

NITE-XS

Unmanaged Industrial Ethernet Switches M12 IP65/67
Fast Ethernet



Kraftfahrt-Bundesamt
E-Mark - (E1/R10)



**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

Unmanaged Industrial Ethernet Switches M12 IP65/67

Fast Ethernet



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: 1,522 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 A I _{peak} (DC=40 µs, cold start)		

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

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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 mm² - 0.22 mm², 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

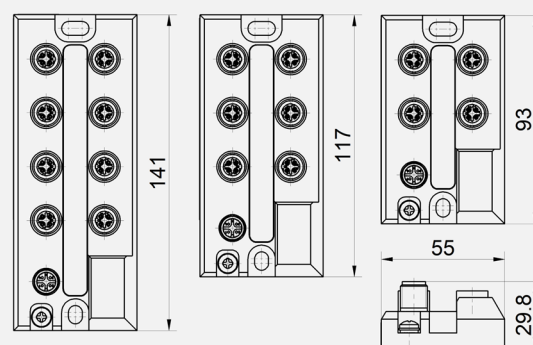
Approvals and certifications

CE, DIN EN 50155, DIN EN 60950-1, E-Mark - (E1/R10), ITxPT

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

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