

NITE-XK

Unmanaged Industrial Ethernet Switches M12 IP40
Fast Ethernet



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

IT **PT**

Robust, vibration-proof communication in harsh environmental conditions

- Flexible use with 24 VAC/VDC
- Ultra-compact, ruggedized design
- Temperature range -40 to +70°C
- Polarity protection
- IP40 metal housing
- Inrush current limitation
- DIN EN 50155 rail compliant
- PROFINET suitable

Unmanaged Industrial Ethernet Switch M12 IP40

Fast Ethernet



With minimal housing size and low power consumption, the NITE-XK Industrial Ethernet switches are the perfect link in harsh environments. By shock and vibration-proof M12 connection technology for data and power supply, all applications in harsh industrial environments and in rail and commercial vehicles can be networked. The redundant 24 Volt AC/DC power supply is protected against polarity reversal and works reliably even with undersupply of 9 VDC. The tolerance to voltage dips, a dielectric strength of 2.25 kVDC and the limitation of the inrush enable a stable operation in all operating conditions. 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

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 drilling housing (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): IP40

Port count (M12)	4	6	8
Width (mm)	49	49	49
Height (mm)	93	117	141
Depth (mm)	29.8	29.8	29.8
Weight (g)	160	210	255

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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

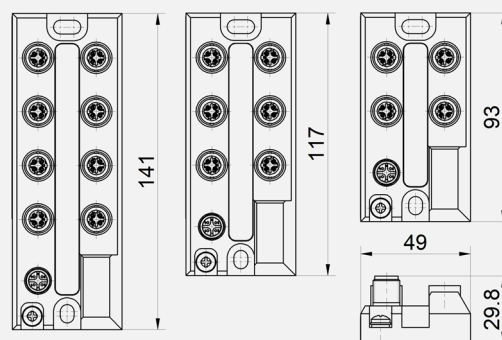
Approvals and certifications

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-XK4-1100	311300	4xM12, FE, 24 V
NITE-XK6-1100	311500	6xM12, FE, 24 V
NITE-XK8-1100	311600	8xM12, FE, 24 V
NITE-XK4-1101	311301	4xM12, FE, 24 V, LLDP Blocking
NITE-XK6-1101	311501	6xM12, FE, 24 V, LLDP Blocking
NITE-XSK-1101	311601	8xM12, FE, 24 V, LLDP Blocking

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