



# HIRSCHMANN

A BELDEN BRAND

## Product Bulletin

PB00045HE

### OCTOPUS 8TX-EEC Switch

Unmanaged Ethernet switch with protective metal housing, designed for reliable and secure data transmission and video streaming in harsh industrial environments.



**This 8-port switch is part of the OCTOPUS family, and delivers a simple-to-install and space-saving solution for smaller industrial networks, specifically in transportation and machine building settings.**

- **Compact, easy-to-implement device** – This switch comes ready-to-use straight out of the box and can quickly be installed in tight locations without being housed in cabinets.
- **Developed to master high network loads** – The OCTOPUS 8TX-EEC provides the high throughput and low latency required by high-definition IP-cameras.
- **Secures the network** – Shut off unused ports or limit the network load for enhanced IT security.
- **Approved for transportation industry** – The OCTOPUS 8TX-EEC meets application-specific regulations and has all the necessary approvals for use onboard road and rail vehicles.

For engineers, system integrators and machine builders looking for a ruggedized, easy-to-use switch, Hirschmann offers the perfect fit: the OCTOPUS 8TX-EEC switch.

OCTOPUS 8TX-EEC is ideal for industrial applications that require reliable solutions in areas where space is a premium. The switch enables reliable and secure data transmission at high network loads, even under harsh environmental conditions.

### Applications

The OCTOPUS 8TX-EEC is designed for a range of industrial applications, specifically in the transportation industry, including mass transit systems and rail rolling stock. Due to its ruggedized features, the switch also performs well in general manufacturing, machine building and automotive applications.

### Your Benefits

The OCTOPUS 8TX-EEC switch is a cost-effective and easy-to-install solution that provides reliable data transmission and robust connectivity to systems. For environments where space is at a premium, the switch offers a compact solution and is able to be mounted anywhere, without protective cabinets. In addition, it is built to withstand dirt, dust, vibrations and water, as well as extreme heat and cold.

It's just right for small industrial networks with high data traffic demands.

**A new product to serve your needs.  
Be certain.**



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## OCTOPUS 8TX-EEC Switch



The OCTOPUS 8TX-EEC Ethernet switch joins a family of switches that has allowed fail-safe networks to be installed in a variety of different application scenarios for more than 15 years. The OCTOPUS family offers maximum network reliability and long-term availability under extreme conditions.

This switch has an IP67/IP65 rating, meeting the requirements of switching functions in water-proof and dust-tight housings for mounting outside of cabinets. It also operates at temperatures ranging from -40 °C to +70 °C.

The switch meets application-specific regulations, including EN 50155 for operating conditions in railway vehicles, EN 50121-4 for use along railway lines, EN 45545 for fire protection in trains, GL for ships, and e1 for use in road vehicles.

### Benefits at a Glance

- Powerful switching capabilities (e.g., 1.5 MB buffer for high data peaks)
- 8 configurable Fast Ethernet ports
- M12 connectors for shock and vibration resistance
- IP67/IP65 protection degree rating and metal housing for harsh environments
- Operates at temperatures ranging from -40 °C to +70 °C
- Meets application-specific regulations: EN 50155, EN 50121-4, EN 45545 for trains and e1 for use in road vehicles
- Installation outside of cabinets
- Compatible with Belden cables and Lumberg Automation connectors

Ruggedized networking solution with space-saving, compact design.



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## Technical Information

Product Description	
Type	OCTOPUS 8TX-EEC
Description	IP67/IP65 switch in accordance with IEEE 802.3, store-and-forward-switching, Ethernet (10 Mbit/s) and Fast-Ethernet (100 Mbit/s), 1.5 MB packet buffer, 16k MAC address table, 4 QoS queues
Port Type and Quantity	8 x 10/100 BASE-TX, M12 D-coding, 4-pole, TP cable, auto-crossing, auto-negotiation, auto-polarity
Order No.	942 150-001
More Interfaces	
Power Supply/Signaling Contact	1 x M12 5-pin connector, A-coding/no signal contact
USB Interface	1 x M12 5-pin socket, A-coding
V.24 Interface	n.a.
Network Size – Length of Cable	
Twisted Pair (TP)	0 to 100 m
Network Size – Cascadability	
Line-/Star Topology	Any
Ring Structure (HIPER-Ring)	n.a.
Power Requirements	
Operating Voltage	9 to 32 V DC
Current Consumption at 24 V DC	175 mA
Power Consumption	max. 4.2 W
Software	
Management	n.a.
Diagnostics	LEDs (power, link status, data)
Configuration	Switch: aging time, QoS 802.1p mapping, QoS DSCP mapping. Per port: port state, flow control, broadcast mode, multicast mode, jumbo frames, QoS trust mode, port-based priority, auto-negotiation, data rate, duplex mode, auto-crossing, MDI state
Security	Broadcast threshold, multicast threshold, port disable
Other Services	n.a.
Redundancy Functions	n.a.
Ambient Conditions	
Operation Temperature	-40 °C to +70 °C
Storage/Transport Temperature	-40 °C to +85 °C
Relative Humidity (also condensing)	5% to 100%
MTBF	www.hirschmann.com
Mechanical Construction	
Dimensions (W x H x D)	60 x 200 x 31 mm
Mounting	Wall mounting
Weight	470 g
Protection Class	IP65, IP67
Approvals	
Safety of Industrial Control Equipment	UL 61010-1, UL 61010-2-201
Rolling Stock and Along Track	EN 50155, EN 45545, EN 50121-4
Scope of Delivery and Accessories	
Scope of Delivery	M12-connector (ELWIK A 5012 PG7) for power connection, description and operating instructions, protective caps on M12 ports (Ethernet)
Accessories to Order Separately	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), autokonfiguration adapter ACA22-M12 (EEC) (942 125-001), M12 - USB adapter cable (942 199-001).*

**NOTE:** These are the prominent technical specifications. For complete technical specifications visit: [www.hirschmann.com](http://www.hirschmann.com)

\* 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 re-request. Furthermore unsealed accessories like RJ45 adapters or terminal access cables are certainly not suitable inside IP67 areas.





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## 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, GarrettCom, Hirschmann, Lumberg Automation and Tofino Security.

Irrespective of the technology you use, you can rely on our full support – from implementation to 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 add value to your business. When it comes to signal transmissions, Belden is the No. 1 solutions provider. We know your business and want to understand your specific challenges and goals to show how effective signal transmission solutions can push you ahead of the competition. By combining the strengths of our five leading brands, Belden, GarrettCom, Hirschmann, Lumberg Automation and Tofino Security, we are able to offer the integrated solution you need. Today, it may be a single cable, switch or connector, to solve a specific issue; tomorrow, it can be a complex range of integrated applications, systems and solutions. With the rise in smart, connected devices brought on by the Industrial Internet of Things (IIoT), together, we can make sure your infrastructure is ready to handle and make sense of the influx of data. Transform your business now with instant access to information, and make your vision a reality. Visit [info.belden.com/iiot](http://info.belden.com/iiot) to learn more.

### About Belden

Belden Inc., a global leader in high quality, end-to-end signal transmission solutions, delivers a comprehensive product portfolio designed to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. With innovative solutions targeted at reliable and secure transmission of rapidly growing amounts of data, audio and video needed for today's applications, Belden is at the center of the global transformation to a connected world. Founded in 1902, the company is headquartered in St. Louis, USA, and has manufacturing capabilities in North and South America, Europe and Asia.

For more information, visit us at [www.beldensolutions.com](http://www.beldensolutions.com) and follow us on Twitter [@BeldenIND](https://twitter.com/BeldenIND).

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3 8TX-EEC Switch\_PB00045\_INIT\_HIR\_0616\_E\_EMEA