

**Product:** [OCTOPUS 8TX-EEC-M-2S](#) 

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



**Product Description**

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

**Technical Specifications**

**Product description**

Type:	OCTOPUS 8TX-EEC-M-2S
Description:	Managed IP65 and IP67 switch, HiOS software layer 2 standard , 8 Fast-Ethernet M12-ports D-coded, approved for use onboard trains and road vehicles
Part Number:	942301001
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
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**Network size - cascading**

Line - / star topology:	any
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**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, GARP Multicast Registration Protocol (GMRP), IGMP Snooping/Querier per VLAN (v1/v2/v3), Unknown Multicast Filtering, Multiple VLAN Registration Protocol (MVRP), Multiple MAC Registration Protocol (MMRP), Multiple Registration Protocol (MRP), Template based TSN 802.1Qbv
Redundancy:	HIPER-Ring (Ring Switch), Link Aggregation with LACP, Link Backup, Media Redundancy Protocol (MRP) (IEC62439-2), Redundant Network Coupling, RSTP 802.1D-2004 (IEC62439-1), RSTP Guards
Management:	Dual Software Image Support, TFTP, SFTP, SCP, LLDP (802.1AB), LLDP-MED, SSHv2, HTTP, HTTPS, Traps, SNMP v1/v2/v3, Telnet
Diagnostics:	Management Address Conflict Detection, MAC Notification, Signal Contact, Device Status Indication, TCPDump, LEDs, Syslog, Persistent Logging on ACA, 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, Port Mirroring N:2, System Information, Self-Tests on Cold Start, Copper Cable Test, Configuration Check Dialog, Switch Dump, Email Notification
Configuration:	Automatic Configuration Undo (roll-back), Configuration Fingerprint, Text-based Configuration File (XML), 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, USB-C Management support, Command Line Interface (CLI), CLI Scripting, CLI script handling over ENVIRONMENT at boot, Full-featured MIB Support, Context-sensitive Help, HTML5 based Management
Security:	MAC-based Port Security, Port-based Access Control with 802.1X, Guest/unauthenticated VLAN, Integrated Authentication Server (IAS), RADIUS VLAN Assignment, Denial-of-Service Prevention, DoS Prevention Drop Counter, VLAN-based ACL, Ingress VLAN-based ACL, Basic ACL, Access to Management restricted by VLAN, Device Security Indication, Audit Trail, 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, Buffered Real Time Clock, SNTP Client, SNTP Server
Industrial Profiles:	EtherNet/IP Protocol, IEC61850 Protocol (MMS Server, Switch Model), Modbus TCP, EtherNet/IP Separate VLAN

Miscellaneous:	Manual Cable Crossing, Port Power Down
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## Ambient conditions

Operating temperature:	-40-+70 °C
Note:	Please note that some recommended accessory parts only support a temperature range from -25 °C to +70 °C and might limit the possible operating conditions for the entire system.
Storage/transport 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
Mounting:	Wall mounting
Protection class:	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:	cUL61010-2-201 (pending)
Safety of information technology equipment:	EN62368
Hazardous locations:	ISA 12.12.01 Class 1 Div. 2 (pending)
Railway norm:	EN 50155, EN 45545-2, EN 50121-4, EMV06 (pending)
Transportation:	E1, ECE R118 (pending), EN 61850, IEC61850 (pending), DNVGL (pending)

## 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 ELWIK A 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 × M12 power connector (ELWIK A 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:	<a href="https://www.doc.hirschmann.com">https://www.doc.hirschmann.com</a>
Certificates:	<a href="https://www.doc.hirschmann.com/certificates.html">https://www.doc.hirschmann.com/certificates.html</a>
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