



Product: [OCTOPUS 16M-Train](#) 

Life Cycle Status: Limited Availability/Passive

Replaced by: [OS20/24/30/34 - OCTOPUS II configurator](#)

Managed IP67 Switch, 16 ports, supply voltage 24 VDC, Software L2P, train approvals

Product Description

Managed IP 65 / IP 67 switch in accordance with IEEE 802.3, store-and-forward-switching, software layer 2 Professional, Fast-Ethernet (10/100 MBit/s) ports, electrical Fast-Ethernet (10/100 MBit/s) M12-ports

Technical Specifications

Product description

Type:	OCTOPUS 16M Train
Description:	The OCTOPUS switches are suited for outdoor applications with rough environmental conditions. Because of the branch typical approvals they can be used in transport applications (E1), as well as in trains (EN 50155) and ships (GL).
Part Number:	943984001
Port type and quantity:	16 ports in total uplink ports: 10/100 BASE-TX, M12 "D"-coding, 4-pole 16 x 10/100 BASE-TX TP-cable, auto-crossing, auto-negotiation, auto-polarity.

Product Life Cycle

Life Cycle:	Limited Availability/Passive - the product is entering End of Life
Availability:	Passiv
Last Order Date:	2023-12-31
Last Delivery Date:	2024-06-30

More Interfaces

Power supply/signaling contact:	1 x M12 5-pin connector, A coding,
V.24 interface:	1 x M12 4-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 - cascadiability

Line - / star topology:	any
Ring structure (HIPER-Ring) quantity switches:	50 (reconfiguration time 0.3 sec.)

Power requirements

Operating Voltage:	24/36/48 VDC -60% / +25% (9,6..60 VDC)
Power consumption:	9.5 W
Power output in BTU (IT)/h:	32
Redundancy functions:	redundant power supply

Software

Management:	Serial interface V.24 web-interface, Telnet, SSHv2, HTTP, HTTPS, TFTP, SFTP, SNMP v1/v2/v3, Traps
Diagnostics:	LEDs (power 1, power 2, link status, data, redundancy manager, error) cable tester, signaling contact, RMON (statistics, history, alarms, events), SysLog support, port mirroring
Configuration:	Command Line Interface (CLI), auto-configuration adapter, TELNET, BootP, DHCP Option 82, HiDiscovery
Security:	Port Security (IP and MAC), SNMPv3, SSHv3, SNMP access settings (VLAN/IP), IEEE 802.1X authentication

Ambient conditions

MTBF (Telecordia SR-332 Issue 3) @ 25°C:	32.7 Years
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):	10-100 %

Mechanical construction

Dimensions (WxHxD):	261 mm x 189 mm x 70 mm
Weight:	1900 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, 2 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

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)
Railway norm:	EN 50155, EN 45545-2, EN 50121-4
Transportation:	E1

Reliability

Guarantee:	60 months (please refer to the terms of guarantee for detailed information)
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Scope of delivery and accessories

Accessories to Order Separately:	ACA22-M12 (EEC) (942 125-001), M12 connector, "D"-coded (934 445-001) 2 m cordset with M12-connector, "D"-coded (934 578-001) 5 m cordset with M12-connectors, "D"-coded (934 578-002) 10 m cordset with M12-connectors, "D"-coded (934 578-003) Bulkhead M12 "D"-coded to RJ45 (934 498-001), OCTOPUS metal dust cover set (25 pieces) (942 057-001), OCTOPUS plastic dust cover set (25 pieces) (942 057-002)*
Scope of delivery:	1 × Device, 1 x connector for power connection, General safety instructions

Further Instructions

Product Documentation:	https://www.doc.hirschmann.com
Certificates:	https://www.doc.hirschmann.com/certificates.html
Software Download:	https://hirschmann-support.belden.com/en-US/downloads

History

Update and Revision:	Revision Number: 0.112 Revision Date: 06-19-2024
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