



4-channel Temperature Input

805-TI-04

THC and RTD

- ◆ Pt 100, Pt 1000, Ni 100, 0..4 kOhm in 2/3/4 wire configuration
- ◆ thermocouple type B, E, J, K, L, N, R, S, T, U, mV
- ◆ internal cold junction compensation
- ◆ short and break detection
- ◆ isolation, input to bus and input to power
- ◆ isolation channel to channel
- ◆ 4-channel, EEx ia IIC

MODULE SPECIFICATION

See also System Specification

INPUT (PT 100, PT 1000)

Wire resistance (4 wire) < 50 ohm for each wire
 Wire resistance (3 wire) 0 to 10 ohm symmetric
 Wire resistance (2 wire) < 10 ohm
 Short-circuit detection < 5 ohm
 Sensor, line-break detection > 10 kOhm

INPUT (THERMOCOUPLE)

Line-break detection < 100 nA, > 150 mV

EXPLOSION PROTECTION

Certificate number PTB 01 ATEX 2140
 Max. short-circuit current $I_o = 25$ mA
 Voltage $U_o = 5.5$ V
 Performance $P_o = 35$ mW
 External inductance $L_o = 2$ mH See Note 1
 External capacitance $C_o = 2.6$ μ F See Note 1
Note 1: For permissible alternatives see PTB ATEX Certification.

DIAGNOSTIC INFORMATION

System / Module power on LED green / red
 Line break or short circuit LED 1 to 4, red
Via fieldbus
 Break, short per channel
 Over/under-range per channel
 Simulation per channel
 Communication, hardware for each I/O module

CHARACTERISTICS AT RATED CONDITIONS

Calibrated accuracy < 0.2K, < 80 mOhm, < 0.01 mV
 Digital Accuracy 16 bit
 Linearity < 0.05 %
 Temperature effect < 0.05 % / 10 K
 Response time 1 s (10% -> 90%)
 50/60 Hz filter > 40 dB
 Damping per software PT1
 Total power consumption < 2 W

