

# T1-XS SPE

Unmanaged **Industrial Ethernet Switches M12 IP65/67**  
**Single Pair Ethernet**



## Data transfer via a Twisted single-pair cable with SPE

- ▶ 24 VDC Power Supply
- ▶ Ultra-compact, ruggedized design
- ▶ Temperature range -40 to +70°C
- ▶ IP65/67 metal housing
- ▶ IEEE 802.3bw (100Base-T1)
- ▶ 4x D-coded Master Ports
- ▶ 1x D-coded T1|TX Auto-Detection
- ▶ Polarity protection

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The NITE-T1XS5 is an ultra-compact SPE switch for installation directly in the field. By using contacts 1 and 3 of the standard D-coded connector, you can quickly and easily save costs and space in cabling. An unshielded twisted single-pair cable is sufficient for data transmission up to a length of 15m. Larger cable lengths and protection against EMC interference can be achieved with shielded cables. Port 1 supports the T1|TX Auto-Detection mode, where standard Ethernet and Single Pair Ethernet end devices can be connected, whether they are MASTER or SLAVE.

General

|                              |                             |
|------------------------------|-----------------------------|
| Switch:                      | IEEE802.3 Store and Forward |
| Port count (X-cod. + D-cod.) | 4+1                         |
| MTBF (SN 29500, Mio. h)      | tbd                         |

Power supply / electronics

|                         |  |
|-------------------------|--|
| Nominal voltage (VDC):  | Vin 24   |
| Voltage range (VDC):    | 9 bis 60   |
| Connect. type:          | Vin M12 A-cod. (Pin1,2+ Pin3,4-)   M4 screw (FE) |
| Supply circuit:         | SELV DIN 60950 (circuit breaker 10 A)            |
| Inrush current limiter: | No   |
| Input fuse:             | Yes, Interrupting rating 50 A @ 125 VAC/VDC      |
| Polarity protection:    | Yes  |
| PCB Conformal Coating:  | Yes  |
| Protection category:    | III  |

|                              |           |
|------------------------------|-----------|
| Port count (X-cod. + D-cod.) | 4+1       |
| Power consumption (W)        |           |
| Idle   full load             | 1,7   2,1 |
| Input current (mA)           |           |
| Idle   full load             | 75   85   |
| Inrush current (A)           | tbd       |

Mechanical properties

|                                  |   |
|----------------------------------|---|
| Housing material:                | Nickel-plated aluminium, stainless steel    |
| Mounting:                        | M6 hole for wall mounting, round head screw |
| IP Protection class (operation): | IP65/67                                     |
| Port count (M12)                 | 4+1   |
| Width (mm)                       | 65  |
| Height (mm)                      | 135   |
| Depth (mm)                       | 29,8  |
| Weight (g)                       | 370   |

Ethernet interface 1 (T1|TX Auto-Detection)

|                     |  |
|---------------------|--|
| IEEE Standards:     | 802.3 100BaseT(X) & 802.3bw 100Base-T1   |
| Connection type:    | M12 D-coded  |
| Port count   Speed: | 1   10/100 Mbit/s TX & 100 Mbit/s T1   |
| Cable length:       | TX 100 m (Twisted Pair, 0,14 mm² - 0,22 mm², Cat 5)<br>T1 15+ m (Twisted Pair) |

Ethernet interface 2

|                     |                            |
|---------------------|----------------------------|
| IEEE Standards:     | IEEE 802.3bw 100Base-T1    |
| Connection type:    | M12 D-coded                |
| Port count   Speed: | 4   100 Mbit/s             |
| Pin assignment:     | TRX+ = PIN 1; TRX- = PIN 3 |
| T1 Port Mode:       | Master                     |
| Cable length:       | 15 m (Twisted Pair)        |

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EMC and environmental specifications

|                                   |                               |
|-----------------------------------|-------------------------------|
| Operating temperature:            | -40°C to +70°C                |
| Storage temperature:              | -40°C to +85°C                |
| Relative humidity (operation):    | 0%-95% (not condensing)       |
| Relative humidity (storage):      | 0%-95% (not condensing)       |
| Atmospheric pressure (operation): | 2,000 m (795 hPa)             |
| EMC immunity:                     | DIN EN - 50121-3-2, 61000-6-2 |
| EMC radiated emission:            | DIN EN - 50121-3-2, 61000-6-4 |
| Mechanical stability:             | DIN EN 61373                  |

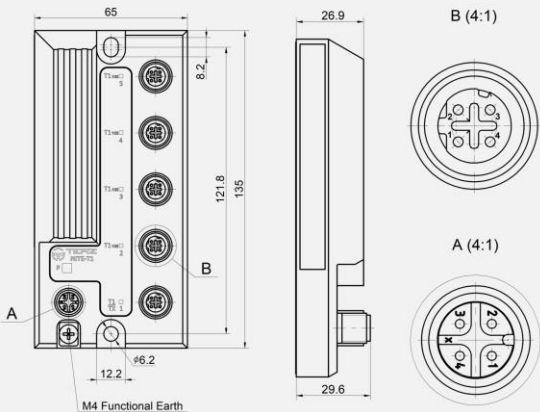
Approvals and certifications

CE, E-Mark - (E1/R10)

Status and diagnostic indicators

LED: Power | Link/Activity per Port

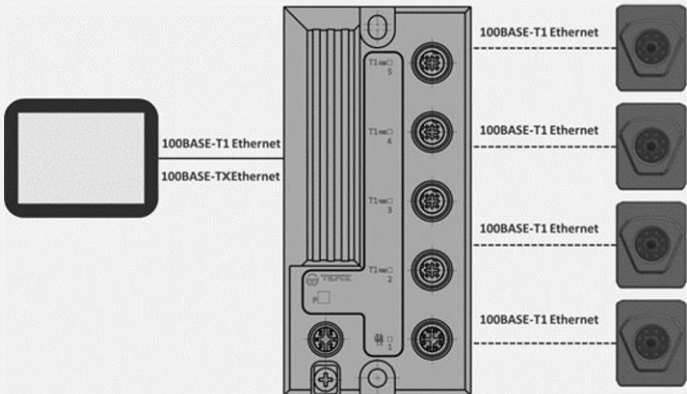
Drawing



Products

| Article         | Art.-No. | Specification               |
|-----------------|----------|-----------------------------|
| NITE-T1XS5-8103 | 4814003  | 4x T1 Master, 1x TX T1 auto |

Application example



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