

Gigabit Ethernet Installation Switch 45x45 with Twisted Pair Uplink

Introduction

Gigabit Performance

With Gigabit Ethernet Switches your system is already equipped for future bandwidth requirements in the workplace. The full Gigabit Ethernet performance is supported on the copper uplink as well as on the local copper ports.

Integrated Power-over-Ethernet

With the Power-over-Ethernet (PoE) Standard IEEE 802.3af end devices (e.g. VoIP telephones) can be supplied with data as well as power through the connected Twisted-Pair cable which means you don't need an external power supply.

Simple installation

Thanks to snap-in installation which doesn't require any tools the switch can be installed quickly and easily. This system, which is the most compact available, also ensures compatibility with standard international installation systems.

Comprehensive management

The integrated management agent enables full configuration, monitoring and management of all devices in the network via a powerful software package called MICROSENS Device Manager. Extended functions such as VLANs, data prioritisation (QoS) and Power-over-Ethernet can be specifically assigned.

See also document entitled '*MICROSENS Network Management Specifications*'

Features

- **Gigabit Switch**
Fanless Gigabit Ethernet 10/100/1000 MBit/s installation switch in accordance with IEEE 802.3u Layer-2 non-blocking switch, wire-speed forwarding, store-and-forward, max. 1024 MAC addresses, auto-learning and aging, Full Duplex Frame in accordance with IEEE 802.3x.
- **45x45 Design**
Simple snap-in installation with (no screw fixing) in under-window ducts, under-floor ducts, surface housing, cavity walls and table housings, compact dimensions
- **Power Management**
48 V direct voltage for switch and PoE, unused ports are deactivated to reduce energy consumption, maximum power draw of switch 8 W (not including PoE supply), PoE supply maximum 61.6 W (4x 15.4 W).
- **Connections**
5x 10/100/1000Base-TX (RJ-45) with PoE, auto negotiation to identify speed 10/100/1000 Mbps and half or full duplex operation, auto crossover for automatic adaptation of the pin configuration to the connected cable for uniform cabling.

Technical Specifications

Type	Gigabit Ethernet installation switch 45x45 5 Ports 10/100/1000Base-TX with PoE, in accordance with IEEE 802.3 for cable duct/under-floor duct installation
Connections	5x local port 10/100/1000Base-T, RJ-45, PoE Option: 1x cascading port 10/100/1000Base-T, RJ-45, PoE 1x power supply terminal 48 V DC, max 70 W.
Displays	LED display field for local ports <i>Link Status</i> <i>PoE Status</i> for switch <i>Power, Switch Status, Uplink Status</i>
Cable type	STP cable, 100 Ohms, category 5 with RJ-45 plug
Max. cable length	100 m (Twisted-Pair)
Power-over-Ethernet	Integrated controller in accordance with IEEE 802.3af, max. 15.4 W per port
Data Transmission Rate	TP: 10/100/1000 Mbps
Power Supply	Direct voltage 48 VDC (44..57 V) max. 8 W for Switch plus max. 4x 15.4 W for connected PoE end devices
Management	Integrated Management Controller
Operating Temperature	0°C to 40°C
Storage Temperature	-20°C to 85°C
Relative Humidity	5% to 80%, non condensing

*Lengths shown are based on the assumption of typical fibre damping and cannot be guaranteed.

System Components

Two versions of the installation switch are available - for horizontal or vertical installation. A modular design was deliberately for both of the installation options:

- Lower costs for procurement and installation
- Robust and durable design thanks to self-enclosed device, easy handling
- Gigabit connections are directly contacted in the device, which allows short, electrical pathways (EMC) and minimises error-proneness

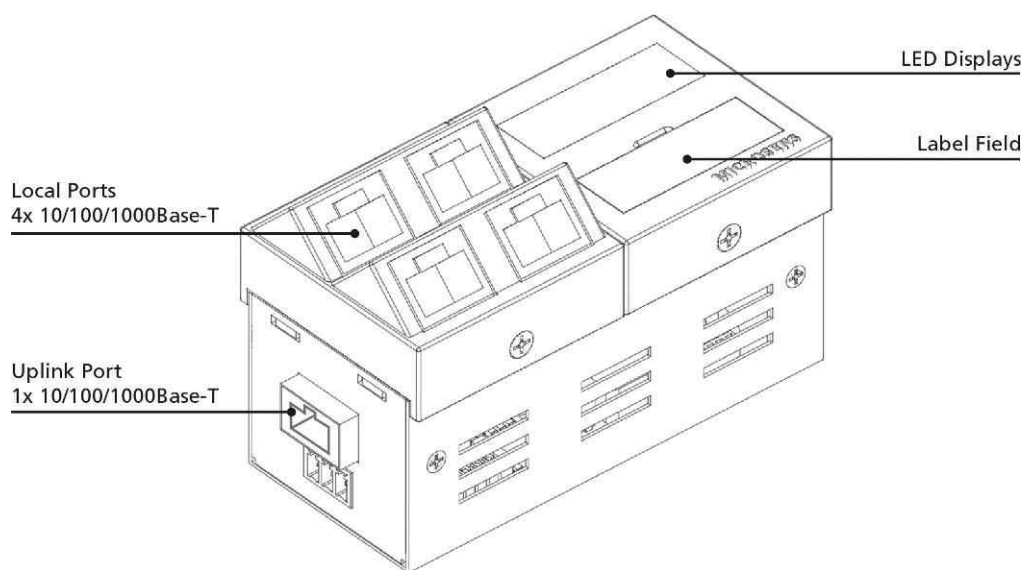


Fig. 1: Horizontal version of Gigabit Ethernet Installation Switch

Resetting the Switch and IP Configuration

The switch can be operated directly using hidden buttons. The buttons are located under the label field on the front of the switch (see Fig. 3).

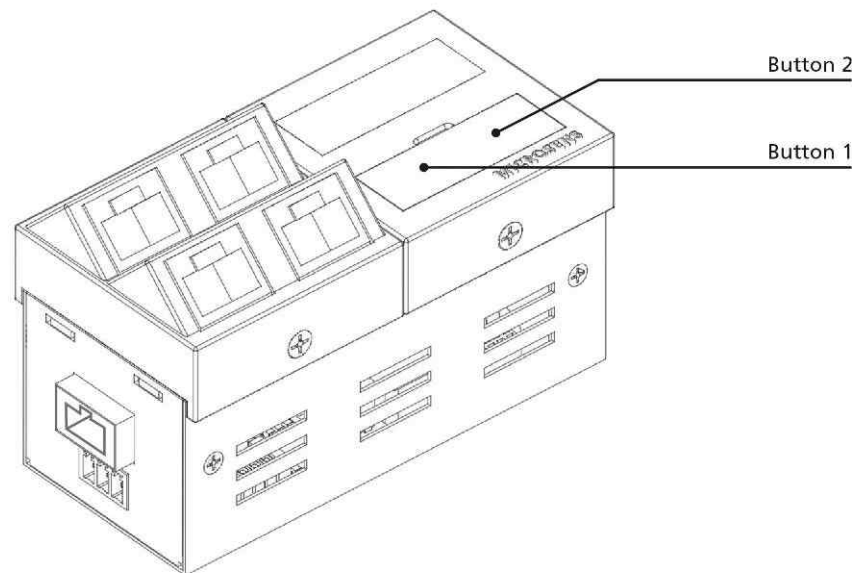


Fig. 2: Position of the Reset buttons (horizontal installation version)

Button 1: Hardware reset:

The device can be reset by briefly pressing Button 1. The reset is carried out by the hardware (cold start). When it is restarted the last configuration saved in the device will be loaded. The IP address and device name will remain unchanged.

NOTE: During the reset the data transfer via the switch is temporarily interrupted.

Button 2: IP configuration / Resetting to factory settings

Button 2 has a dual function, depending on the type of activation:

IP configuration

By pressing Button 2 for at least 3 seconds (until the Status LED starts flashing yellow) an IP configuration query is triggered for the switch. Using a computer within the same Ethernet segment with MICROSENS Device Manager Software that has already been launched the IP address and the device name can now be assigned manually.

Resetting to factory settings

If Button 2 is held down during hardware reset (by briefly pressing Button 1), the configuration of the switches is reset to the factory settings. The IP configuration of the switch remains unchanged. Button 2 has to be held down, until the switch reset cycle has been completed.

LED displays

A total of twelve LEDs are used to display the operating status of the Gigabit Ethernet installation switches.

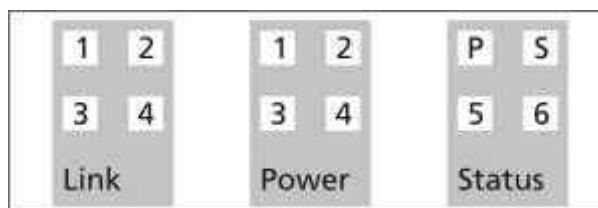


Figure 3: LED displays

Link Status

LED	Meaning	Function		
Link	Link Status	Colour	Status	Description
1,2,3,4			Off	No link to port
		Green	static	Link to port
		Green	flashing	Data transfer to port

Power-over-Ethernet

Power	PoE Status	Colour	Status	Description
1,2,3,4		–	Off	PoE function deactivated
		Green	Static	PoE function active
				Connected PD is supplied with PoE
		Orange	Static	PoE function active
				No PD identified
		Red	Static	PoE function active
				Port locked by Power Management

Switch Status

P	Power	Colour	Status	Description
		–	Off	Device deactivated
		Green	static	Device fully operational
S	Switch Status	–	off	Device in normal operating condition
		Orange	static	Reset sequence is carried out
		Orange	flashing	IP configuration is triggered
		Green	flashing	Restoration to factory settings carried out
5	Uplink Status	–	off	No link to port
		Green	static	Logical link to uplink port (Auto negotiation completed)
		Green	flashing	Date transfer to port
		Orange	static	Link to port (Auto negotiation not completed)
6	Downlink Status	Colour	Status	Description
			off	deactivated

Dimensions

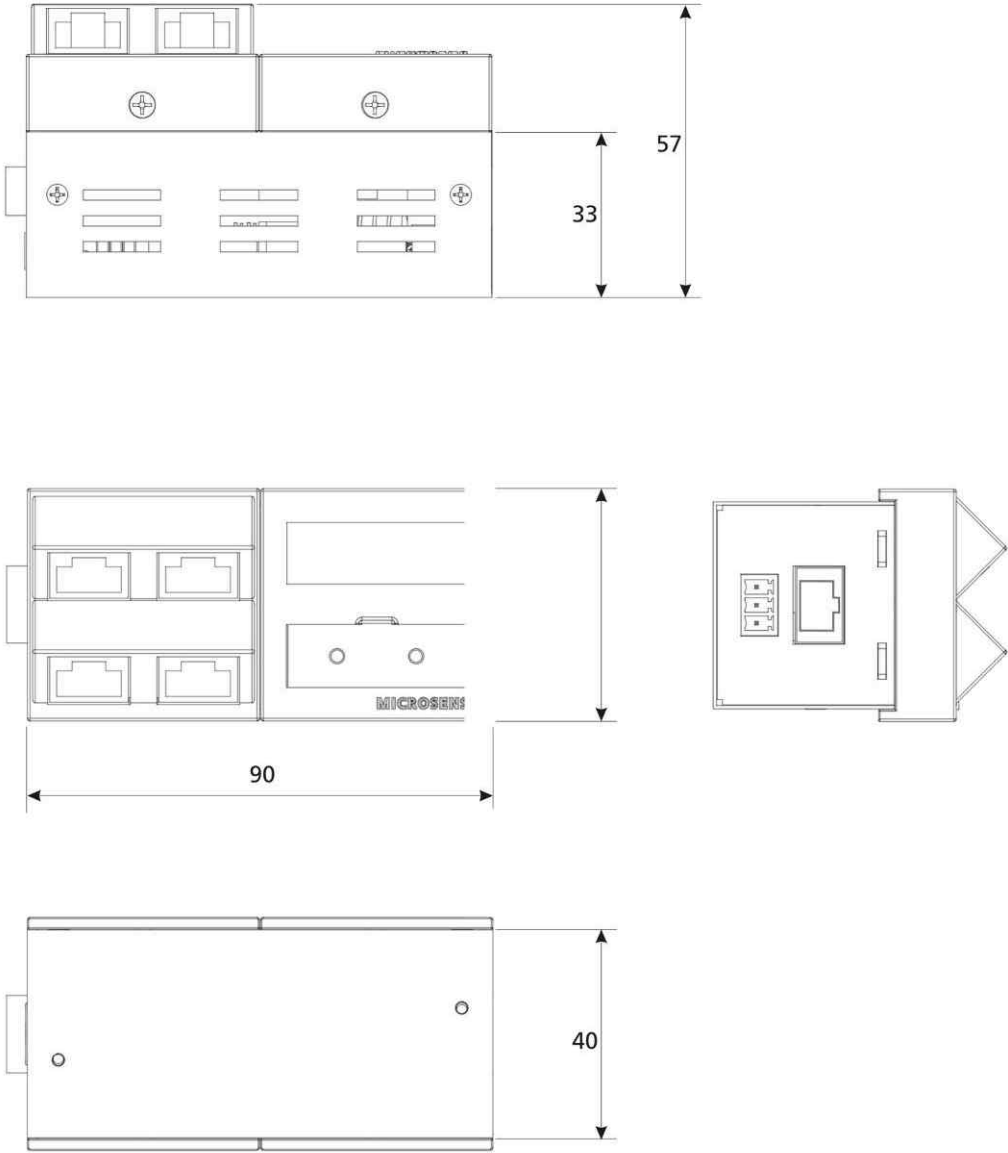


Fig. 4: Dimensions of horizontal installation version

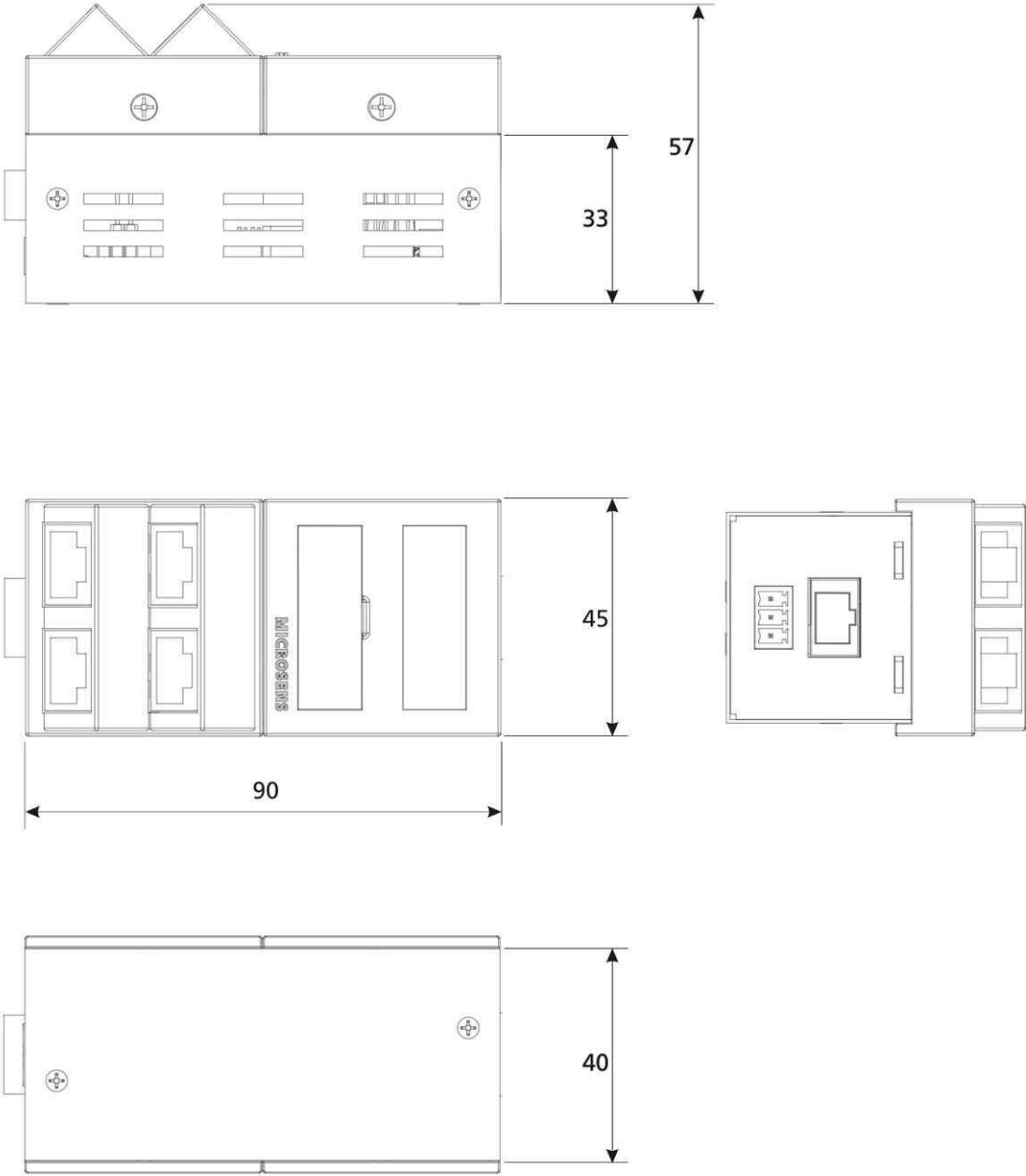


Fig. 5: Dimensions of vertical installation version

Power Supply

The installation switch has a 48 V DC supply. An external network component can be used for connecting to 230 V AC (MS700675). The network component has an output of 65 W and ensures the power supply to the switch and the PoE end devices (max. 4 x 15 W).

Ordering Information

	Art.-No.	Description	Connectors
1x Uplink	MS450184PM-48	Gigabit Ethernet Installation Switch 5x10/100/1000T, horizontal version, 48 V DC power supply, manageable VLANs, QoS, 4x PoE-Ports	5x RJ-45 1x 3-pin 48 V DC
	MS450185PM-48	Gigabit Ethernet Installation Switch 5x10/100/1000T, vertical version, 48 V DC power supply, manageable VLANs, QoS, 4x PoE-Ports	5x RJ-45 1x 3-pin 48 V DC
Uplink- und Downlink	MS450186PM-48	Gigabit Ethernet Installation Switch 6x10/100/1000T, horizontal version, 48 V DC power supply, manageable VLANs, QoS, 4x PoE-Ports	6x RJ-45 1x 3-pin 48 V DC
	MS450187PM-48	Gigabit Ethernet Installation Switch 6x10/100/1000T, vertical version, 48 V DC power supply, manageable VLANs, QoS, 4x PoE-Ports	6x RJ-45 1x 3-pin 48 V DC

Accessories (Extract)

Art. No.	Description
MS140029	Universal installation kit for installation in standard under-window ducts (installation adapter + cover frame, white)
MS200150	Device Manager PC Software V3.x MICROSENS Switch Management (CD-ROM)
MS700675	Switched power supply, Input: 230V, Output: 48V/1.35 A 65 W for 45x45, Power-over-Ethernet Switch
MS700430	Hat rail power supply 60 Watt 48 V/1.25 A, wide range input 85-264 V AC

We accept no liability for the accuracy of the information given. As a result of the continuous development of our products we reserve the right to make technical modifications.dh4308