



## Product information OCTOPUS 16M-2FX

Industrial Ethernet:Waterproof IP67/IP54 Switches:Managed Waterproof IP67/IP54 Switches:Fast Ethernet Managed Waterproof IP67 Switches:OCTOPUS 16M-2FX

<http://e-catalog.hirschmann.com/link/57078-24455-49850-109276-124128-40101/en/conf/ui/istate>

Name	OCTOPUS 16M-2FX
	
	Managed IP 67 switch in accordance with IEEE 802.3, store-and-forward-switching, software layer 2 professional, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s)
<b>Delivery informations</b>	
Availability	no longer available
<b>Product description</b>	
Description	Managed IP 67 switch in accordance with IEEE 802.3, store-and-forward-switching, software layer 2 professional, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s)
Port type and quantity	14 x 10/100 BASE-TX, M12 D coding, 4-pole, TP cable auto-crossing, auto-negotiation, auto-polarity 2 x 100Base-FX MM, microFX
Type	OCTOPUS 16M-2FX
Order No.	943 912-002
<b>More Interfaces</b>	
Power supply/signaling contact	1 x M12 5-pin connector, A coding
V.24 interface	1 x M12 4-pin socket, A coding
USB interface	1 x M12 5-pin socket, A coding
<b>Network size - length of cable</b>	
Twisted pair (TP)	0 - 100 m
Multimode fiber (MM) 50/125 µm	0 - 5000 m, 8 dB Link Budget at 1300 nm, A = 1 dB/km, 3 dB Reserve, B = 800 MHz x km
Multimode fiber (MM) 62.5/125 µm	0 - 4000 m, 11 dB Link Budget at 1300 nm, A = 1 dB/km, 3 dB Reserve, B = 500 MHz x km
<b>Network size - cascadiability</b>	
Line - / star topology	Any
Ring structure (HIPER-Ring) quantity switches	50 (reconfiguration time < 0.3 sec.)
<b>Power requirements</b>	
Operating voltage	DC 9.6 to 60 V
Power consumption	max. 13.0 W
Current consumption at 24 V DC	480 mA
Current consumption at 48 V DC	n/a
<b>Service</b>	
Management	Serial interface, Web interface, SNMP V1/V2/V3 (HiVision/Industrial HiVision)
Diagnostics	LEDs (power 1, power 2, link status, data, redundancy manager, error) cable tester, signalling contact, RMON (statistics, history, alarms, events), SysLog support, port mirroring
Configuration	Command Line Interface (CLI scripting), auto-configuration adapter (ACA21-M12), TELNET, BootP, DHCP Option 82, HiDiscovery
Security	Port security (MAC and IP address), SNMPv3, SSHv3, SNMP access settings (VLAN/IP), IEEE 802.1X authentication
Other services	4 QoS queues, user priority (IEEE 802.1D/p), VLAN (IEEE 802.1Q), unknown multicast filtering, multicast support (IGMP Snooping/Querier, GMRP), broadcast limiter per port, ingress and egress packet limiter, Flow Control IEEE 802.3x, LLDP (topology discovery IEEE 802.1AB), Link Aggregation (IEEE 802.3ad), buffered real-time clock, PTP support (Precision Time Protocol) (IEEE 1588 client for system clock only), SNTP support (Simple Network Time Protocol, client/server)
<b>Redundancy</b>	
Redundancy functions	HIPER-Ring (ring structure), RSTP (Rapid Spanning Tree Protocol, IEEE 802.1w), redundant network/ring coupling, redundant power supply
<b>Ambient conditions</b>	
Operating temperature	-40 °C to +70 °C
Storage/transport temperature	-40 °C to +85 °C



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<b>MTBF</b>	15,5 Jahre; MIL-HDBK 217F: Gb 25 °C
<b>Relative humidity</b>	10 to 100% (also condensing)
<b>Mechanical construction</b>	
<b>Dimensions (W x H x D)</b>	261 mm x 189 mm x 70 mm
<b>Mounting</b>	Wall mounting
<b>Weight</b>	1950 g
<b>Protection class</b>	IP 67
<b>Mechanical stability</b>	
<b>IEC 60068-2-27 shock</b>	15 g, 11 ms duration, 18 shocks
<b>IEC 60068-2-6 vibration</b>	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.
<b>EMC interference immunity</b>	
<b>EN 61000-4-2 electrostatic discharge (ESD)</b>	4 kV contact discharge, 8 kV air discharge
<b>EN 61000-4-3 electromagnetic field</b>	10 V/m (80 - 1000 MHz)
<b>EN 61000-4-4 fast transients (burst)</b>	2 kV power line, 1 kV data line
<b>EN 61000-4-5 surge voltage</b>	power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line
<b>EN 61000-4-6 conducted immunity</b>	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
<b>EMC emitted immunity</b>	
<b>FCC CFR47 Part 15</b>	FCC CFR47 Part 15 Class A
<b>EN 55022</b>	EN 55022 Class A
<b>Approvals</b>	
<b>Safety of industrial control equipment</b>	cUL 508
<b>Shipbuilding</b>	Germanischer Lloyd
<b>Employment in vehicles</b>	E1
<b>Scope of delivery and accessories</b>	
<b>Scope of delivery</b>	covers for sealing unused ports, M12-connector (ELWIK 5012 PG7) for power connection, description and operating instructions
<b>Accessories to order separately</b>	Auto Configuration Adapter (ACA21-M12), order no. 943 931-001; modem cable (OCTOPUS Terminalkabel), order no. 943 902-001; field assembleable M12-connector (EM12S OCTOPUS), order no. 934 445-001; patchcords (EM12S 001Lxxx OCTOPUS), order no. 934 578-xxx; crossing M12 to RJ45 (EF12RJ45 OCTOPUS), order no. 934 498-001
<b>Note</b>	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. Specially designed connector types with protection class IP67 and extended temperature range are available on request. Furthermore unsealed accessories like RJ45 adapters or terminal access cables are certainly not suitable inside IP67 areas.

For more information please contact:

**Hirschmann Automation and Control GmbH**

Stuttgarter Strasse 45-51

72654 Neckartenzlingen

Germany

Phone: +49 7127/14-1809

E-Mail: [inet-sales@belden.com](mailto:inet-sales@belden.com)

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