

## Entry Line Industrial Gigabit Ethernet Bridging Converter, PoE+ optional 1x 10/100/1000Base-T, 1x 100/1000 SFP

### General

The IP protocol has already left the in-house environment and is going to take all remaining communication areas. Industrial Ethernet already is an established idea, describing the reliable use of Ethernet components in harsh environments.

Because of the large number of these applications the market requires simple and also reliable and cost effective products. With the new Industrial Ethernet Entry Line MICROSENS fulfils these requirements. The products are very compact and include:

- 5 and 8 port Fast Ethernet Switches
- 8 Port Gigabit Ethernet Switch
- Switches with fiber-uplink
- Media Converter for Fast Ethernet and Gigabit Ethernet
- Device Server for the conversion of serial interfaces (RS-232/422/485) to IP.

All new devices distinguish themselves with easy handling (Plug&Play) and do not need extensive configuration. New developments are focusing on increasing the port numbers and further implementation of Gigabit Ethernet.



Fig. 1: Entry Line Gigabit Ethernet SFP Bridging Converter

## Benefits

### System Interface/Performance

- RJ-45 port support Auto MDI/MDI-X Function
- Auto Negotiation Speed, Half/Full Duplex
- Store-and-Forward Switching Architecture
- Jumbo Frame: 9Kbytes
- Alarm Contact Relay

### Power Supply

- Wide Input Range Power Design
- Power Polarity Reverse Protection
- Overload Current Protection

### Chassis/Installation

- IP-30 Protection
- DIN-Rail and Wall Mount Design

## Standard Compliance

### IEEE Standards

- IEEE 802.3 10Base-T Ethernet
- IEEE 802.3u 100Base-TX/100Base-FX
- IEEE 802.3x Flow Control and Back Pressure
- IEEE 802.3ab 1000Base-T
- IEEE 802.3z 1000BaseSX/LX standards
- IEEE 802.3af/at for PoE/PoE+

## Technical specifications

<b>Type</b>	Gigabit Ethernet Media Bridging Converter for industrial use, optional with PoE+
<b>Fiber type</b>	see SFP specification
<b>Cable type</b>	Shielded Twisted Pair cable, 100 Ohm, min. Category 5, Pin out RJ45-ports auto crossing
<b>Data rate</b>	RJ-45: 10/100/1000 Mbps SFP: 100/1000 Mbps
<b>Packet Size</b>	max. 9 kBytes
<b>POE Pinout</b>	30 Watt 2 pair mode A end span V+, V+, V-, V- for pin 1, 2, 3, 6
<b>LED displays</b>	PW1 (green): ON – power good, OFF – power failed SFP LED (green): ON – SFP detected TP LED: Amber ON – PD detected; green ON – Link/active

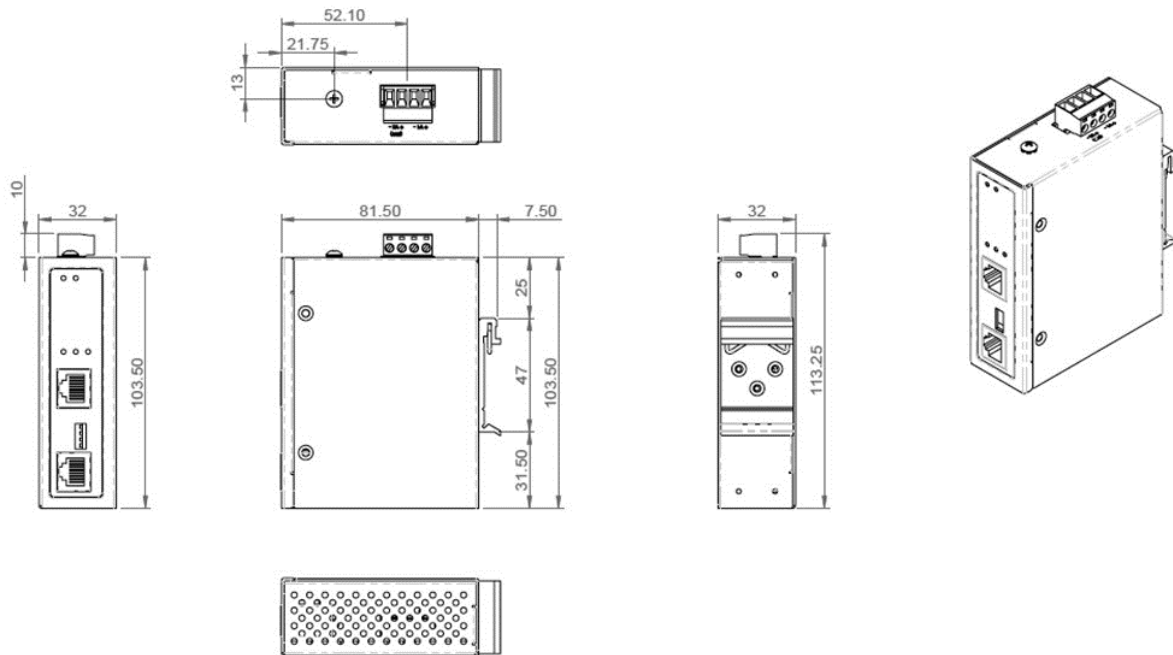
<b>DIP Switch</b>	DIP Switch to select speed 100 Mbps or 1000 Mbps
<b>Alarm Contact</b>	max. 1 A / 24 V DC, closed when power lost
<b>Mounting</b>	35 mm DIN-Rail, according DIN EN 50022 optional wall mounting
<b>Power supply</b>	12..56 V DC (non PoE+ version) 48..56 V DC (PoE+ version) connections with screw terminals, reverse polarity protection, overload current protection
<b>Power Consumption</b>	2 W @ 48 V DC without PoE
<b>Dimensions</b>	32 x 81.5 x 103.5 mm (w x d x h)
<b>Protection Class</b>	IP 30
<b>Operating temp.</b>	-40°C to 75°C
<b>Storage temperature</b>	-40°C to 85°C
<b>Rel. humidity</b>	5% to 95% non condensing
<b>MTBF</b>	510,304 hrs (MIL-HDBK-217F) at 25°C
<b>Certifications</b>	
<b>EN55022/24</b>	ITE equipment
<b>EN55011</b>	Industrial, Scientific and Medical (ISM) equipment
<b>Safety</b>	IEC EN60950-1
<b>EMC/EMS</b>	CE
<b>EMI</b>	CE EN 55022 Class A

## Twisted Pair Connections

The integrated auto-crossing function of the Twisted-Pair ports makes the use of crossed patch cables unnecessary. The converter automatically detects the pin out of the connected cable and adapts the port accordingly. For all connections standard 1:1 Twisted Pair cables can be used.

The Autonegotiation mechanism detects automatically the speed and transmission mode (full or half duplex) between connected ports.

## Dimensions



Dimensions Gigabit Ethernet Bridging Converter

## Safety Notes

**WARNING:** Infrared radiation as used for data transmission within the fiber optic, although invisible to the human eye, can nevertheless cause damage.

To avoid damage to the eyes:

- never look straight into the output of fiber optic components – danger of blinding!
- cover all unused optical connections with caps.
- commission the transmission link only after completing all connections.

The active laser components used with this product comply with the provisions of **Laser Class 1**.

**DANGER:** Conductive components of power and telecommunications networks can carry dangerously high voltage.

To avoid electric shock:

- Do not carry out installation or maintenance work during lightning storms.
- All electric installations must be carried out in accordance with local regulations.

## Order Information

Art.-No.	Description	Connectors
MS657099X	Industrial Gigabit Ethernet Bridging Converter, 1x 10/100/1000T to 100/1000X SFP Port	1x SFP Port 1x RJ-45 2x Power
MS657099PX	Industrial Gigabit Ethernet Bridging Converter, 1x 10/100/1000T PoE (30W) to 100/1000X SFP Port	1x SFP Port 1x RJ-45 2x Power
MS100200DX	SFP Transceiver Gigabit Ethernet, 850 nm Multimode LC, Digital Diagnostics, ext. temp. version -40..+85°C	LC duplex
MS100210DX	SFP Transceiver Gigabit Ethernet, 1310 nm Single Mode LC, min. 10 km, Digital Diagnostics, ext. temp. Version -40..+85°C	LC duplex
MS100190DX	SFP Transceiver Fast Ethernet, 1310 nm Multimode LC, Digital Diagnostics, ext. temp. version -40..+85°C	LC duplex
MS100191DX	SFP Transceiver Fast Ethernet, 1310 nm Single Mode LC, min. 20km, Digital Diagnostics, ext. temp. version -40..+85°C	LC duplex

## Accessories

Art.-No.	Description	Connectors
MS700420	DIN-Rail power supply 24W, 24VDC / 1.0 A, wide range input 85-264 VAC, screw terminals	In: 3-pin Out: 2-pin
MS700455	DIN Rail mounting power supply 50W, 48VDC / 1.05 A, input voltage 85-264 VAC, screw terminals	In: 3-pin Out: 4-pin

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