



PRODUCT DATASHEET

PTD-100

Ex RTD PROBE

APPLICATION

The PTD-100 probe is specially designed to improve the measuring accuracy between control input sensors and controllers. The probe is designed to avoid the use of zener barriers between sensor and controllers in installations where the sensor is located in a hazardous area and the controller in a safe area.

The probe can either be connected in an Ex e or Ex d junction box and is suitable for use with Thermon's or other manufacturer's electronic controllers.

RATINGS

Number of wires3 wire plus 1 earth tail
 Resistance100 Ohm @ 0°C
 AccuracyClass A (IEC 60751:2008)
 Length of the probe ¹1 m
 Sheath material of the probe316A stainless steel
 Gland sizeM20
 Temperature range, tip of probe-196°C to +660°C
 Maximum temperature at gland100°C
 Minimum bending radius ²18 mm

Notes

- Probe lengths of 3, 5, 7 and 9 meters are also available. Order PTD-100-X where "X" indicates the length of the probe.

PTD-100-1	1 meter probe
PTD-100-3	3 meter probe
PTD-100-5	5 meter probe
PTD-100-7	7 meter probe
PTD-100-9	9 meter probe
- The measuring tip (length 15 mm) should not be bent.
- Conductor to be solid or stranded.
- Maximum length for signal cables installed in ambient temperatures up to 40°C. max. loop resistance for controller input is 30 Ohm, including 1 Ohm allowance for contact resistance at terminal.

CERTIFICATIONS/APPROVALS

0344 FTZU 18ATEX 0033U
 Ex II 2 G Ex db IIC Gb
 Ex II 2 G Ex ib IIC Db
 Ex II 2 G Ex tb IIC Db

IECEx FTZU18.0005U
 Ex db IIC Gb
 Ex ib IIC Gb
 Ex tb IIC Db

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 1Ex d i IIC Gb

Contact TC-E for additional approvals and specific information.



FEATURES

Reliable measurements:

Complete earth shielded stainless steel outer jacket prevents electromagnetic radiation to effect the measuring accuracy of control input.

Rugged construction:

Each PTD-100 has a stainless steel outer jacket so that the probe cannot be damaged by sharp edges, for instance the cladding of thermal insulation.

Approved for hazardous areas:

The PTD-100 is suitable for use in hazardous areas without the need for zener barriers. The probe can either be connected in an Ex e or Ex d junction box.

WIRING INFORMATION

To obtain the maximum distance between the PTD-100 and the controller for different conductor sizes of the signal cable use the table below. Thermon recommends to use 3 wire cables with a braided earth shield.

For hazardous area applications Thermon offers junction boxes such as the Terminator ZP-PTD-XP, ZP-PTD-WP and JB-K-O-WP. The junction boxes have one M25 and three M20 sealed entries for PTD and power connections.

Conductor ³ cross section	Maximum signal cable length ⁴ between PTD-100 and controller
1.5 mm ²	1,0 km
2.5 mm ²	1,7 km
4.0 mm ²	2,7 km