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 wires	3 wire plus 1 earth tail
Resistance	100 Ohm @ 0°C
Accuracy	Class A (IEC 60751:2008)
Length of the probe [1]	1 m
Sheath material of the probe	316A stainless steel
Gland size	M20
Temperature range, tip of probe	-196°C to +660°C
Maximum temperature at gland	100°C
Minimum bending radius [2]	18 mm

Notes

1. 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
2. The measuring tip (length 15 mm) should not be bent.
3. Conductor to be solid or stranded.
4. 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
CE 0344 Ex

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

IEC IECEx

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

EAC Ex

RU C-US.AA87.B.00333/20
1Ex d i IIC Gb

Contact Thermon 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-0-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

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