




**Product information**  
**OCTOPUS 24M-Train-BP**  
**942 093-001**

Name	
OCTOPUS 24M-Train-BP	
	
Managed IP 67 switch in accordance with IEEE 802.3, bypass relay, store-and-forward-switching, software layer 2 professional, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s).	
Delivery informations	
Availability	available
Product description	
Description	Managed IP 67 switch in accordance with IEEE 802.3, bypass relay, store-and-forward-switching, software layer 2 professional, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s).
Port type and quantity	24 x 10/100 BASE-TX, thereof 2 with bypass relay, M12 D coding, 4-pole, TP cable auto-crossing, auto-negotiation, auto-polarity
Type	OCTOPUS 24M-Train-BP
Order No.	942 093-001
More Interfaces	
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
Network size - length of cable	
Twisted pair (TP)	0 - 100 m, at relay ports in total 0 - 100 m
Multimode fiber (MM) 50/125 µm	n/a
Multimode fiber (MM) 62.5/125 µm	n/a
Network size - cascading	
Line - / star topology	Any
Ring structure (HIPER-Ring) quantity switches	50 (reconfiguration time < 0.3 sec.)
Power requirements	
Operating voltage	DC 9.6 to 60 V
Power consumption	max. 14 W
Current consumption at 24 V DC	550 mA
Current consumption at 48 V DC	280
Service	
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)
Redundancy	
Redundancy functions	Bypass relay, HIPER-Ring (ring structure), RSTP (Rapid Spanning Tree Protocol, IEEE 802.1w), redundant network/ring coupling, redundant power supply
Ambient conditions	
Operating temperature	-40 °C to +70 °C
Storage/transport temperature	-40 °C to +85 °C
MTBF	45 years; Telcordia, Gb 25 °C
Relative humidity	10 to 100% (also condensing)
Mechanical construction	
Dimensions (W x H x D)	338 mm x 189 mm x 70 mm

The information published has been compiled as carefully as possible. It is subject to alteration without notice in technical as well as in price related/commercial respect.



<b>Mounting</b>	Wall mounting
<b>Weight</b>	2500 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>	20 V/m (80 - 3000 MHz)
<b>EN 61000-4-4 fast transients (burst)</b>	2 kV power line, 2 kV data line
<b>EN 61000-4-5 surge voltage</b>	power line: 2 kV (line/earth), 1 kV (line/line), 2 kV data line
<b>EN 61000-4-6 conducted immunity</b>	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>Electronic mechanisms on rail-mounted vehicles</b>	EN 50155, EN 50121-4, DIN 5510-2, NF F 16-101, NF F 16-102
<b>Scope of delivery and accessories</b>	
<b>Scope of delivery</b>	M12-connector (ELWIK A 5012 PG7) for power connection, description and operating instructions
<b>Accessories to order separately</b>	Auto Configuration Adapter (ACA21-M12 EEC), order no. 943 931-002; modem cable (OCTOPUS Terminalkabel), order no. 943 902-001; field assembleable M12-connector (EM12S OCTOPUS), order no. 934 445-001; patchcords (EM12S 001Lxxxx OCTOPUS), order no. 934 578-xxx; crossing M12 to RJ45 (EF12RJ45 OCTOPUS), order no. 934 498-001; OCTOPUS dust cover set (order no. 942 057-001)
<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.