Datasheet

MICROSENS

Entry Line
Industrial Gigabit Ethernet Bridge Series
optionally with PoE (+) / HI-PoE (60W)

Features

Gigabit Bridge, opt. with PoE

MS657099X Bridge

MS657099PX Bridge with PoE+

MS657099PHX Bridge with HI-PoE

- Dual Speed SFP-Slot (100/1000Base-X)
- Fully compatible with 802.3af / 802.3at (PoE-versions only)

Ports

- 1x 10/100/1000Base-T
  1x 100/1000Base-X (SFP-Slot)
- An SFP Transceiver is not part of the scope of delivery
- 1x pluggable screw connector
- 1x Grounding screw

Housing

- DIN rail bracket or wall bracket (scope of delivery)
- Protection class: IP 30
- Metal Housing

Power supply

- Input 12..56 V DC
- Input 48..56 V DC (PoE-versions only)
- an external power supply (230 V AC) is not included in scope of delivery

Technical Details

Gigabit Bridge

Type	Gigabit Ethernet Bridging Converter, IEEE 802.3 compliant
Switching Fabric	4Gbps
Data Processing	Store-and-forward
MAC Table	2K
Packet Buffer	1MB
Jumbo Frames	max. 9 kBytes
MTBF	510.304 Hours (MIL-HDBK-217F) at 25°C

Environment

Operating temp.	-40..+75 °C
Humidity	5 ..95%, non condensing
Storage temp.	-40..+85 °C

Twisted Pair Port

Type	Gigabit Ethernet, Triple Speed 10/100/1000Base-T
Connection	RJ-45 socket, shielded
Cable type	Shielded Twisted-Pair Cable, Cat. 5, Impedance 100 Ohm,
Flow Control	Pause Frames (IEEE 802.3x)
Power-over-Ethernet (PX)	Power Sourcing Equipment (PSE) IEEE 802.3at Class 0, max. 30 W per Port
Power-over-Ethernet (PHX)	Power Sourcing Equipment (PSE) HI-PoE 60 W

FO Port

Type	1x SFP (Dual Speed), 100/1000Base-X
Flow Control	IEEE 802.3x Flow Control
Connection	SFP with LC (typical)
SFP	Not included in scope of delivery

Displays (LEDs)

Power PW1	Green: OK
TP-Port	Green: Link detected Yellow: Powered Device detected (PX-Version)
SFP	Green: SFP detected

DIP-Switch

DIP-Switch	100Mbit/s <-> 1.000Mbit/s
Res <-> Res	*Not used*

Power supply (DC-Voltage)

Connection	Pluggable screw connector
Input	12..56 VDC
Power Consumption	Typ. 2W (ohne PoE)
Grounding (PE)	Screw
Alarm contact	1A @24 V DC (is closed when the power supply is disconnected)

Power-over-Ethernet (PX / PHX only)

Type	PSE – Power Source Equipment for the feeding of end devices
Input	48..56 VDC
Power MS657099PX MS657099PHX	 15,4/30W/36W max. 15,4/30W/60W max.
PoE-Pin assignment	1,2,3,6 (Endspan)

Mechanical

Dimension incl. DIN-Adapter	81 x 32 x 103,5 mm (L x W x H, without connections)
Mounting	DIN-ISO support rail (35mm) to DIN EN 50022 or wall mounting
Protection class	IP30 (Metal housing)

Standards

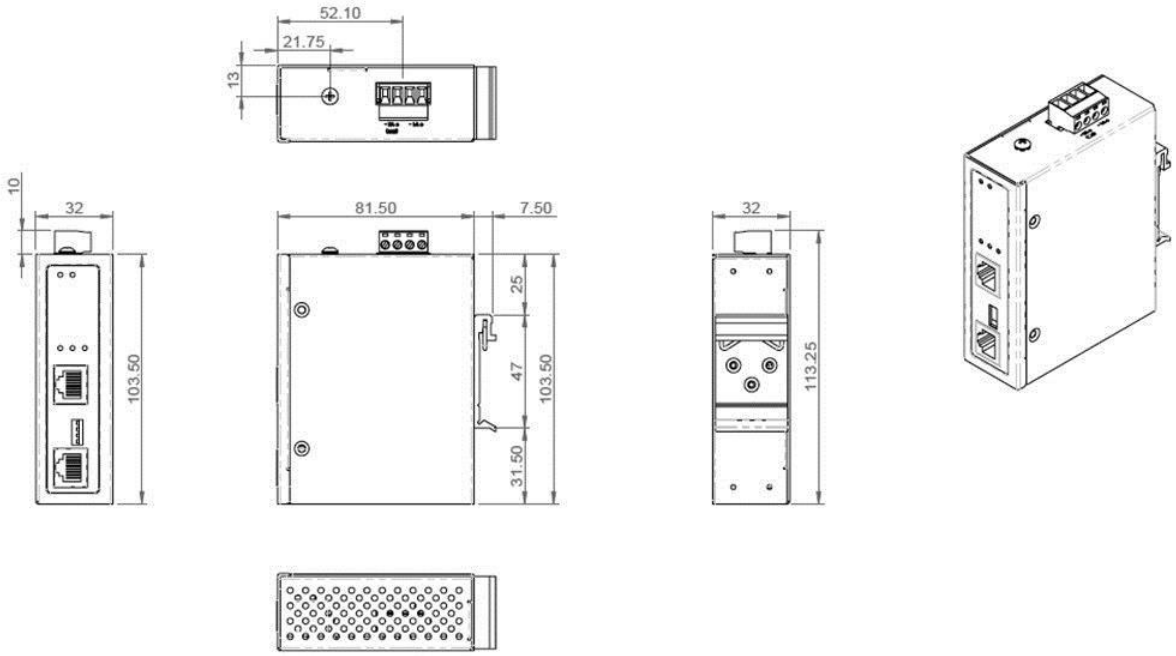
EMV	EN55022 (Klasse A) EN55024 EN55011
Safety	EN60950-1
IEEE	802.3 10Base-T 802.3u 100Base-TX 802.3ab 1000Base-T 802.3z 1000Base-X 802.3x Flow Control 802.3af PoE (PoE-Versions) 802.3at PoE+ (PoE-Versions)

Twisted Pair Connections (RJ-45)

The integrated autocrossing function of all twisted pair ports makes the use of crossed patch cables unnecessary. The Bridging Converter automatically detects the pinout of the connected cable and adapts to the port accordingly. Twisted pair cables can be used for all 1:1 standard connections.

The autonegotiation mechanism automatically detects the speed and transmission mode (full or half duplex) between the connected ports. A manual for configuration is therefore not required.

Dimensions



Power supply

Power is supplied by an external power supply with an output voltage of 12…56 V DC (48…56 VDC when using PX / PHX-Version). The power supply is not included in the scope of delivery, but can be ordered separately (e.g. MS700420). It is connected via the pluggable screw connector on the top of the device.

Safety Notes

Attention: Infrared light, which is used for data transmission in a fiber optic network, is not visible to the human eye, but can still cause damage.

To avoid damage to the eyes:
- Never look directly with the eye into the outputs of optical components or fiber optics. Risk of blindness!
- Cover all unused optical connections with caps.
- Do not put the transmission line into operation until all connections have been made

The active laser technology used in this product complies with **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

Industrial Gigabit (PoE) Bridge

Description	Art.-No.
Industrial Gigabit Bridge, 1x 10/100/1000Base-T, 1x 100/1000Base-X (SFP-Slot), Extended temperature range -40..+75°C	
Industrial Gigabit Ethernet Bridging Converter 1x 10/100/1000Base-T to 1x 100/1000Base-X SFP Port	**MS657099X**
Industrial Gigabit Ethernet Bridging -converter with PoE+ 1x 10/100/1000Base-T with PoE+ (30 W) to 1x 100/1000Base-X SFP Port	**MS657099PX**
Industrial Gigabit Ethernet Bridging Converter with HI-PoE (60W) 1x 10/100/1000Base-T with HI-PoE (60 W) to 1x 100/1000Base-X SFP Port	**MS657099PHX**

Alternativ Entry Line Products

Description	Art.-No.
6-Port Industrial Gigabit Switch, 4x 10/100/1000Base-T, 2x 100/1000Base-X (SFP-Slot), 1x as FO/TP-Comboport, extended temperature range -40..+75°C	
Industrial Gigabit Switch, 2x 12..56V DC redundant	**MS657203X**
Industrial Gigabit Switch, 4x 10/100/1000Base-T with PoE+ (30 W), 2x 48..56V DC redundant	**MS657203PX**

Accesoires

Description	Art.-No.
SFP Transceiver, extended temperature range -40.+85°C (more versions available on request)	
Gigabit Ethernet, Digital Diagnostic 850 nm Multimode, 1000Base-SX, LC duplex	**MS100200DX**
Gigabit Ethernet, Digital Diagnostic 1310 nm Single mode, 1000Base-LX, LC duplex	**MS100210DX**
Fast Ethernet, Digital Diagnostic 1310 nm Multimode, 100Base-FX, LC duplex	**MS100190DX**
Fast Ethernet, Digital Diagnostic 1310 nm Single mode, 100Base-FX, LC duplex	**MS100191DX**

(Fig.: MS700456)

Industrial DIN-Rail Power Supply	
Industrial DIN-Rail Power Supply 24VDC/1,25A (30W) Input 100..240VAC/120..375VDC, Out: 24..28VDC, -20..+70°C	**MS700440**
DIN-Rail power supply **48…56 VDC** / 1,05 A (50W), Wide range input 85…264 VAC / 180…264 VDC Operating temperature -10°C bis +70°C	**MS700455**
DIN- Rail power supply **45…55 VDC** / 2.5 A (120W), Wide range input 90…132 / 180…264 VAC Operating temperature -35…+70°C	**MS700456**