for ambient temperatures down to -55 °C.

Both devices also come with the suitable cable entries and silicone cold applied set

**Function**

A change in temperature in the sensor causes a change in the volume in the liquid-filled measuring system, which in turn results in a movement of the diaphragm membrane, which is connected to a transmission mechanism, and this opens a microswitch. If the sensor temperature exceeds the set value, the contacts 1 and 2 remain continuously open.

- Power junction box with built-in thermostat
- On and Off-Pipe (Tankwall) mountable versions
- Including one power and end termination kit (CAK)

**Explosion protection Thermostat**

Marking	⊕ II 2G Ex de IIC T5, T5 Gb
	⊕ II 2D Ex tb IIIC T95°C T80°C Db
Certification	IBExU 12 ATEX 1099 IECEX IBE 12.0031

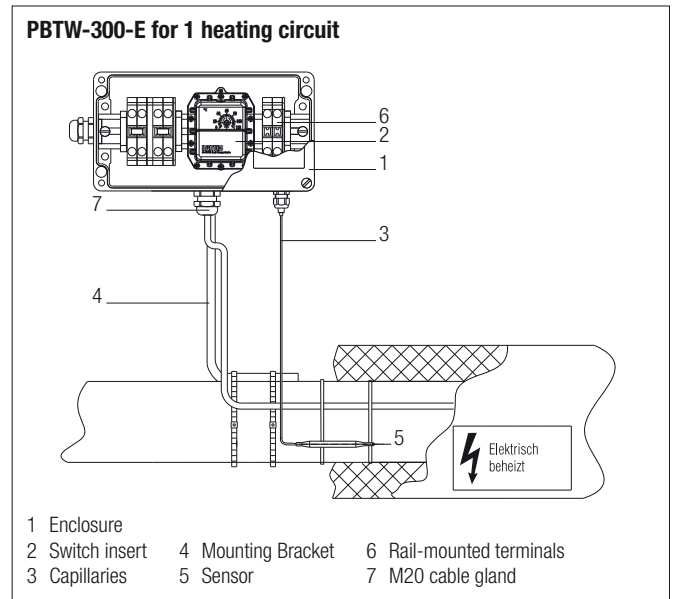
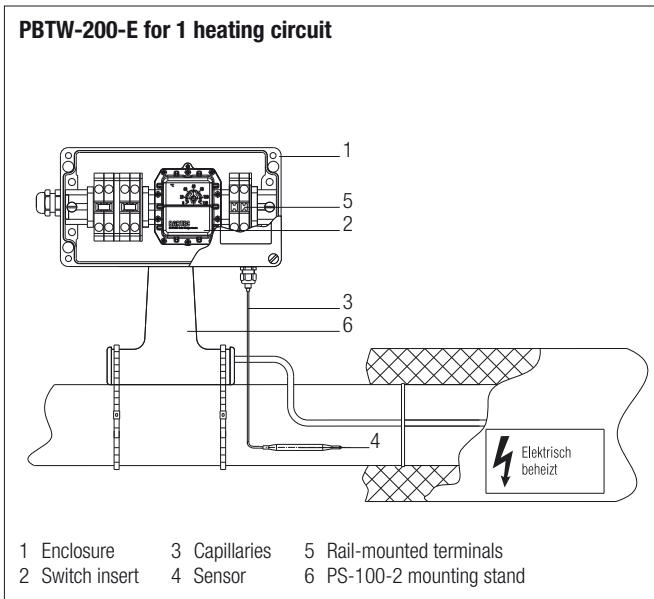
**Explosion protection Heating System**

Marking	PSB	⊕ II 2G Ex e IIC T5,T6 Gb ⊕ II 2D Ex tb IIIC T85°C T100°C Db
	MSB	⊕ II 2G Ex e IIC 150°C (T3), T4 Gb ⊕ II 2D Ex tb IIIC T150°C, T130°C Db
	HSB	⊕ II 2G Ex e IIC 180°C (T3),T4 Gb ⊕ II 2D Ex tb IIIC T180°C ,T130°C Db
Certification	PSB	KEMA 08 ATEX 0111 X IECEX KEM 09.0084X
	MSB/ HSB	KEMA 08 ATEX 0110 X IECEX KEM 09.0083X

Other approvals and certificates, see [www.bartec.de](http://www.bartec.de)

**Technical data**

Protection class	IP 66/Type 4X	
Min. ambient temperature	-40 °C (PBTW-200-E***) -55 °C (PBTW-300-E***)	
Max. ambient temperature	depends on the type of heating cable	
Storage temperature	-55 °C to +65 °C	
Capillary tube	Length:	1000 mm up to 5000 mm on request
	OD sensor line:	1.5 mm
	Min. bend radius:	5 mm
	Sensor bulb diameter:	6 mm
	Sensor material:	SS 1.4571
Contacts 1 SPDT	Contact decks 1 to 2:	AC 230 V/16 A
	Contact decks 1 to 4:	AC 230 V/6.3 A
Switching hysteresis	depending on type, see ordering information	
Switching accuracy	depending on type, see ordering information	



**Technical data**

Dimensions	120 mm x 220 mm x 90 mm
Min. ambient temperature	-40 °C
Terminals	4 x 6 mm <sup>2</sup> + 2 x PE
Heating cable connections	1 or 2 x sealing gland (D5) in polymeric base

**Technical data**

Dimensions	120 mm x 220 mm x 90 mm
Min. ambient temperature	-55 °C
Terminals	4 x 6 mm <sup>2</sup> + 2 x PE
Heating cable connections	1 x M20, closed with blind plug

**System-dependent conditions**

	Circuit breaker, (C characteristics)	Ambient temperature	Temperature class
PSB system 27-1680-.910/....	1 x 25 A	-55 °C to +40 °C	T6
	1 x 25 A	-55 °C to +50 °C	T5
MSB system 27-1980-.910/....	1 x 25 A	-55 °C to +50 °C	T4
HSB system 27-1780-.910/....	1 x 25 A	-55 °C to +50 °C	T3

**Ordering information**

Type	Switching temperature	Switching point deviation	Hysteresis	Order no.
PBTW-200-E050	-20 °C to + 50 °C	+ 5K/-0K	5 K	27-54D2-4422/C210
PBTW-200-E190	0 °C to +190 °C	+16K/-0K	14 K	27-54D2-4422/D210
PBTW-300-E050	-20 °C to + 50 °C	+ 5K/-0K	5 K	27-54D2-4411/C210
PBTW-300-E190	0 °C to +190 °C	+16K/-0K	14 K	27-54D2-4411/D210

Technical data subject to change without notice.