

periNODE Pt100

Smart SPE Sensor Adapter for Pt100 RTDs



The periNODE Pt100 is specifically engineered to measure temperature using a 3-wire-Pt100 temperature sensor, employing the ratiometric 3-wire RTD (Resistance Temperature Detector) measurement method. It turns the analogue, passive sensor into a smart, active network participant. The sensor then delivers digital data - including physical unit - via Ethernet to any IT-system or data hub. The periNODE enables the design of data transfer intervals to meet user-specific needs. This reduces network traffic and the collection of excess data.

Targeted Applications

- Industrial sensors
- IoT / IIoT
- Remote sensor access
- Building automation

Housing

- Material: Hotmelt
- Ingress Protection Class: IP65/67

Key Features

- **No-Code** Firmware, adoptable to multiple sensors
- **100Mbps** Single Pair Ethernet (100BASE-T1, IEEE 802.3bw)
- 24V power supplied via **hybrid network cable**
- **End-to-end encryption** with RBAC
- Integrated Software Stacks: TCP/IPv6, mTLS, MQTTs, HTTPs, mDNS, DNS-SD
- Integrated WebUI & **RESTful API**
- Supports remote firmware updates
- auto discovery (**Zeroconf** networking)
- patent-protected

Network Interface Power In

- **Type:** M8-hybrid male connector, style 6J-M8CI w/o shielding (IEC 63171-6:2021) (Figure 1)
- **Com.:** 100BASE-T1 (IEEE 802.3bw)
- **Power:** 24VDC in

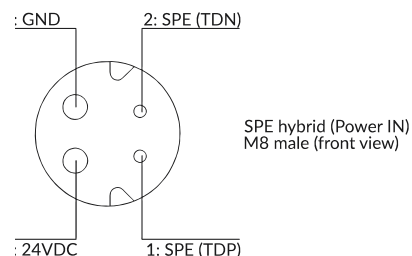


Figure 1: M8-hybrid male connector

Operational Parameters

- Operating voltage: 24VDC input
- Supply Voltage: 24V output (2A max)
- Temperature range: -40°C to +70°C
- Power consumption: 0.6W

Analog Interface

- **Type:** M12 A-coded 4-pin female connector (Figure 2)
- **Signal:** Pt100 analog in

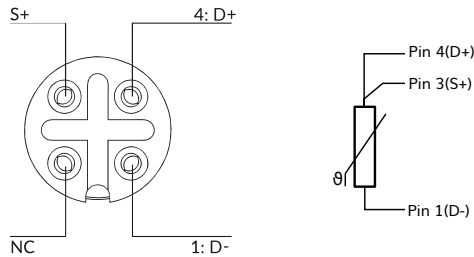


Figure 2: RTD analog connector

Compliance

- CRA ready
- RoHS 3 (EU 2015/863), WEEE (2012/19/EU), REACH, CE
- Immunity standard according to IEC 61000-6-2:2016
- Emission standard according to IEC 61000-6-3:2020

Security

- NIST compliant TLS implementation
- Role Based Access Control (RBAC)
- Certificate based client authentication
- AES encryption algorithm
- X.509 certificates and PKIX path validation
- Elliptic Curve Cryptography (ECC)

Mechanical Dimensions

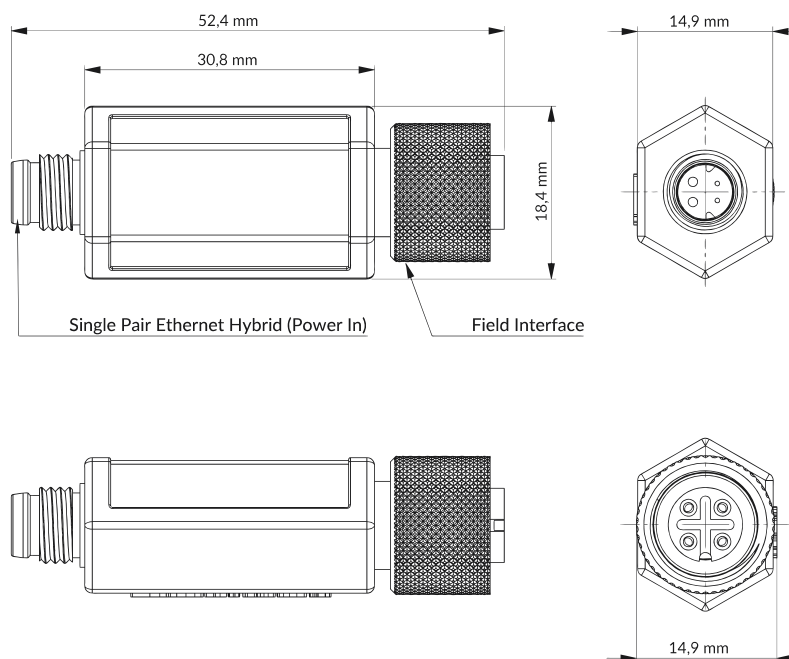


Figure 3: Mechanical Dimensions

Ordering Information

Ordering Code	Product Name	Description
PRN.000.006	periNODE Pt100	smart adapter for Pt100 based RTDs.

Support Products

Ordering Code	Product Name	Description
PRN.000.002	periNODE 0-10V	smart adapter for 0 to 10V signal type.
PRN.000.010	periNODE GPIO	smart adapter for GPIO signal type.
PRN.000.008	periSWITCH 3-port	hybrid SPE 3-port switch with M8 connectors.
PRN.000.003	periSTART standard	hybrid SPE media converter with M8 connector.
PRN.000.017	periLINE 0.2m	hybrid SPE cable assembly (lengths 0.2m, 1m, 5m)