MICROSENS

Product Overview

Fast Ethernet Micro Switch Twisted Pair Uplink

Description

In addition to the solution with the fiber optic connection, MICROSENS also offers micro switches with twisted pair uplink. With the integrated switches – the most compactly designed on the market – upgrading of Ethernet connections as well as Power-over-Ethernet can be made at the work location at no great expenditure.
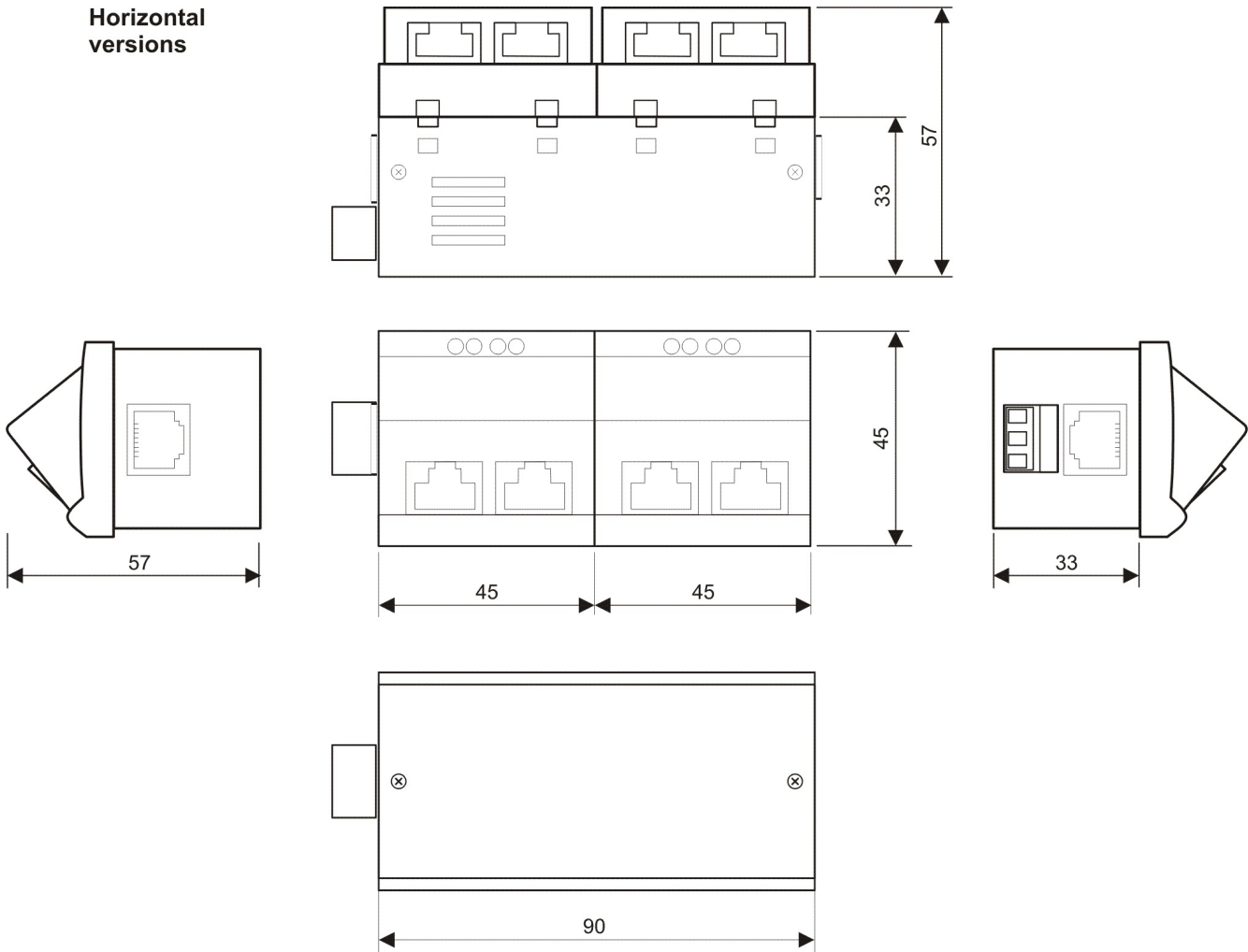
Beside the standard version with integrated 230 VAC power unit, there is an extended version available with Power-over-Ethernet and 48 VDC power connection. The PoE version can be supplied over the uplink port via PoE and is therefore completely independent of an external power supply. The power of up to 15.4 W (Class 0) is not only for the own supply (Powered Device, PD) but can be fed to the user connections so that it is available to other users (Power Source Equipment, PSE)
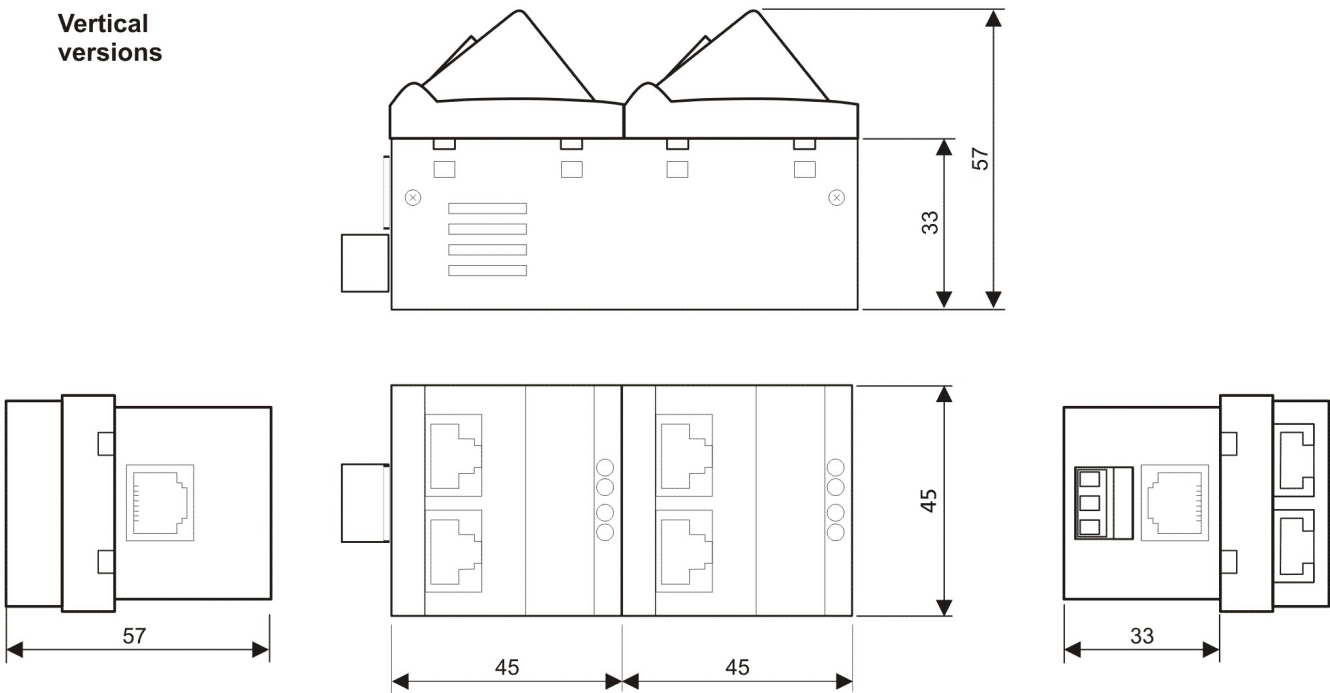
Properties

- Versions with 5x and 6x 10/100TX
- Internal 230VAC power supply, optional PoE version with 48 VDC
- Easy expansion of the port capacity (1 to 4 ports)
- Easy administration (Web-, Telnet-, SNMP-interface and NMP Platform)
- VLANs, data prioritisation (QoS), authentication according to 802.1X
- Port based VLANs (traffic segmentation)
- Fast, tool-free mounting by snap-in installation
- Power-over-Ethernet for powering VoIP phones, IP cameras, WLAN, APs, etc. (PoE version)
- alternative power supply via uplink port using Power over Ethernet (Powered Device)

Dimensions

Horizontal versions

57

33

57

45

33

57

45

45

33

90

Vertical versions

57

33

57

45

45

57

45

45

33

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 (Twisted-Pair)

Number of Ports	1
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	For "PM"-Series, only: Powered Device (PD) IEEE 802.3af class 0, max. 15.4 W, forced-mode (legacy-devices), pinout wires 1/2 (+), 3/6 (-)

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

Power Supply (AC)

Input Voltage	195..265 V AC (230 V AC typ.) 50..60 Hz (50 Hz typ.)
Power Consumption	Typ. 4 W

Local Ports (Twisted-Pair)

Number of Ports	Fast Ethernet, dual speed 10/100Base-TX
Type	RJ-45 jack, shielded
Connector	Twisted-Pair cable, category 5e, impedance 100 Ohm, length max. 100 m
Cable Type	Pause frames (IEEE 802.3x), configurable
Flow Control	Auto MDI/MDI-X, auto polarity
Pinout	Auto MDI/MDI-X, auto polarity
Power-over-Ethernet	For "PM"-Series, only: 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	"PM"-Series, only: 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/-/+
Ground Terminal (PE)	6.3 mm flat-pin plug

Environment

Operating Temperature	0..40 °C
Storage Temperature	-20..85 °C

Connector	3 pin screw clamp, PE/N/	**Relative Humidity**	10..90%, non condensing
Ground Terminal (PE)	6.3 mm flat-pin plug		

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)

Reliability

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

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 802.1D 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 - Port based VLANs (Traffic Segmentation)

Order Information

Description	Article Number
Horizontal Installation	
Fast Ethernet Installation-Switch 45x45 with Twisted Pair Uplink, 5x 10/100TX, horizontal version, int. 230VAC power supply	**MS450150M**
Fast Ethernet Installation-Switch 45x45 with Twisted Pair Uplink + Downlink, 6x 10/100TX, horizontal version, int. 230VAC power supply	**MS450156M**
Fast Ethernet Installation-Switch 45x45 with Twisted Pair Uplink, 5x 10/100TX + POE, horizontal version, 48VDC power input	**MS450154PM-48**
Fast Ethernet Installation Switch 45x45, Uplink TP, horizontal, Management, integrated PoE-Controller	**MS450156PM-48**
Vertical Installation	
Fast Ethernet Installation-Switch 45x45 with Twisted Pair Uplink, 5x 10/100TX, vertical version, int. 230VAC power supply	**MS450155M**
Fast Ethernet Installation-Switch 45x45 with Twisted Pair Uplink + Downlink, 6x 10/100TX, vertical version, int. 230VAC power supply	**MS450157M**
5 Port Fast Ethernet Micro-Switch 45x45 vertical, 4x10/100TX with 1x10/100Base-TX uplink, 48 VDC external power supply optional through 10/100TX uplink port	**MS450155PM-48**
6 Port Fast Ethernet Micro-Switch 45x45, 4x10/100TX with 2x10/100Base-TX up/downlink, vertical mounting, 48 VDC external power supply optional through 10/100TX uplink port (PD-Powered Device), manageable (web/Telnet/SNMP/ opt. NMP software), VLANs, QoS, Security, 5x Power-over-Ethernet ports acc. to IEEE802.3af	**MS450157PM-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**