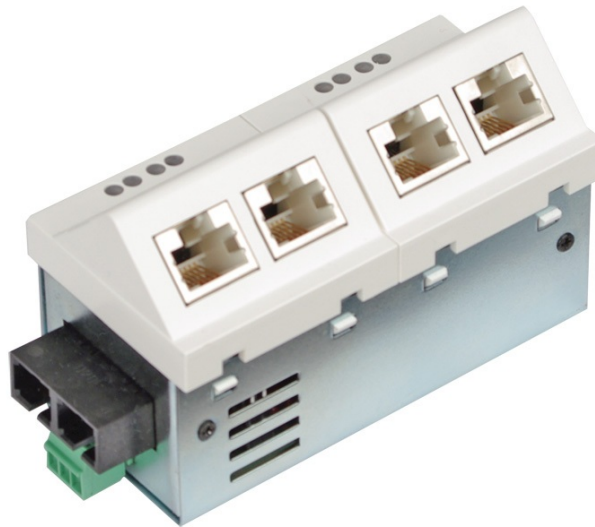**MICROSENS**

Product Overview

Fast Ethernet Micro Switch 5 Port with PoE

Description

The MICROSENS Fiber to the Office concept with its intelligent combination of fiber and twisted-pair cabling offers a long term and therefore future proof investment into the building infrastructure.

Due to the tool less snap-in installation the mounting of the switch is done easily and fast. This most compact system on the market ensures furthermore the compatibility to the most common installation systems of the world.

The Fast Ethernet installation-switch has an integrated management agent which offers besides the monitoring of status information also comprehensive configuration possibilities. The main features are the extensive hardware configuration, the port based VLANs and the data prioritisation (CoS) according to the IEEE 802.3p and IEEE 802.3Q® standards.
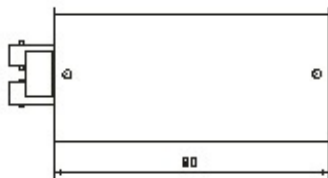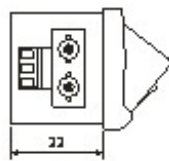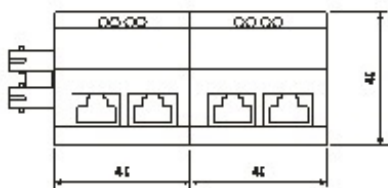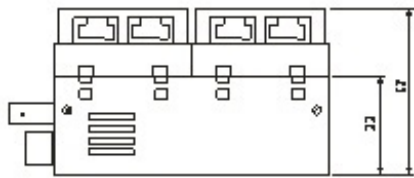
The actual switch has full Power-over-Ethernet support on all ports. The Power-over-Ethernet controller according IEEE 802.3af is already integrated. The complete device is supplied with 48 V DC power. This supply can be done by a compact external power supply or a separate in-house DC power network.

Properties

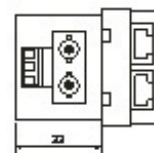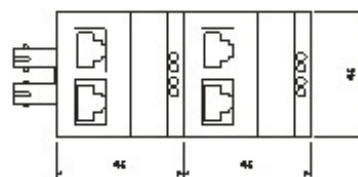- Power-over-Ethernet for powering VoIP phones, IP cameras, WLANAPs, etc.
- Cost efficient VoIP integration in fiber optic networks
- Easy administration (Web-, Telnet-, SNMP-interface and NMP Platform)
- VLANs, data prioritisation (QoS)
- Port based VLANs (traffic segmentation)
- authentication according to 802.1X
- Fast, tool-free mounting by snap-in installation

Dimensions

hor. Version

vert. Version

Specifications

General

Type	Fast Ethernet Switch Layer 2+, IEEE 802.3 compliant
Performance	Store-and-forward, Full wire-speed, non-blocking on all ports
MAC-Adresses	2,048 addresses, automatic learning and aging
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

Uplink (Fixed Optical Transceiver)

Number of Ports	1
Type	Fast Ethernet Multimode: 100Base-FX Single Mode: 100Base-FX
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 1300nm: -19 dBm Single Mode 1300nm 15 km: -15 dBm
Receiver Sensitivity	Multimode 1300nm: -31 dBM Single Mode 1300nm 15 km: -31 dB
Flow Control	Pause frames (IEEE 802.3x), configurable

Control Panel

Reset Button	Reset of device, last saved configuration is reloaded
Config Button	Button
	Pressed separately: Request

Local Ports (Twisted-Pair)

Number of Ports	4
Type	Fast Ethernet, dual speed 10/100Base-TX
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 (-)

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

Power Supply (DC)

Input Voltage	44..57 VDC (48 VDC typ.)
Power Consumption	Typ. 4 W (device only), max. 65 W (incl. PoE)
Connector	3 pin screw clamp, PE/-/+

IP-configuration for
management agent.
Pressed together with reset-
button: Reset to factory default
settings, can be disabled

Ground Terminal (PE)	6.3 mm flat-pin plug

Environment

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

Mechanical

Dimensions	90 mm x 45 mm x 57 mm (l x d x h, without connectors)
Mounting depth	33 mm
Weight	200g
Housing Color	Standard color: pure white (alternative colors on request)

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 802.3x Flow Control 802.3ac VLAN Tagging 802.3af Power-over-Ethernet 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)

Reliability

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

Additional Features

Software	- Port Monitor - CDP v1, v2 - Port based VLANs (traffic

segmentation)

Order Information

Description	Article Number
Horizontal Installation	
Installation Switch Fast Ethernet 45x45, 4x 10/100Base-TX, 1x 100Base-FX 1300nm Multimode, management , integrated PoLAN-controller	**MS450230PM-48**
Installation Switch Fast Ethernet 45x45, 4x 10/100Base-TX, 1x 100Base-FX 1300nm Multimode, management , integrated PoLAN-controller	**MS450231PM-48**
Installation Switch Fast Ethernet 45x45, 4x 10/100Base-TX, 1x 100Base-FX 1300nm Single mode, management , integrated PoLAN-controller	**MS450232PM-48**
Installation Switch Fast Ethernet 45x45, 4x 10/100Base-TX, 1x 100Base-FX 1300nm Single mode, management , integrated PoLAN-controller	**MS450233PM-48**
Vertical Installation	
Installation Switch Fast Ethernet 45x45, 4x 10/100Base-TX, 1x 100Base-FX 1300nm Multimode, management , integrated PoLAN-controller	**MS450240PM-48**
Installation Switch Fast Ethernet 45x45, 4x 10/100Base-TX, 1x 100Base-FX 1300nm Multimode, management , integrated PoLAN-controller	**MS450241PM-48**
Installation Switch Fast Ethernet 45x45, 4x 10/100Base-TX, 1x 100Base-FX 1300nm Single mode, management , integrated PoLAN-controller	**MS450242PM-48**
Installation Switch Fast Ethernet 45x45, 4x 10/100Base-TX, 1x 100Base-FX 1300nm Single mode, vertical mounting Laser min. 15 km	**MS450243PM-48**

Accessories

Description	Article Number
Universal installation set for E2 mounting boxes consisting of adapter plate and cover frame (pure white)	**MS140029**
Universal installation kit for cable ducts with C-profile, incl. masking frame	**MS140040BR**
Ackermann Installation set consisting of socket (165 mm length), device support and 1x 45 mm blind cover Scope of delivery: parts pre-assembled	**MS140026**
Ackermann Installation set consisting of socket (208 mm length), device support, 1x 45 mm blind cover, 1x socket cover Scope of delivery: parts pre-assembled	**MS140027**
Power supply 100-230 VAC / 48 VDC, 1.35 A, 65 W	**MS700675**
Switching power supply 48V/1.35A 65W for Power-over-Ethernet devices	**MS700680**