

# NITE-XS

Unmanaged Industrial Ethernet Switches M12 IP65/67  
Fast Ethernet



## Cabinet-free networking directly in the field: Reliable, ruggedized and stable

- ▶ Flexible use with 24 VAC/VDC
- ▶ Ultra-compact, ruggedized design
- ▶ Temperature range -40 to +70°C
- ▶ Polarity protection
- ▶ IP65/67 metal housing
- ▶ Inrush current limitation
- ▶ DIN EN 50155 rail compliant
- ▶ PROFINET suitable

The ultra-compact M12 IP65/67 unmanaged Industrial Ethernet switches connect all applications efficiently and reliably in harsh industrial environments as well as in rail and commercial vehicles. With its wide temperature range, high shock and vibration resistance and rugged metal housing, the NITE-XS can be installed directly in the field outside the switch cabinet. The Plug&Play switches provide a robust and reliable Ethernet communication directly in the application, saving cabinet space and reducing the cabling effort. The dielectric strength of 2.25 kVDC, excellent EMC performance characteristics and fire protection according to DIN EN 45545, make the NITE-XS Ethernet switches fully suitable for railways and comply with DIN EN 50155. With two different frame forwarding/blocking variants (LLDP/PTCP), all applications are optimally supported.

### General

**Switch:** IEEE802.3 Store and Forward; non-blocking wire speed  
**Auto-Negotiation, Auto-MDI-X, Auto-Polarity:** Yes  
**Frame size:** 2,048 Bytes  
**MAC table size:** 2,000 addresses  
**Quality of Service:** Yes – 4 priority queues  
**Energy Efficient Ethernet:** No  
**Flow Control:** No  
**PROFINET suitable:** Yes

| Port count (M12)                   | 4          | 6          | 8     |
|------------------------------------|------------|------------|-------|
| MTBF (SN 29500, Mio. h)            | 3,431      | 2,791      | 2,353 |
| Frame Forwarding (Art.-No.)        | xxxxx0     | xxxxx1     |       |
| LLDP, PTCP Delay 01:80:C2:00:00:0E | Forwarding | Blocking   |       |
| RSTP BPDU 01:80:C2:00:00:00        | Forwarding | Forwarding |       |

### Power supply / electronics

**Nominal voltage:** Vin 24 VAC / 24 VDC  
**Permitted voltage range:** 8 to 28 VAC / 9 to 36 VDC  
**Connection type:** Vin M12 A-cod. (+ -) | M4 thread drill hole (FE)  
**Supply circuit:** SELV DIN 60950 (circuit breaker 10 A)  
**Redundant power supply:** Yes, two full-bridge circuits  
**Inrush current limiter:** Yes  
**Input fuse:** Yes, Interrupting rating 50 A @ 125 VAC/VDC  
**Polarity protection:** Yes  
**Power failure bridging:** 10 ms DIN 50155  
**PCB Conformal Coating:** Yes  
**Protection category:** III  
**Isolation:** 2.25 kVDC; Vin ↔ Ethernet Ports | Vin ↔ housing

| Port count (M12)      | 4        | 6       | 8       |
|-----------------------|----------|---------|---------|
| Power consumption (W) |          |         |         |
| Idle   full load      | 0.4 0.82 | 0.4 1.0 | 0.4 1.2 |
| Input current (mA)    |          |         |         |
| Idle   full load      | 16   34  | 16   42 | 16   50 |
| Inrush current (A)    | 8        | 8       | 8       |

### 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    | 6    | 8    |
|------------------|------|------|------|
| Width (mm)       | 55   | 55   | 55   |
| Height (mm)      | 93   | 117  | 141  |
| Depth (mm)       | 29.8 | 29.8 | 29.8 |
| Weight (g)       | 200  | 250  | 295  |

Note: We reserve the right to make technical changes to this document without prior notice. TERZ assumes no responsibility or liability for any errors or inaccuracies in this document. All rights to this document and its contents are reserved. Duplication, use of the content or announcement to third parties in any form is not permitted without written permission from TERZ. Copyright © 2018 TERZ Industrial Electronics GmbH. All rights reserved.

### Ethernet Interfaces

**IEEE Standards:** 802.3 10BaseT, 802.3u 100BaseT(X)  
**Isolation:** 2.25 kVDC; Ethernet Port ↔ housing | Port ↔ Port  
**Connection type:** M12 D-coded  
**Port count | Speed:** 4,6,8 Ports | 10/100 Mbit/s  
**Cable length:** 100 m (Twisted Pair, 0.14 mm<sup>2</sup> - 0.22 mm<sup>2</sup>, Cat 5)

### 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, 55024  
**EMC radiated emission:** DIN EN - 50121-3-2, 61000-6-4, 55032  
**Mechanical stability:** DIN EN 61373  
**Fire protection:** DIN EN 45545

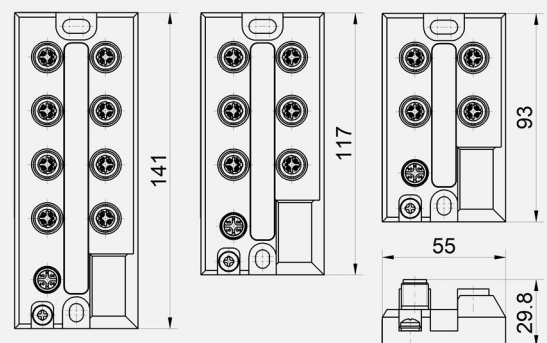
### Approvals and certifications

CE, DIN EN 50155, DIN EN 60950-1

### Status and diagnostic indicators

**LED:** Power | Link/Activity per Port

### Drawing



### Products

| Article       | Art.-No. | Specification                  |
|---------------|----------|--------------------------------|
| NITE-XS4-1100 | 411300   | 4xM12, FE, 24 V                |
| NITE-XS6-1100 | 411500   | 6xM12, FE, 24 V                |
| NITE-XS8-1100 | 411600   | 8xM12, FE, 24 V                |
| NITE-XS4-1101 | 411301   | 4xM12, FE, 24 V, LLDP Blocking |
| NITE-XS6-1101 | 411501   | 6xM12, FE, 24 V, LLDP Blocking |
| NITE-XS8-1101 | 411601   | 8xM12, FE, 24 V, LLDP Blocking |

