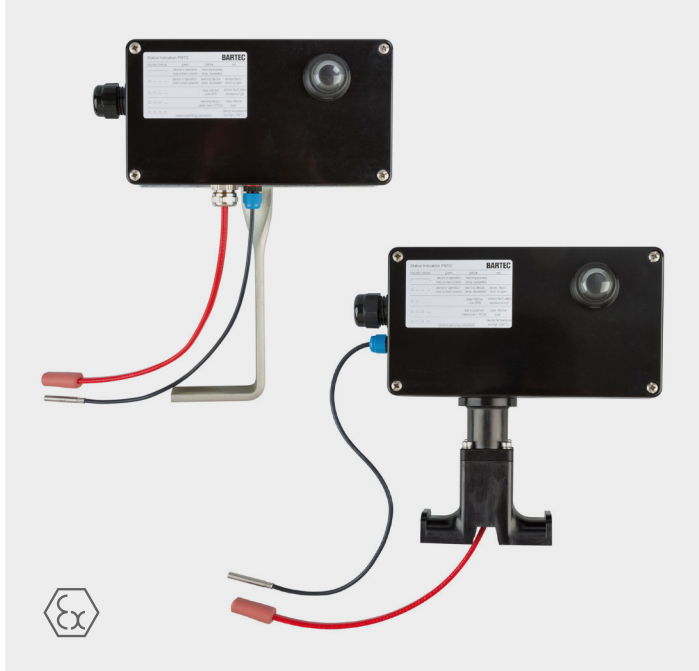# BARTEC

PBTC-200-E/PBTC-300-E/PBTC-310-E

Power junction box

– Junction box with built-in electronic thermostat module for BARTEC parallel heating cables PSB, MSB, HSB+, HTSB or BPL
– pipe, tank and wall mounting
– Indication of operating status by LED status indicator
– Resistance Temperature Device Pt100 intrinsically safe

PBTC-200-E, PBTC-300-E and PBTC-310-E are electronic thermostat modules in an Ex e certified polyester junction box. The thermostat modules have been developed as on-off temperature controllers for trace heating applications. The adjustable temperature setpoint allows flexible applications in the range of frost protection and temperature maintenance of liquid or gaseous media on pipes or tanks. The integrated LED status display indicates the current operating status of the unit or system by means of colour and flashing codes. The temperature unit can be switched between °C and °F. Approved for the direct connection of BARTEC self regulating heating cables.

PBTC-200 for pipe mounting

Junction box with thermostat module for pipe mounting by means of polycarbonate mounting stand. The heating cable is fed through the mounting stand. No additional insulation bushing is required to feed the heating cable through the pipe insulation. Connection kit for connecting the PSB, MSB, HSB+ and HTSB heating cables is included. No further connection kit (CAK) necessary.

PBTC-300 for pipe and tank wall mounting

Junction box with thermostat module for pipe or tank wall mounting by means of mounting brackets. The heating cable is led directly out of the junction box. If necessary, an additional insulation bushing is required to fead the heating cable through the pipe insulation. Connection kit for connecting the PSB and MSB heating cables is included. Additional connection kit (CAK-SRG-B) required for connecting the heating cables HSB+ and HTSB.

PBTC-310 for pipe and tank wall mounting (BPL)

Junction box with thermostat module for pipe or tank wall mounting by means of a mounting bracket. The heating cable is led directly out of the junction box. Intended for mounting with heating cable BPL, the connection kit is included.
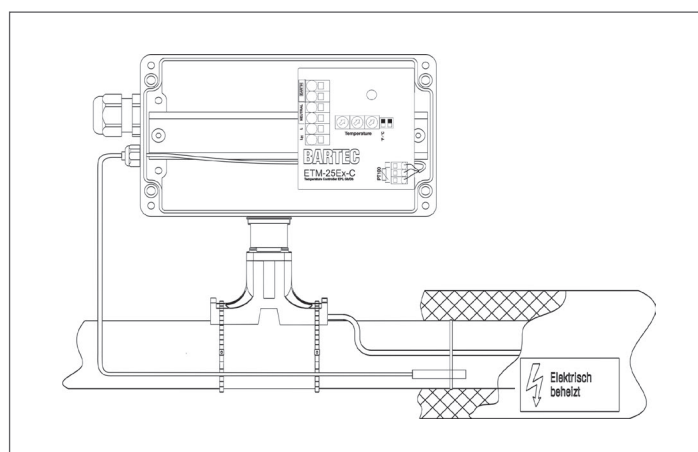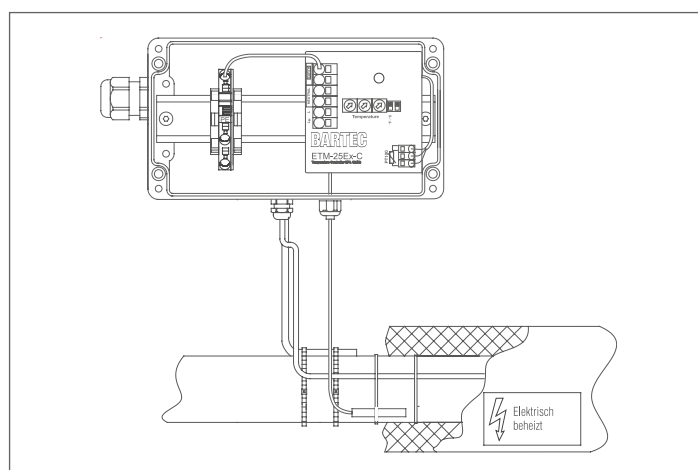
Explosion protection Thermostat

PBTC-200-E / PBTC-300-E (27-54C2-****)	
Marking	⟨Ex⟩ II 2 G Ex eb mb [ib] 60079-30-1 IIC T6... 110 °C (T4) Gb
	⟨Ex⟩ II 2 D Ex tb [ib] 60079-30-1 IIIC T_L 80 °C... T_L 110 °C Db
Certification	DEKRA 21ATEX0118 X
	IECEx DEK 21.0074X
PBTC-310-E (07-31**)	
Marking	⟨Ex⟩ II 2 G Ex eb mb [ib] IIC T6...110 °C (T4) Gb
	⟨Ex⟩ II 2 D Ex tb [ib] IIIC T_L 80 °C... T_L 110 °C Db
Certification	IBExU 12 ATEX 1099 X
	IECEx IBE 12.0031 X

Other approvals and certificates, see
www.bartec.com

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Technical data

Power and load terminal	6mm² / spring type / Ex eb
Rated voltage U supply	80 - 277 VAC
U$_m$	305 VAC
Rated power without load	4.5 W

Load	with self regulating trace heater	for BARTEC trace heaters up to CB rating C32A, Detail: see BARTEC Design Guide, Self-regulating trace heating systems
	with BPL-AL heater	18A/16A/13A

Max. ambient temperature	self regulating trace heater	depends on the type of heating cable
	BPL-AL Heater	+40 °C/+50 °C/+55 °C

Min. ambient temperature	-40 °C
Maximum breaker size	C32A
Protection class	IP 66 (EN 60529)
Storage temperature	-55 °C to +65 °C

Technical data Pt100

Sensor	Pt100 class B
Sensor cable	Silicone cable, length 1500 mm, diameter 3,8 mm
Sensor service temperature	-50 °C to +200 °C

Technical data controller

Measuring range controller	-60 °C to 500 °C
Control range	0 °C to 500 °C
Hysteresis	+5K (others on request)

Application PBTC-200-E

Application PBTC-300-E and PBTC-310-E

Kit Content / Ordering information

	PBTC-200-E	PBTC-300-E	PBTC-310-E
Kit contents	1 GRP* junction box with terminals 1 thermostat ETM-25Ex-C 1 stand assembly 1 cold applied boot and end seal 1 green/yellow tube 2 cable grommets 1 Pt100 M RTD 1,5m	1 GRP* junction box with terminals 1 thermostat ETM-25Ex-C 1 plate and bracket assembly 1 cold applied boot and end seal 1 green/yellow tube 1 cable gland with grommets 1 Pt100 M RTD 1,5m	1 GRP* junction box with terminals 1 thermostat ETM-25Ex-C 1 plate and bracket assembly 1 cold applied boot and RTV 1 cable earth lug 1 cable gland with grommet 1 Pt100 M RTD 1,5m
Compatible cable series	PSB, MSB, HSB+, HTSB	PSB, MSB, HSB+, HTSB; CAK-SRG-B is required for HSB+ or HTSB	BPL
Box Size	120 mm x 220 mm x 90 mm	120 mm x 220 mm x 90 mm	120 mm x 220 mm x 90 mm
Box support	Integrated PPS mounting stand	Mounting plate and bracket, galv. steel	Mounting plate and bracket, galv. steel
Stand height	120 mm	300 mm	300 mm
Power entry	1x M25 cable gland	1x M25 cable gland	1x M25 cable gland
Heating cable entry	2 x grommet	1 x heating cable gland	1 x heating cable gland
Terminals	Spring Type, Ex e, 1 supply phase, 1 supply neutral, 1 heater phase, 1 heater neutral, 2 ground	Spring Type, Ex e, 1 supply phase, 1 supply neutral, 1 heater phase, 1 heater neutral, 3 ground	Spring Type, Ex e, 1 supply phase, 1 supply neutral, 1 heater phase, 1 heater neutral, 3 ground
Terminal size	6mm²	6mm²	6mm²
Order no.	27-54C2-4412E210	27-54C2-4411E210	27-54C3-4411E210

* junction box in stainles steel or aluminium on request

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Accessories Pt100

-50 °C to +200 °C / 1,50 m (included in the scope of delivery)	03-9040-0006
-50 °C to +200 °C / 5,00 m	03-9040-0010