HIRSCHMANN
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Product: OCTOPUS 8TX-EEC-M-2A

Managed IP67 Switch, 8 ports, supply voltage 24 VDC, software HiOS 2A

Product Description

Managed IP65 and IP67 switch, HiOS software layer 2 advanced, 8 Fast-Ethernet M12-ports D-coded, approved for use onboard trains and road vehicles

Technical Specifications

Product description

Type:	OCTOPUS 8TX-EEC-M-2A
Name:	OCTOPUS 8TX-EEC-M-2A
Description:	Managed IP65 and IP67 switch, HiOS software layer 2 advanced, 8 Fast-Ethernet M12-ports D-coded, approved for use onboard trains and road vehicles
Part Number:	942301002
Port Type and Quantity:	8 ports in total: 10/100 BASE-TX, M12 "D"-coding

More Interfaces

Power supply/signaling contact:	1 x M12 5-pin connector, A coding
USB interface:	1 x M12 5-pin socket, A coding

Network size - length of cable

Twisted pair (TP):	0-100 m

Network size - cascadibility

Line - / star topology:	any

Power requirements

Operating Voltage:	24/36 V DC (16,8V DC ... 45 V DC)
Power Consumption:	6 W
Power output in BTU (IT)/h:	20

Software

Switching:	Independent VLAN Learning, Fast Aging, Static Unicast/Multicast Address Entries, QoS / Port Prioritization (802.1D/p), TOS/DSCP Prioritization, Interface Trust Mode, CoS Queue Management, Queue-Shaping / Max. Queue Bandwidth, Flow Control (802.3X), Egress Interface Shaping, Ingress Storm Protection, Jumbo Frames, VLAN (802.1Q), GARP VLAN Registration Protocol (GVRP), Voice VLAN, Private VLAN, GARP Multicast Registration Protocol (GMRP), IGMP Snooping/Querier per VLAN (v1/v2/v3), Unknown Multicast Filtering, Forward unknown multicast to query ports per vlan, Multiple VLAN Registration Protocol (MVRP), Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP), TSN 802.1Qbv Support on interfaces 1/1 - 1/3.
Redundancy:	HIPER-Ring (Ring Switch), HIPER-Ring over Link Aggregation, Link Aggregation with LACP, Link Backup, Media Redundancy Protocol (MRP) (IEC62439-2) - Redundancy Manager, Media Redundancy Protocol (MRP) (IEC62439-2) - Redundancy Client, MRP over Link Aggregation, Redundant Network Coupling, Sub Ring Manager, RSTP 802.1D-2004 (IEC62439-1), MSTP (802.1Q), RSTP Guards
Management:	DNS Client, Dual Software Image Support, TFTP, SFTP, SCP, LLDP (802.1AB), LLDP-MED, SSHv2, OPC-UA Server, HTTP, HTTPS, IPv6 Management, Service Discovery (bonjour), ITxPT Module Inventory, Traps, SNMPv1/v2 Read-Only, SNMP v1/v2/v3, SNMPv3 Traps, Telnet
Diagnostics:	Management Address Conflict Detection, MAC Notification, Loop Protection, Signal Contact, Device Status Indication, TCPDump, LEDs, Syslog, Persistent Logging on ACA, Email Notification, Port Monitoring with Auto-Disable, Link Flap Detection, Overload Detection, Duplex Mismatch Detection, Link Speed and Duplex Monitoring, RMON (1,2,3,9), Port Mirroring 1:1, Port Mirroring 8:1, Port Mirroring N:1, RSPAN, SFLOW, Port Mirroring N:2, System Information, Self-Tests on Cold Start, Copper Cable Test, Configuration Check Dialog, Switch Dump
Configuration:	Automatic Configuration Undo (roll-back), Configuration Fingerprint, XML-based Configuration File, Backup config on a remote server when saving, Clear config but keep IP settings, BOOTP/DHCP Client with Auto-Configuration, DHCP Server: per Port, DHCP Server: Pools per VLAN, AutoConfiguration Adapter ACA21/22 (USB), HiDiscovery, DHCP Relay with Option 82, Interface Shutdown via Tracking, Auto Disable, USB-C Management support, Command Line Interface (CLI), CLI Scripting, CLI script handling over ENVM at boot, Full-featured MIB Support, Context-sensitive Help, HTML5 based Management

Security:	Signed Firmware Images, MAC-based Port Security, Port-based Access Control with 802.1X, Guest/unauthenticated VLAN, Integrated Authentication Server (IAS), RADIUS VLAN Assignment, Multi-Client Authentication per Port, MAC Authentication Bypass, Format options for MAC authentication bypass, DHCP Snooping, IP Source Guard, Dynamic ARP Inspection, Denial-of-Service Prevention, DoS Prevention Drop Counter, RADIUS Client, TACACS+ Client, LDAP, Ingress MAC-based ACL, Ingress IPv4-based ACL, Time-based ACL, VLAN-based ACL, Ingress VLAN-based ACL, ACL Flow-based Limiting, Access to Management restricted by VLAN, Device Security Indication, Audit Trail, Secure Boot, CLI Logging, HTTPS Certificate Management, Restricted Management Access, Appropriate Use Banner, Configurable Password Policy, Configurable Number of Login Attempts, SNMP Logging, Multiple Privilege Levels, Local User Management, Remote Authentication via RADIUS, User Account Locking, Password change on first login
Time synchronisation:	PTPv2 Transparent Clock two-step, PTPv2 Boundary Clock, BC with Up to 8 Sync / s, 802.1AS, 802.1AS-2020, Buffered Real Time Clock, SNTP Client, SNTP Server
Industrial Profiles:	EtherNet/IP Protocol, IEC61850 Protocol (MMS Server, Switch Model), Modbus TCP, PROFINET Protocol
Miscellaneous:	Manual Cable Crossing, Port Power Down

Ambient conditions

MTBF (Telcordia SR-332 Issue 3) @ 25°C:	5 101 282 h
Operating temperature:	-40-+70 °C
Note:	Please note that some recommended accessory parts only support a temperature range from -25 ºC to +70 ºC and might limit the possible operating conditions for the entire system.
Minimum Storage Temperature:	-40-+85 °C
Relative humidity (also condensing):	5-100 %

Mechanical construction

Dimensions (WxHxD):	201 mm x 61 mm x 46 mm
Weight:	900 g
Mount Type:	Wall mounting
IP Protection Rating:	IP65, IP67

Mechanical stability

IEC 60068-2-6 vibration:	1 mm, 2 Hz-13.2 Hz, 90 min. 0.7 g, 13.2 Hz-100 Hz, 90 min. 3.5 mm, 3 Hz-9 Hz, 10 cycles, 1 octave/min. 1 g, 9 Hz-150 Hz, 10 cycles, 1 octave/min
IEC 60068-2-27 shock:	15 g, 11 ms duration, 18 shocks

EMC interference immunity

EN 61000-4-2 electrostatic discharge (ESD):	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field:	20 V/m (80-3000 MHz)
EN 61000-4-4 fast transients (burst):	2 kV power line, 4 kV data line
EN 61000-4-5 surge voltage:	power line: 2 kV (line/earth), 1 kV (line/line), 2 kV data line
EN 61000-4-6 Conducted Immunity:	3 V (10 kHz-150 kHz), 10 V (150 kHz-80 MHz)

EMC emitted immunity

EN 55032:	EN 55032 Class A
FCC CFR47 Part 15:	FCC 47CFR Part 15, Class A

Approvals

Basis Standard:	CE, EAC, Australian Regulatory Compliance Mark (RCM), GOST-R, CCC, KCC (pending)
Safety of industrial control equipment:	cUL61010-1/-2-201
Safety of information technology equipment:	EN62368
Hazardous locations:	ISA 12.12.01 Class 1 Div. 2 (pending)
Shipbuilding:	DNV
Railway norm:	EN 50155, EN 45545-2, EN 50121-4, EMV06 (pending)
Transportation:	E1, ECE R118, EN 61850
Industrial Security:	IEC 62443-4-2 Security Level 2

Reliability

Guarantee:	60 months (please refer to the ""terms of guarantee or detailed information)

Scope of delivery and accessories

Accessories to Order Separately:	AutoConfiguration Adapter ACA22-M12-C (EEC) (942-306-001), Adapterkabel M12-5Pin auf USB (for configuration) (942 309-001), Connector ELWIKA 5012 PG7 (5-pin M12 socket for voltage supply) (933 175-100), Connection cable with M12 connector, D-coded (934 497-00x), Adapter M12 D-coded to RJ45 (934 498-001), OCTOPUS metal protection caps (25 pcs.) (942 057-001), OCTOPUS plastic protection caps (25 pcs.) (934 963-001), ACA2x-M12 to USB (USB 1.1/2.0 Type-A) Adapter (for ACA M12 connection to PC) (942-199-001), Industrial HiVision Network Management Software (943 156-xxx)
Scope of delivery:	1 × Device, 1 × General safety instructions, 1 x M12 power connector (ELWIKA 5012 PG7), 15x plastic labels for ethernet ports and device, 7x M12 plastic protection caps for USB interface and ethernet-ports, 1x M12 plastic protection cap for power supply input

Further Instructions

Product Documentation:	https://www.doc.hirschmann.com
Certificates:	https://www.doc.hirschmann.com/certificates.html
Software Download:	https://my.belden.com/s/downloads

History

Update and Revision:	Revision Number: 0.165 Revision Date: 03-03-2026

Variants

Item #	Type
942301002	OCTOPUS 8TX-EEC-M-2A

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