



Pt100/Pt1000 Temperature Sensor Input Module (PTI)

SIL-2

- EN 50126
- EN 50128
- EN 50129
- EN 50155
- EN 45545



MODULE FUNCTIONS

The Trainnet® PTI modules are temperature sensor input modules. They acquire the signals from the PT-100 (PTI2037A) or PT-1000 (PTI3593A) temperature sensors (resistance measurement) and convert them into temperature values expressed in degrees Celsius. The PTI modules make the measured temperature values available to the train computer's CPU.

The Trainnet® PTI can be used as a part of a Trainnet® TCMS, VCU or Event Recorder. Alternatively, the Trainnet® PTI can be fitted in the Trainnet® Remote I/O Module (RIOM).

KEY FEATURES

The Trainnet® PTI has six measurement channels which can measure temperature within the -110 to +325 °C range with over range indication. Each channel is isolated from each other, thus a fault in one channel will not affect the others. The temperature sensors can be connected using 2-wire, 3-wire or 4-wire schemes providing flexibility.

The measurement resolution is 0.01 °C, with accuracy better

than ±1 °C within the measurement range.

The module has its own 32-bit embedded processor that uses factory calibration values to convert measurement values to degrees Celsius with the best possible accuracy. The embedded processor also implements diagnostic functions and reports to the train computer's CPU module if it suspects that the input values cannot be trusted. The Trainnet® PTI detects the temperature sensor as well as cable faults and input channel faults.

TECHNICAL SPECIFICATIONS

Dimensions (W x H x D)

4 TE x 3 U x 160 mm

Weight

160 g

Input Power

5 V DC ± 5 % (310 mA typ., 400 mA max.)

Temperature Range (operational)

-40 °C...+70 °C

MTBF (40 °C ambient temperature)

2 490 000 h

I/O Connector

DIN41612-F48 (at front)

Host Interface

RS 485

Input Channels

6 Pt100 sensor

Connection Type

2-wire, 3-wire or 4-wire

Measurement Range

-110 °C to + 325 °C

Resolution

0.01 °C

Accuracy

Better than ± 1 °C (3- or 4-wire)