

Product Overview

Gigabit Ethernet Micro Switch 5 Port PoE



Description

The new generation now supports complete gigabit performance on all connections. The central switch is connected via an integrated 1000Base X fiber optic connection.

The complete Power-over-Ethernet (PoE) functionality has been designed in accordance with IEEE Std. 802.3af and is supported of all four RJ-45 ports (10/100/1000Base-T). Intelligent power management monitors the current power consumption of the end devices connected.

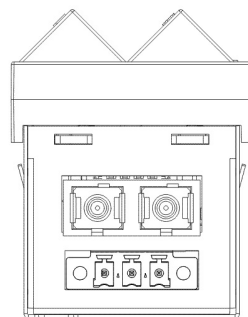
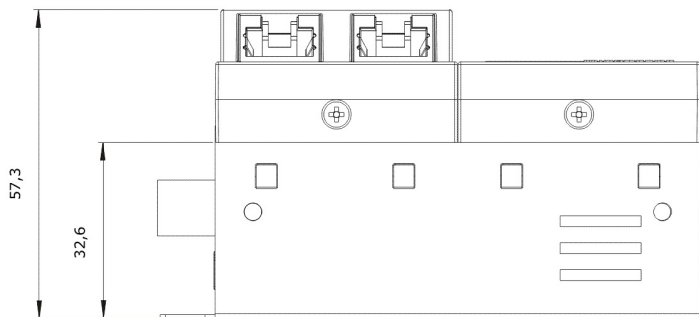
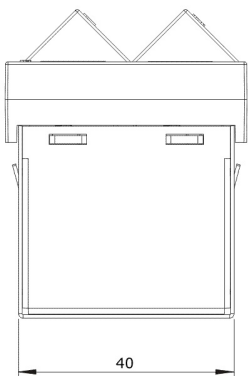
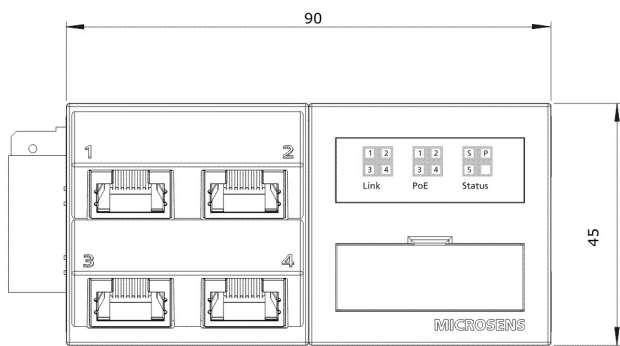
The switch is generally equipped with integrated network management and supports all management standards from Telnet to SNMP and web browser. Furthermore, the switch has at its disposal features for data prioritisation, VLANs and authentication in accordance with IEEE Std. 802.1X.

Properties

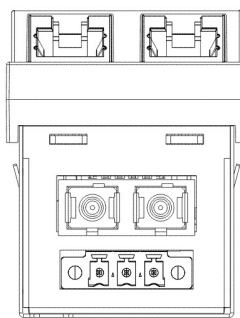
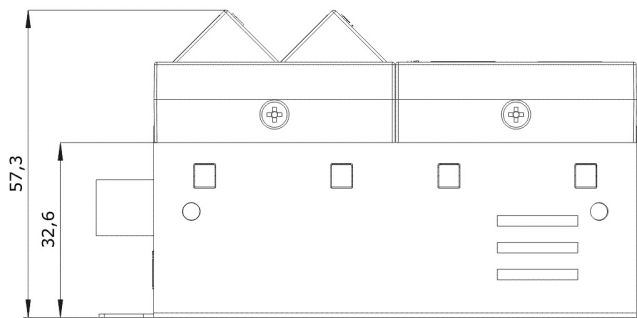
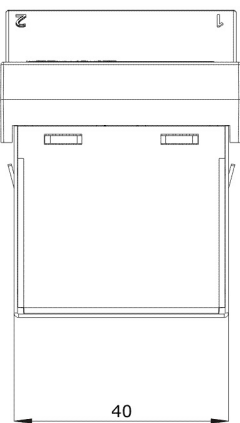
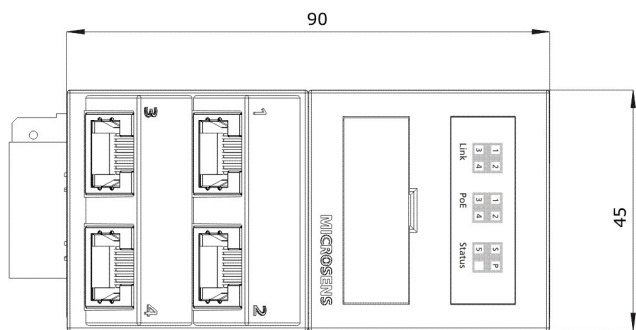
- full Gigabit performance on all ports
- 4x 10/100/1000Base-T ports with PoE, 1x 1000Base-SX/LX uplink
- Integrated management agent, SNMP/web-bases/Telnet/Device Manager
- Port-Security (Authentication according to BSI, IEEE 802.1x, etc.)
- Power-over-Ethernet according to IEEE 802.3af on all 4 TP ports
- VLAN and data prioritisation (QoS)
- Fast and tool-less installation due to snap-in design

Dimensions

Horizontal Version



Vertical Version



Specifications

General

Type	Gigabit Ethernet Switch Layer 2+, IEEE 802.3 compliant
Performance	Store-and-forward, Full wire-speed, non-blocking on all ports
MAC-Adresses	8,192 addresses, automatic learning and aging
Jumbo Frames	max. 10,240 bytes
VLANs	Tagging IEEE 802.3ac Priorisation IEEE 802.1p VLAN IDs 0..4095 Static and dynamic VLAN table
Quality of Service	4 hardware-queues per port prioritisation according to: * IPv4/IPv6 * VLAN priority IEEE 802.1p * port queue weighting strict or weighted, configurable
Management	CLI: telnet Web: http SNMPv1, SNMPv2c Microsens NMP-Software

Uplink (Pluggable Transceiver)

Number of Ports	1 (only MS450869PM-48 & MS450879PM-48)
Type	Fast/Gigabit Ethernet, 100/1000Base-X
Connector	SFP-Slot
Flow Control	Pause frames (IEEE 802.3x), configurable

Display

Power	Local ports 1 to 4: green: PoE sourcing orange: PoE standby red: PoE error
Link	Local ports 1 to 4: blinking: activity green: authorized/forwarding orange: blocked red: unauthorized
Status	Switch Status (S) green: device ready Link status uplink (5) blinking: activity green: authorized/forwarding orange: blocked red: unauthorized

Local Ports (Twisted-Pair)

Number of Ports	4
Type	Gigabit Ethernet, triple speed 10/100/1000Base-T
Connector	RJ-45 jack, shielded
Cable Type	Twisted-Pair cable, category 5e, impedance 100 Ohm, length max. 100 m
Flow Control	Pause frames (IEEE 802.3x), configurable
Pinout	Auto MDI/MDI-X, auto polarity
Power-over-Ethernet	Power Sourcing Equipment (PSE) IEEE 802.3af class 0, max. 15.4 W, forced-mode (legacy-devices), pinout wires 1/2 (+), 3/6 (-)

Uplink (Fixed Optical Transceiver)

Number of Ports	1
Type	Gigabit Ethernet Multimode: 1000Base-SX Single Mode: 1000Base-LX
Connector	SC or ST duplex
Fiber Cable Type	Multimode: 50 or 62.5/125 µm fiber Single Mode: 9/125 µm fiber
Distance	Multimode: 550 m Single Mode: 10 km, 20 km (optional) actual distance may depend on fiber performance
Output Optical Power	Multimode 850nm: -9,5..-4 dBm Single Mode 1310nm 10 km: -9,5..-3 dBm Single Mode 1310nm 20 km: -9,5..+3 dBm
Receiver Sensitivity	Multimode 850nm: -18 dBm (max. 0 dBm) Single Mode 1310nm 10 km: -20 dBm (max. -3 dBm) Single Mode 1310nm 20 km: -23 dBm (max. -3 dBm)
Flow Control	Pause frames (IEEE 802.3x), configurable

Power Supply (DC)

Input Voltage	44..57 VDC (48 VDC typ.)
Power Consumption	Typ. 6.5 W (device only), max. 65 W (incl. PoE)
Connector	3 pin screw clamp, PE/-/+
Ground Terminal (PE)	6.3 mm flat-pin plug

Mechanical

Dimensions	90 mm x 45 mm x 58 mm (l x w x d, without connectors)
Mounting depth	32,6 mm
Weight	310 g
Housing Color	Standard color: pure white (alternative colors on request)

Reliability

MTBF	100,000 h
Method	calculated, MIL-HDBK-217F

Control Panel

Reset Button	Reset of device, last saved configuration is reloaded
Config Button	Pressed separately: Request IP-configuration for management agent. Pressed together with reset-button: Reset to factory default settings, can be disabled

Environment

Operating Temperature	0..40 °C
Storage Temperature	-20..85 °C
Relative Humidity	10..90%, non condensing

Standards Compliance

CE Mark	2004/108/EC (EMC) 2006/95/EG (Low Voltage)
Safety	EN 60950-1:2006
Electromagnetic Emission	EN 55022:2006
Electromagnetic Immunity	EN 55024:1998
IEEE (Ethernet)	802.3i 10Base-T 802.3u 100Base-T 802.3z 1000Base-X 802.3ab 1000Base-T 802.3x Flow Control 802.3ac VLAN Tagging 802.3af PoE 802.1D Spanning Tree 802.1Q Tagged VLANs 802.1p Packet Prioritisation 802.1w Rapid Spanning Tree 802.1X Network Access Control
RFC	IPv4: - RFC 791 (IPv4) - RFC 826 (ARP) - RFC 792 (ICMP) - RFC 2131 (DHCP) - RFC 2474/3260 (IPv4 DiffServ/IPv6 Traffic Class) - RFC 4541 (IGMP) - RFC 1769 (SNTP) - RFC 1155/1156/1157 (SNMPv1) - RFC 1901/1905/1906 (SNMPv2) - RFC 3411/3412/3584 (SNMPv3) - RFC 2574/3414 (USM) - RFC 2575/3415 (VACM)

- RFC 2865 (RADIUS)
- RFC 2866 (Accounting)
- RFC 2868 (Tunnel Attributes)
- RFC 5424 (Syslog)

Additional Features

Software

- Port Monitor
- CDP v1, v2

Order Information

Description	Article Number
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Horizontal Versions

Gigabit Ethernet Installation Switch 4x10/100/1000T, 1x 1000Base-SX, ST Multimode 850 nm, horizontal version, 48 V DC power input, manageable VLANs, QoS, 4x PoE ports	MS450860PM-48
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Gigabit Ethernet Installation Switch 4x10/100/1000T, 1x 1000Base-SX, SC Multimode 850 nm, horizontal version, 48 V DC power input, manageable VLANs, QoS, 4x PoE ports	MS450861PM-48
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Gigabit Ethernet Installation Switch 4x10/100/1000T, 1x 1000Base-SX, SC Single Mode 1310 nm, 48 VDC power input, manageable VLANs, QoS, 4x PoE ports	MS450862PM-48
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Gigabit Ethernet Installation Switch 4x10/100/1000T, 1x 1000Base-X SFP Port, 48 VDC power input, manageable VLANs, QoS, 4x PoE ports	MS450869PM-48
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Vertical Versions

Gigabit Ethernet Installation Switch 4x10/100/1000T, 1x 1000Base-SX, ST Multimode 850 nm, vertical version, 48 V DC power input, manageable VLANs, QoS, 4x PoE ports	MS450870PM-48
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Gigabit Ethernet Installation Switch 4x10/100/1000T, 1x 1000Base-SX, SC Multimode 850 nm, vertical version, 48 V DC power input, manageable VLANs, QoS, 4x PoE ports	MS450871PM-48
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Gigabit Ethernet Installation Switch 4x10/100/1000T, 1x 1000Base-SX, SC Single Mode 1310 nm, 48 VDC power input, manageable VLANs, QoS, 4x PoE ports	MS450872PM-48
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Gigabit Ethernet Installation Switch 4x10/100/1000T, 1x 1000Base-X SFP Port, 48 VDC power input, manageable VLANs, QoS, 4x PoE ports	MS450879PM-48
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Accessories

Description	Article Number
Universal installation set for E2 mounting boxes consisting of adapter plate and cover frame (pure white)	MS140029
Installation set consisting of cover frame (168 x 85 mm), front-locking device support, 1x blind cover Colour: pure white	MS140040F2
Installation set consisting of cover frame (168 x 85 mm), adapter plate and 2x device support, pre-assembled, Colour: pure white	MS140040BR2
Ackermann Installation set consisting of socket (165 mm length), device support and 1x 45 mm blind cover Scope of delivery: parts pre-assembled	MS140026
Power supply 100-230 VAC / 48 VDC, 1.35 A, 65 W	MS700675
SFP Gigabit Ethernet Transceiver 1000Base-SX, Multimode 850nm, digital Diagnostics, exten. temp.-range: -40..85°C	MS100200DX
SFP Gigabit Ethernet Transceiver 1000Base-LX, Single Mode 1310nm, digital Diagnostics, -40..85°C	MS100210DX
nmp Professional - MICROSENS Network Management Platform - java software and one year update license	MS200160-1
nmp Standard - MICROSENS Network Management Platform - java software and one year update license	MS200162-1
NMP Server - management software with 1 year update licence, incl. 5 clients	MS200164-1

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