

PBTC-400-E / PBTL-400 E PBTCL-400-E

Power Junction Box / Local Control Station



Power junction box with built-in electronic thermostat for general purpose.

- LED-Status Indication
- Pt100 Intrinsic safe

PBTC/-L/-CL-400 temperature controllers are ON/OFF thermostats in an Ex-e certified polyester enclosure. For applications with BARTEC EKL/EMK or other applications with further appropriate connection lines.

This device has been developed for usage as an adjustable control thermostat for freeze protection and temperature maintenance applications on pipes. Version with Limiter are also available. The integrated LED status indicator shows the current operating condition of the device by means of colour and flashing codes.

Pt100 sensor for a max. exposure temperature of 200°C included in the scope of delivery. For higher exposure temperatures, a suitable Pt100 must be ordered separately.

PBTC-400-E

Controller in 160x160x90 enclosure

Ex-Temperature Controller for direct field connection of a load device.

PBTL-400-E

Limiter in 160x160x90 enclosure

Ready to use Limiter assembly for series resistance trace heaters. Designed to fulfil the requirements of the Ex- trace heating standard IEEEE/IEC/EN 60079-30-1 for controlled design electrical performance level Gb/Db (additional control device required).

PBTCL-400-E

Controller-Limiter combination in 260x160x90 enclosure

Ready to use controller limiter assembly for series resistance trace heaters. Designed to fulfil the requirements of the Ex-trace heating standard IEEEE/IEC/EN 60079-30-1 for controlled design electrical performance level Gb/Db.

Explosion protection Thermostat

Marking	Ex eb mb [ib] IIC T4, T5 Gb Ex tb [ib] IIIC T135°C, T95°C, Db
Certification	IBExU 12 ATEX 1099 X IECEX IBE 12.0031 X

Explosion protection Thermostat Module ETM-25Ex

Marking	Ex eb mb [ib] [60079-30-1] IIC Gb Ex tb [ib] [60079-30-1] IIIC Db
Certification	DEKRA 20ATEX0021 U IECEX DEK 20.0009 U
	Other approvals and certificates, see bartec.com

Technical data

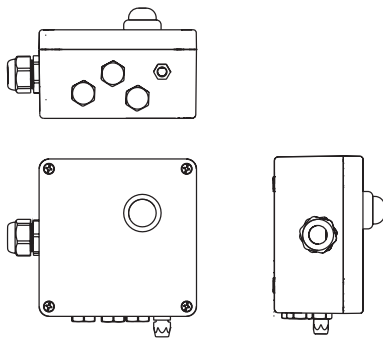
Power and load terminal	6mm ² / spring type / Ex eb
Rated voltage U supply	80 - 277 VAC
U _{max}	305 VAC
Rated power without load	4.5 W / 9W
Load Current	depending on max. ambient temperature Resistive load only
Protection class	IP 66
Min. ambient temperature	-40 °C
Max. ambient temperature	40 °C / 50 °C / 55 °C depending on load current
Storage temperature	-55 °C to +65 °C
Sensortype	Pt100 Class B
Sensor cable	Silicone cable, Length 1500 mm, sensor diameter 6mm
Sensor service temperature	-50 °C to +200 °C
Hysteresis	+5K

Load current / Max. Ambient Temp. / T-Class / Max. Surface Temperature

PBTC-400-E / PBTL-400-E	
	T5 / T95 °C
Ta 40 °C	18 A
Ta 50 °C	16 A
Ta 55 °C	13 A
PBTCL-400-E	
	T5 / T95 °C
Ta 40 °C	18 A
Ta 55 °C	13 A

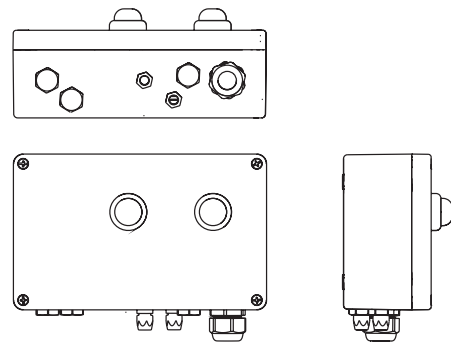
Drawing: Single Controller Device

PBTC-400-E / PBTL-400-E



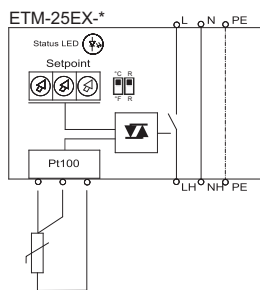
Drawing: Controller-Limiter Combination

PBTCL-400-E



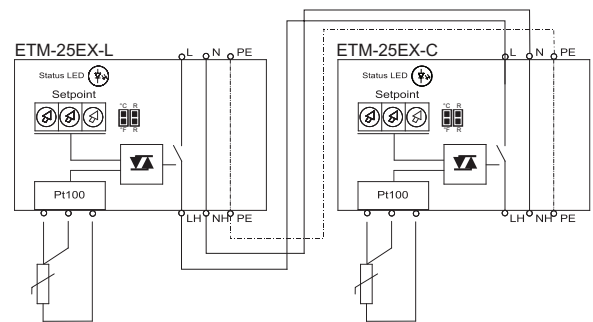
Wiring Diagram: Single Controller Device

PBTC-400-E / PBTL-400-E



Wiring Diagram: Controller-Limiter Combination

PBTCL-400-E



Kit Content / Ordering Information

	PBTC-400-E Single Controller	PBTL-400-E Single Limiter	PBTCL-400-E Controller-Limiter Combination
Kit contents	1 Junction Box with 1 Thermostat ETM-25Ex-C 1 Pt100 M	1 Junction Box with 1 Thermostat ETM-25Ex-L 1 Pt100 M	1 Junction Box with 1 Thermostat ETM-25Ex-C 1 Thermostat ETM-25Ex-L 2 Pt100 M
Box Size	160 mm x 160 mm x 90 mm	160 mm x 160 mm x 90 mm	260 mm x 160 mm x 90 mm
Power entry	M25 cable gland	M25 cable gland	M25 cable gland
Load connection cable entry	2 x M20 x 1,5 Threaded hole closed with blind plug	2 x M20 x 1,5 Threaded hole closed with blind plug	2 x M20x1,5 Threaded hole closed with blind plug
Terminals	Spring Type, Ex e, 1 supply phase, 1 supply neutral, 1 heater phase, 1 heater neutral, 4 ground	Spring Type, Ex e, 1 supply phase, 1 supply neutral, 1 heater phase, 1 heater neutral, 4 ground	Spring Type, Ex e, 1 supply phase, 1 supply neutral, 1 heater phase, 1 heater neutral, 4 ground
Terminal size	6 mm ²	6 mm ²	6 mm ²
Order no.	07-3103-1609W004	07-3103-1609W005	07-3103-2609W005

Accessories:

03-9040-0010 Pt100 M (5m)	Silicone cable length 5000 mm / diameter 6mm Sensor service temperature 50 °C to +200 °C / IP 65
03-9040-0017 Pt100 M (max. exposure temp. +500 °C)	MI Sensor length 1000mm / Sensor diameter 3 mm, measuring range -50 °C to 500 °C Silicon connection cable 1.5 m, service temperature -50 °C to 200 °C / IP54
05-0091-0013 Mounting plate SS 160	for polyester enclosure with dimensions 160 mm x 160 mm x 90 mm
05-0091-0014 Mounting plate SS 260	for polyester enclosure with dimensions 260 mm x 160 mm x 90 mm
05-0091-0051 Mounting bracket VA	Mounting bracket MWG/MWU 270 stainless steel
05-0005-0017 Mounting plate galvanised steel 160	Mounting plate for polyester enclosure dimensions 160 mm x 160 mm x 90 mm
05-0005-0018 Mounting plate galvanised steel 260	Mounting plate for polyester enclosure dimensions 260 mm x 160 mm x 90 mm
05-0105-0163 Mounting bracket, U-shaped	Mounting bracket galvanised steel, U-shaped, mounting distance 200 mm
05-0105-0162 Mounting bracket, twisted	Mounting bracket galvanised steel, twisted, mounting distance 200 mm