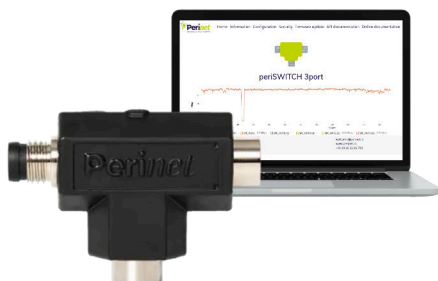# periSWITCH 3-port
Smart 3-Port SPE Network Switch

The periSWITCH 3-port switch enables branching for Perinet's IoT system, allowing multiple sensors and actuators to be connected in one network. To suit fast integration requirements in an ever-accelerating market, it is developed to work as a plug-and-play component. Furthermore, hybrid Single Pair Ethernet technology allows the periSWITCH 3-port to connect up to 50 components in one network and with only one power feed-in point.

Targeted Applications

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

Key Features

- **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

Operational Parameters

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

Housing

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

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

1: SPE (TDP) 3: 24VDC
2: SPE (TDN) 4: GND
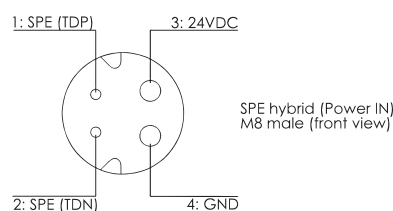SPE hybrid (Power IN) M8 male (front view)

Figure 1: M8-hybrid male connector

Network Interfaces Power Out

- **Type**: M8-hybrid female connector, style 6J-M8C w/o shielding (IEC 63171-6:2021) (Figure 2)
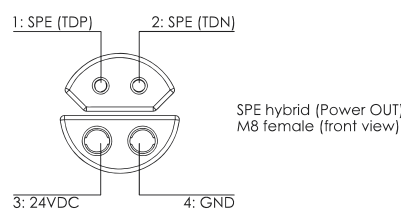- **Com.**: 100BASE-T1 (IEEE 802.3bw)
- **Power**: 24VDC out

1: SPE (TDP) 2: SPE (TDN)
3: 24VDC 4: GND
SPE hybrid (Power OUT) M8 female (front view)

Figure 2: M8-hybrid female 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)
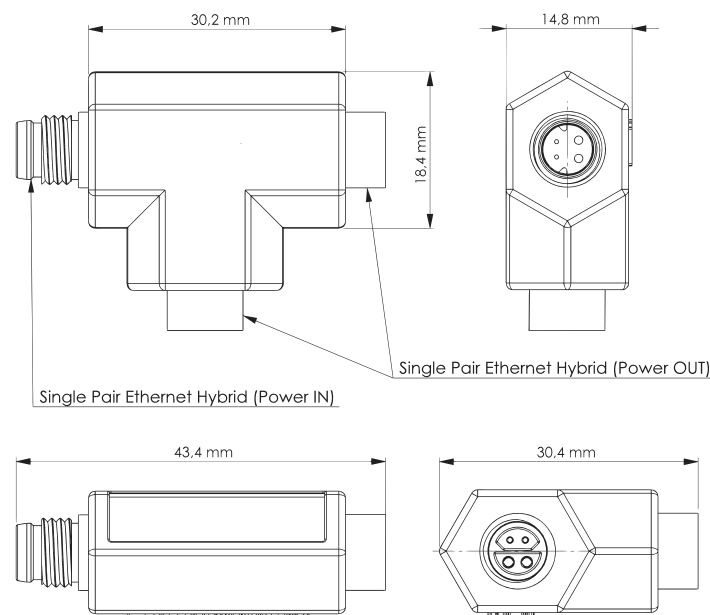
Mechanical Dimensions

Single Pair Ethernet Hybrid (Power OUT)

Single Pair Ethernet Hybrid (Power IN)

Figure 3: Mechanical Dimensions

Ordering Information

Ordering Code	Product Name	Description
PRN.000.008	periSWITCH 3-port	hybrid SPE 3-port switch with M8 connectors.

Support Products

Ordering Code	Product Name	Description
PRN.000.002	periNODE 0-10V	smart adapter for 0 to 10V signal type.
PRN.000.006	periNODE Pt100	smart adapter for Pt100 based RTDs.
PRN.000.010	periNODE GPIO	smart adapter for GPIO signal type.
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)

Product Summary, rev: 3
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