



MS4128-5

Industrial Networking:Industrial Ethernet:MICE:Switches

Product description

Description	MICE, modular, managed Industrial EHTERNET Switch, store and forward switching mode, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s) and Gigabit-Ethernet (1000 Mbit/s)
Port type and quantity	up to 28 ports possible via media modules, 4 x 1000BASE-SX with SFP modules or 4 x 10/100/1000BASE-TX and 24Fast-Ethernet (100 Mbit/s) ports
Type	MS4128-5
Order No.	943 746-001

More Interfaces

Power supply/signaling contact	2 plug-in terminal block, 4-pin
V.24 interface	1 x RJ11 socket

Network size - cascading

Line - / star topology	any
Ring structure (HIPER-Ring)	50 (reconfiguration time < 50 ms)

Power requirements

Operating voltage	24 V DC (-25% to +30%)
Current consumption at 24 V DC	630 mA (not including media modules)
Power consumption	15 W (not including media modules)

Service

Management	serial interface, web interface SNMP v1/v2/v3, HiVision
Diagnostics	LEDs (power, link status, data, 100 Mbit/s, auto-negotiation, full duplex, error, redundancy manager, ring port, LED test), cable tester, 2 x signal contact / fault relais (24 V DC / 1 A), RMON (statistics, history, alarms, events), port mirroring.
Configuration	Command Line Interface (CLI), TELNET, BootP, DHCP, DHCP option 82, HIDiscovery, auto-configuration adapter (ACA21-USB)
Security	SNMP V3 (SSH, SSL), port security, ACL, Authentication (802.1x)
Other services	QoS 4 classes, prioritization (IEEE 802.1D/p), VLAN (802.1Q), multicast (IGMP snooping/querier, GMRP), broadcastlimiter, SNTP (simple network time protocol), flow control IEEE 802.3x
Prepared for	TOS (Type of Service) Diff.-Serv, TOS-Prio-Mapping, protocol based VLANs, Routing RIP and OSPF HIRRP / VRRP, Proxy ARP

Redundancy

Redundancy functions	HIPER-Ring (ring structure), RSTP (rapid spanning tree protocol), redundant network/ring coupling, dual homing, redundant 24 V power supply, redundant signal contact, link aggregation dynamic and static (max. 7 trunks, 8 ports/trunk, LACP)
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Ambient conditions

Operating temperature	0 °C to +60 °C
Storage/transport temperature	-25 °C to +70 °C
Relative humidity (non-condensing)	10% to 95%
MTBF	24.2 years; MIL-HDBK 217F: Gb 25 °C

Mechanical construction

Dimensions (W x H x D)	315 mm x 134 mm x 140 mm
Mounting	DIN Rail 35 mm
Weight	2,2 kg

Protection class	IP 20
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min.
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line
EN 61000-4-6 conducted immunity	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of industrial control equipment	cUL 508 (E175531) in preparation
Hazardous locations	cUL 1604 Class 1 Div 2 (E203960) in preparation
Safety of information technology equipment	cUL 60950 (E168643) in preparation
Germanischer Lloyd	Germanischer Lloyd in preparation
Scope of delivery and accessories	
Scope of delivery	Device, terminal block, operating manual
Accessories to order separately	ML-MS3 labels, MB-2T expansion backplane, auto-configuration adapter (ACA 21-USB), HiVision network management, 19" installation, terminal cable, rail power supply RPS 30, RPS 60 or RPS 120