



# HIRSCHMANN

A BELDEN BRAND

## New Product Bulletin

NP 1032HE

### Basic Managed 9-Port IP67 Switch

The newest Hirschmann™ OCTOPUS OS20 switch is remarkable for its price-performance ratio. Thanks to its basic software, especially optimized for applications in the field, it has clear advantages over unmanaged OCTOPUS switches while costing far less than fully managed ones.



### 9-port-OCTOPUS OS20 Switch from Hirschmann™: Basic Management Offers High Performance at a Comparatively Low Price.

The Hirschmann™ OCTOPUS range now comprises more than 20 different IP67 switches, facilitating optimum solutions for almost any application in the rugged world of automation. The newest member of the family is a 9-port version from the OCTOPUS OS20 series, a layer-2 switch with Hirschmann™'s basic software installed. This software was especially designed for use at field level, and supports not only a variety of management and security functions but also fast redundancy methods such as HIPER Ring, MRP and RSTP. These switches can be cascaded as far as you like, making it possible to implement decentrally structured automation networks with short transmission distances to their terminals – all with maximum network availability thanks to fast redundancy methods and redundant power supplies.

9 Fast Ethernet ports support 10/100 Mbit/s and possess vibration-proof D-coded M12 connections. The OCTOPUS also feature a substantial metal housing and can be operated in the very wide temperature range -40°C to +70°C. This switch fulfills the EMC and fire-proofing requirements for use in rail vehicles, and E1 approval from the German Federal Motor Transport Authority has also been applied for.

The switch's compact (184 x 189 x 70 mm) housing is designed for wall mounting and it can be rapidly taken into operation via plug & play. It can be configured using a command line interface (CLI), DHCP relay agent Option 82 or HiDiscovery, or via the autoconfiguration adapter ACA11-M12 EEC.

RMON, port mirroring and LLDP (Topology Discovery 802.1ab) are available for diagnostic purposes. A potential-free contact signals individually configurable alarms independently of the data network. On the front of the switch there are also LEDs that display not only its device and network status but also data transfers and power supply – greatly simplifying commissioning as well as service and maintenance.

Detailed information can be called up either via a serial V.24 interface or from the 9 Ethernet ports. The OCTOPUS is monitored and configured via SNMP, a standard web browser or Hirschmann™'s powerful network management software Industrial HiVision.



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## OCTOPUS OS20 from Hirschmann™

### The Advantages at a Glance

- Management software for configuration and diagnostics
- Fast redundancy methods
- Ingress protection rating IP67
- Extended temperature range from -40°C to +70°C
- Approved for use in rail vehicles
- 9 Fast Ethernet ports with D-coded M12 connectors
- Redundant power supply
- Potential-free contacts for signaling alarms
- V.24 interface
- LEDs for status displays
- Fast activation by plug and play
- Strong and compact metal housing



OCTOPUS mounted in the roof area of a train

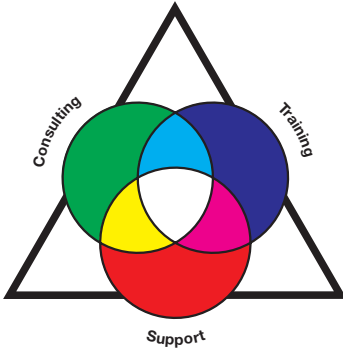


OCTOPUS switches are part of the passenger information systems of modern trains



## Technical Information

Product Description	
Type	OCTOPUS OS20-000900T5T5TAFBHH
Description	Managed IP 67 Switch in accordance with IEEE 802.3, Store-and-Forward-Switching, Software Layer 2 Basic, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s)
Port Type and Quantity	9x 10/100 BASE-TX, M12 D-coding, 4-pole, TP-cable, Autocrossing, Autonegotiation, Autopolarity
Order No.	942 025-005
More Interfaces	
Power Supply/Signaling Contact	1x M12 5-pin connector, A-coding
V.24 Interface	1x M12 4-pin socket, A-coding
Network Size – Length of Cable	
Twisted Pair (TP)	0 m to 100 m
Network Size – Cascadability	
Line-/Star Topology	any
Ring Structure (HIPER-Ring) Quantity Switches	50 (reconfiguration time < 0.3 sec.)
Power Requirements	
Operating Voltage DC	24 V to 48 V
Power Consumption	6.7 W
Current Consumption at 24 V DC	250 mA
Current Consumption at 48 V DC	140 mA
Software	
Management	Serial interface, Web interface, SNMP v2c, v3 password protected, HiVision, File transfer software HTTP/TFTP
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), auto-configuration adapter (ACA21-M12), DHCP Option 82, HiDiscovery
Security	SNMP V3 (no encryption)
Other Services	4 QoS queues, user priority (IEEE 802.1D/p), multicast support (IGMP Snooping/Querier)
Redundancy Functions	HIPER-Ring (client and server), MRP (client and server), RSTP – IEEE802.1w, redundant power supply
Mechanical Stability	
IEC 60068-2-27 Shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 Vibration	1 mm, 5 Hz to 13.2 Hz, 90 min.; 0.7 g, 13.2 Hz to 100 Hz, 90 min.; 3.5 mm, 5 Hz to 8.4 Hz, 10 cycles, 1 octave/min.; 1 g, 8.4 Hz to 150 Hz, 10 cycles, 1 octave/min.
EMC Interference Immunity	
Electrostatic Discharge (ESD)	EN 61000-4-2, 4 kV contact discharge, 8 kV air discharge
Electromagnetic Field	EN 61000-4-3, 10 V/m (80 to 1000 MHz)
Fast Transients (Burst)	EN 61000-4-4, 2 kV power line, 1 kV data line
Surge Voltage	EN 61000-4-5, power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line
Conducted Immunity	EN 61000-4-6, 10 V (150 kHz to 80 MHz)
EMC Emitted Immunity	
FCC CFR47 Part 15	FCC 47 CFR Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of Industrial Control Equipment	cUL 60950-1 (pending)
Shipbuilding	Germanischer Lloyd (pending)
Employment in Vehicles	E1 (pending)
Electronic Mechanisms on Rail-mounted Vehicles	EN 50155, EN 50121-4, DIN 5510-2, NF F 16-101, NF F 16-102



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