HIRSCHMANN
A BELDEN BRAND

New Product Bulletin

NP 1057HE

Gigabit OCTOPUS OS32 from Hirschmann™

The new OCTOPUS OS32 managed IP54 switch combines high data rates with maximum flexibility. It can be used to connect terminal equipment cost-effectively to high-performance backbones even under extreme operating conditions.

The Gigabit OCTOPUS OS32 is the First Waterproof Switch that Can be Fitted with SFP Transceivers. Together with Versions for 8 or 16 Fast Ethernet Ports, Versions for Singlemode and Multimode Fibers Enable Efficient Solutions for Different Requirements. Thanks to PoE Support, Terminal Equipment can be Powered Easily.

- Cost-effective solution, offering maximum flexibility with SFP transceivers and device versions available with 8 or 16 Fast Ethernet ports
- Maximum reliability due to waterproof housing, vibration-proof design and special precautions regarding EMC and fire protection
- Significantly less cabling thanks to PoE support

For the first time a waterproof switch with SFP transceivers is now available in the shape of the new OCTOPUS OS32. It means that fast data networks with different transmission technologies can be implemented flexibly and extended cost-effectively as needed, even in challenging environments. In addition, devices such as IP cameras, VoIP phones or wireless access points can be powered with no extra cables thanks to PoE support, reducing wiring costs considerably. Last but not least, the OCTOPUS OS32 is characterized by a rugged metal housing that can withstand even the toughest conditions. Extensive management and security methods as well as fast redundancy mechanisms ensure maximum network availability.

Applications

The OCTOPUS OS32 can be used in applications that demand the highest level of reliability and performance, for example in mechanical engineering. Since the switch can be seamlessly integrated into Profinet and Ethernet/IP environments, it is also suitable for automotive plant installations.

In rail applications, the OCTOPUS OS32 can be used to implement future-proof solutions for increased passenger safety and comfort. For example, additional IP cameras can be installed and high-resolution images transmitted in real time. Furthermore, this waterproof and extremely rugged switch can be mounted almost anywhere and not even different climatic conditions will affect it. This makes the OCTOPUS OS32 ideal for use around the world.

Benefits

The OCTOPUS OS32 enables cost-effective solutions when it comes to connecting devices in demanding environments via fiber to a high-performance backbone. Thanks to SFP transceivers for singlemode or multimode fibers it offers you optimum flexibility, in other words: You only pay for the equipment you need. Depending on the requirements of your application, you can also choose between switches with 8 or 16 Fast Ethernet ports. Both versions offer maximum reliability, since neither water nor vibrations can damage the Gigabit OCTOPUS OS32. The switch can even withstand extreme heat or cold. It also meets stringent European EMC and fire prevention standards governing use in rail vehicles. Another plus: PoE support offered by the OCTOPUS OS32 allows you to power terminal equipment at comparatively low cost.

A new product to serve your needs.
Be certain.

HIRSCHMANN
A BELDEN BRAND

Hirschmann™ OCTOPUS OS32

Thanks to SFP transceivers, the Gigabit OCTOPUS OS32 switch allows individual solutions to be developed for connecting terminals via fiber to high-performance backbones.

The OCTOPUS OS32 managed IP54 switch offers two IP54-protection-class SFP slots that you can optionally equip with transceivers for singlemode or multimode fibers in Fast Ethernet or Gigabit Ethernet design. Eight Fast Ethernet ports (10/100 BASE-TX) are available for connecting terminals. These feature vibration-proof, D-coded M12 connection technology and support PoE. A version with additional eight Fast Ethernet ports is also available. The design, with no parts subject to wear, incorporates a redundant 48 V power supply unit to guarantee a high level of operational safety.

Benefits at a Glance

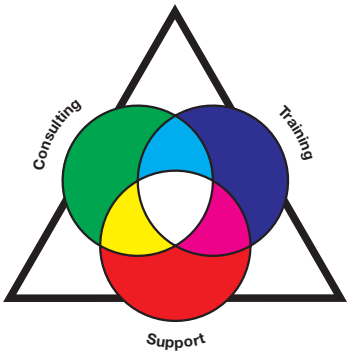
- IP54-protection-class SFP slots for singlemode or multimode fibers
- 8 PoE-enabled Fast Ethernet ports with vibration-proof M12 connections
- Device version with 8 additional Fast Ethernet ports
- PoE via phantom power methods (15 W per terminal)
- Support for Profinet and Ethernet/IP standards
- Sturdy metal housing with compact dimensions
- EMC and fire prevention compliant with European standards governing use in rail vehicles
- IP54 protection rating
- Extended temperature range of -40°C to +70°C
- Fanless design
- Redundant 48 V power supply
- LEDs for equipment and network status and power supply
- Powerful software:
  - Configuration: CLI, DHCP relay agent Option 82, HiDiscovery, autoconfiguration adapter ACA21
  - Diagnostics: RMON, port mirroring and LLDP (Topology Discovery 802.1ab); signaling contact for alarms
  - Management: Standard web browser plus SNMP V2c and V3
  - Redundancy methods: HIPER Ring, MRP, RSTP
  - Security mechanisms: IP and MAC port security, SNMP V3, SSH, SNMP access settings (VLAN/IP) and IEEE 802.1x
- Perfectly suited for Belden® cables and Lumberg Automation™ connectors

Technical Information

Product Description		
Type	**OCTOPUS OS32-08080206O6TPEPHH**	**OCTOPUS OS32-08160206O6TPEPHH**
Description	Managed IP54 PoE switch, software layer 2 professional, Fast Ethernet M12 ports and Gigabit Ethernet IP54 SFP bays according to the IEC V1 standard	
Order No.	942 069-004	942 069-003
Line Lengths		
Twisted Pair Ports (M12 D-coded)	8 x FE with PoE (0 m to 100 m)	8 x FE with PoE + 8 x FE (0 m to 100 m)
SFP Ports (IEC 61076-3-106 V1)	2 x GE/FE ports (for cable length see SFPs)	
Power Requirements		
Operating Temperature Range	-40°C to +70°C	
Operating Voltage (A-coded M12 connector)	2 x 46 V DC to 57 V DC redundant	
Power Input	13 to 140 W (8 x Class 0 PD)	18 to 145 W (8 x Class 0 PD)
Software		
Security	Port security (IP and MAC address), SNMP V3, SSH, SNMP access settings (VLAN/IP) and IEEE 802.1x authentication	
Services	4 QoS queues, user prioritization (IEEE 802.1D/p), VLAN (IEEE 802.1Q), unknown multicast filter, multicast support (IGMP snooping/querier, GMRP), broadcast limiter per port, ingress and egress packet limiter, flow control IEEE 802.3x, LLDP (topology discovery)	
Configuration	Command Line Interface (CLI), autoconfiguration adapter (ACA21-M12 EEC), TELNET, BootP, DHCP Option 82, HiDiscovery	
Diagnostics	LEDs (Power 1, Power 2, link status, data, redundancy manager, fault) cable tester, signaling contact, RMON (statistics, history, alarm, events), syslog support, port mirroring	
Redundancy Functions	MRP, HIPER ring, RSTP	
Mechanical Construction		
Dimensions (W x H x D)	261 x 189 x 70 mm	338 x 189 x 70 mm
Weight	2.000 g	2.700 g
Degree of Protection	IP54	
Approvals		
Norms and Standards	EN 50155, EN 50121-4, DIN 5510-2, NF F 16-101, NF F 16-102, EN 45545, EN 61000-4-2 to -6, EN 55022, FCC CFR47-15, IEC 60068-2-6, IEC 60068-27	
Included in Delivery or Accessories		
Included in Delivery	M12 connectors (ELWIK A 5012 PG7) for power supply terminal, description and operating instructions, CD	
SFPs	M-FAST SFP-MM/LC EEC 943 945-001 FE, 5 km @ 50 µm, 4 km @ 62.5 µm M-FAST SFP-SM/LC EEC 943 946-001 FE, 25 km @ 9 µm M-FAST SFP-SM+/LC EEC 943 947-001 FE, 25 to 65 km @ 9 µm M-FAST SFP-LH/LC EEC 943 948-001 FE, 47 to 104 km @ 9 µm M-SFP-SX/LC EEC 943 896-001 GE, 550 m @ 50 µm, 275 m @ 62.5 µm M-SFP-LX/LC EEC 943 897-001 GE, 550 m @ 50 µm, 550 m @ 62.5 µm, 20 km @ 9 µm M-SFP-LH/LC EEC 943 898-001 GE, 23 to 80 km @ 9 µm	
TP Cables with M12 Connectors	EM12S 001L0200 OCTOPUS 934 578-001 2 m Fast Ethernet connection cable 2 x M12 D-coded EM12S 001L0500 OCTOPUS 934 578-002 5 m Fast Ethernet connection cable 2 x M12 D-coded EM12S 001L1000 OCTOPUS 934 578-003 10 m Fast Ethernet connection cable 2 x M12 D-coded	
FO Cable with IEC V1 Connectors	See e.g. http://www.metz-connect.com	
Miscellaneous	Autoconfiguration adapter 943 913-002 Set of locking screws 942 057-001 SFP assembly tool 942 079-001 M12 D-coded connector 934 445-001	

HIRSCHMANN
A BELDEN BRAND

The Belden® Competence Center



As the complexity of communication and connectivity solutions has increased, so have the requirements for design, implementation and maintenance of these solutions. For users, acquiring and verifying the latest expert knowledge play a decisive role in this. As a reliable partner for end-to-end solutions, Belden offers expert consulting, design, technical support, as well as technology and product training courses from a single source: Belden Competence Center. In addition, we offer you the right qualification for every area of expertise through the world's first certification program for industrial networks. Up-to-date manufacturer's expertise, an international service network and access to external specialists guarantee you the best possible support for products from Belden®, Hirschmann™ and Lumberg Automation™. Irrespective of the technology you use, you can rely on our full support – from the implementation to the optimization of every aspect of daily operations.

Always Stay Ahead with Belden

In a highly competitive environment, it is crucial to have reliable partners who are able to add value to your business. When it comes to signal transmissions, Belden is the number one solutions provider. We understand your business and want to know your specific challenges and targets to see how effective signal transmission solutions can push you ahead of the competition. By combining the strengths of our three leading brands, Belden®; Hirschmann™; and Lumberg Automation™, we are able to offer the solution you need. Today it may be a single cable, a switch or a connector, thus solving a specific issue; tomorrow it can be a complex range of integrated applications, systems and solutions.

We guarantee the superior performance of your mission-critical systems, even in the most demanding circumstances. If signal transmission is vital to your business, get in touch with the partner that delivers. Be certain. Belden.

Phone **+49 (0)7127/14-1809**
www.hirschmann.com

NP 1057HE
08.12