Datasheet

12 / 24-Port managed FE Multiport Converter 19" (1U)

MICROSENS

Made
in
Germany
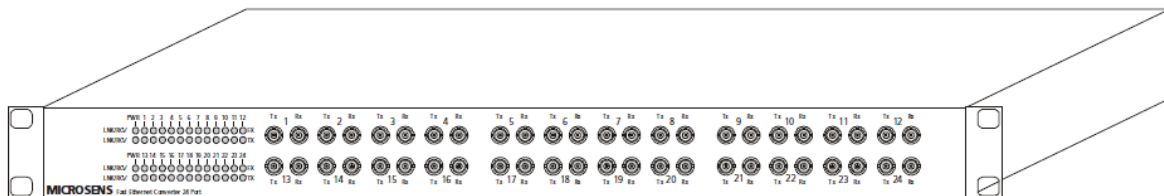
Description

Due to its compact design, the managed MICROSENS Fast Ethernet multiport converter with 12 or 24 FO/copper conversions is ideally suited for centralized multiport conversion from copper (RJ-45) TX to fiber optic (SC) FX.

Its SNMP-capable management enables remote monitoring of the converter ports, operating states can be checked via LEDs on the front of the device.

Depending on customer requirements, the multi-port converter is available in a 12 or 24-port version, both for multi and single mode, each with a SC duplex interface.

The compact design allows multiport conversion on one height unit in 19" format. The fiber optic ports are positioned on the front, the TP port on the back. An exchangeable FAN/filter unit simplifies hardware maintenance.

The following versions of the multiport converter are available:

12-Port	24-Port
12x 100FX Multimode (SC duplex) 12x 100TX	24x 100FX Multimode (SC duplex) 24x 100TX
12x 100FX Single mode (SC duplex) 12x 100TX	24x 100FX Single mode (SC duplex) 24x 100TX

Technical Features

Type	Fast-Ethernet media converter for repeater-free interconnection of twisted pair (100Base-TX) and fiber optic cables (100Base-FX)
Fiber Type	Multimode 50 or 62,5/125µm or Single Mode 9/125µm Duplex with SC- connectors

Optical parameters

Multi-mode version	*min. Reach:*	2 km (Full duplex)
	min. Transmission output:	-19 dBm
	min. Sensitivity:	-31 dBm
	Wavelength:	1310 nm
Single-mode version	*min. Reach:*	15 km (Full duplex)
	min. Transmission output:	-15 dBm
	min. Sensitivity:	-31 dBm
	Wavelength:	1310 nm

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Cable type	12 / 24x RJ-45
Data rate	100MBit/s
Max. Distance FO	Fullduplex: 2 km (Multimode) 15 km (Singlemode) Halfduplex: 362 m
LED indicators	*PWR* Ready for operation *LNK/RCV FX* Optical fiber link intact/receiving data *LNK/RCV TX* TP-Link intact/ receiving data *MGR* Management active
Power supply	100..240 VAC, max. 60 VA
Operating Temperature	0..50 °C
Storage temperature	-20..80 °C
Humidity	5% upto 80 % non-condensing
Dimension	84UD x 1U x 245 mm (W x H x D)
Management	integrated, accessible via RJ-45 management port. Management-Stack of several converters via RJ-45 connection on the back of the device

Length Reduction

Half duplex segment

The converter has a signal delay of max. 50 bit times. The maximum segment length of 412 m is thus reduced by approx. 50 m for fiber optics.

Full duplex Segment

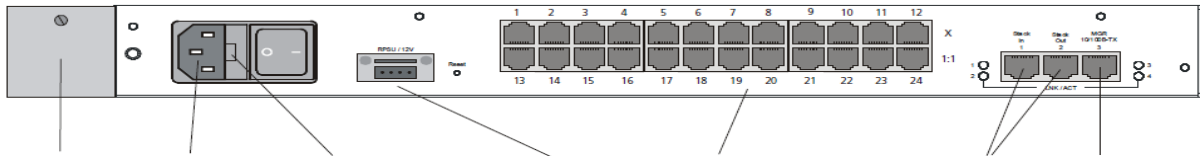In full duplex segments, the signal delay of the converter has no influence on the maximum segment length

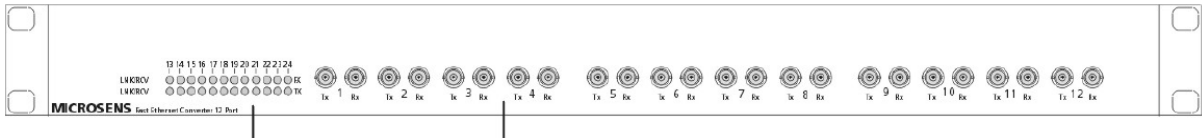## Multiport Converter

Front 24-Port-Version
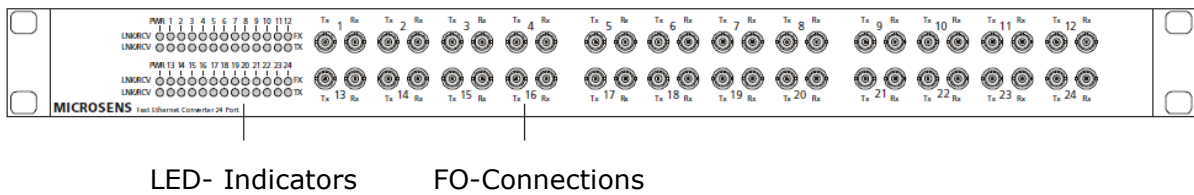
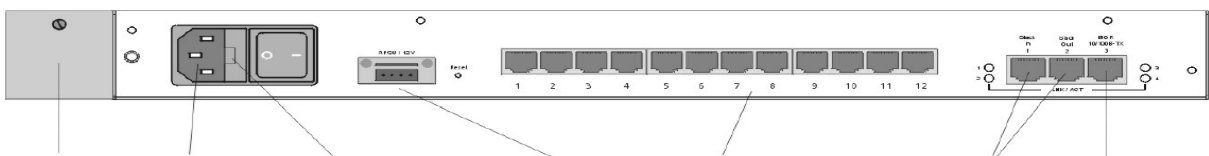LED- Indicators   FO-Connections

Back 24-Port-Version

Slot for   230V-   Primary   RPSU   TP-Ports   Cascading-   Management-
Fan unit   Connection   Fuse   Interface   ports   Port

Front 12-Port-Version

LED-Indicators   FO-Connections

Back 12-Port-Version

Slot for   230V-   primary   RPSU   TP-Ports   Cascading-   Management-
Fan Unit   Connection   Fuse   Interface   ports   port

LED-Indicators

Ready for   LED-indicators   Bright light: Fiber intact (Link)
operation   Per Port   Blinking: Receiving data

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                1  2  3  4  5  6  7  8  9  10 11 12
                |  |  |  |  |  |  |  |  |  |  |  |
LNK/RCV         O  O  O  O  O  O  O  O  O  O  O  O    FX
LNK/RCV         O  O  O  O  O  O  O  O  O  O  O  O    TX

         PWR 13 14 15 16 17 18 19 20 21 22 23 24
             |  |  |  |  |  |  |  |  |  |  |  |  |
LNK/RCV      O  O  O  O  O  O  O  O  O  O  O  O  O    FX
LNK/RCV      O  O  O  O  O  O  O  O  O  O  O  O  O    TX
```

Management
oworking
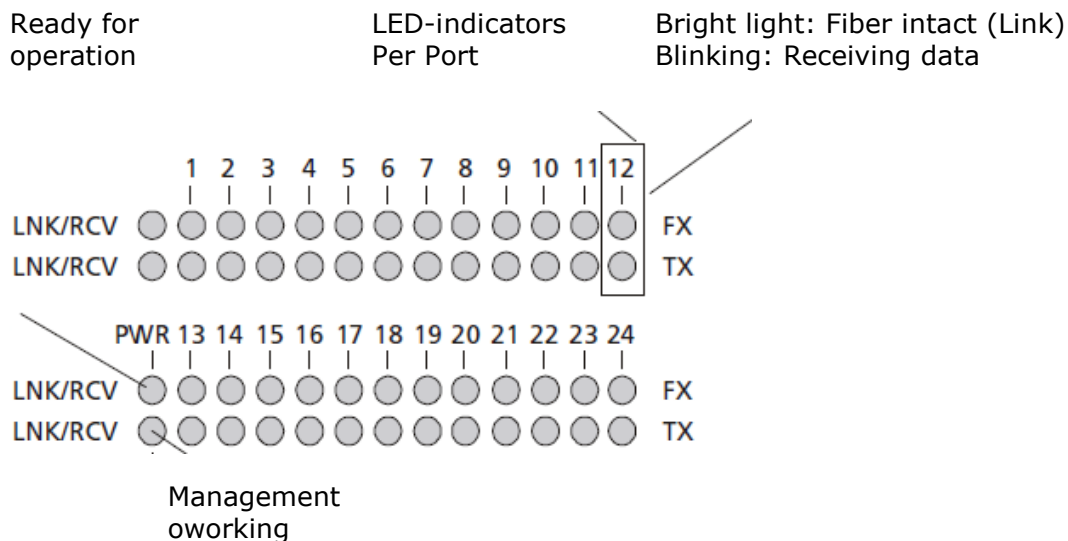
Installation / Initial start-up

The device is delivered completely ready for operation. For commissioning, the unit is connected to a 230 V / 50 Hz connection with the enclosed power cable. The power switch should be switched off at this point. The power consumption is max. 60 VA.

After switching on the power switch, all LEDs light up briefly to check. Afterwards, only the power LED will light up (assuming no other active devices have been connected to the network ports).

Optical Fiber connection (SC)
Fiber optic segments are connected to the SC connectors on the front of the unit. The fiber coming from an FO transmitter is connected to the FO receiver port (labelled RX), the fiber coming from the FO receiver to the FO transmitter port (labelled TX). If the connection is correct and all devices are active, the link LED belonging to the port will light up on the converter.

TP-Connection (RJ-45)
If the connection is correct and all devices are active, all TP-Link LEDs on the converter will light up.

Attention!
If no fiber optic connection has been installed or if it is not active at this time, the device connected via the TP cable will not display a link (link transparency).

Link-Transparency

The converter passes the link signal through ("link through"), which means that if no link is received on the optical side, no link is transmitted on the TP side.

Devices linked via the converter thus 'see' the status of the opposite side. Status information from the network management is not corrupted by the converter.

a) **Normal state: Link signal in both directions.**
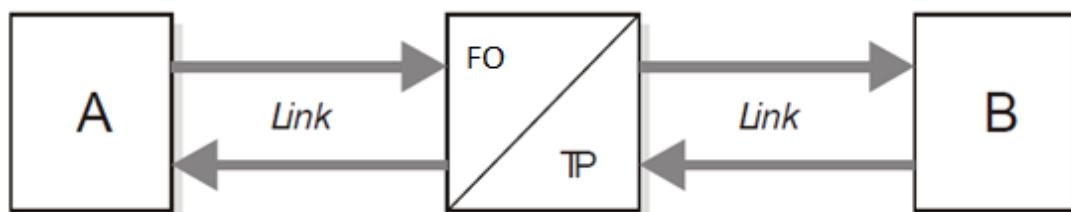
b) **Error: Interruption of a connection**
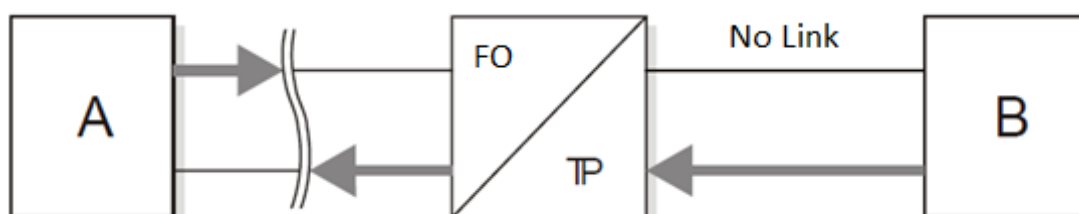
Safety Notes

To prevent **electric shocks**:
- no installation or maintenance work may be carried out during a thunderstorm.
- all power connections may only be made via protective contact sockets.
- all electrical installations must comply with the safety regulations of the country in which they are operated.

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

The active laser components used in this product correspond to **laser class 1**.

Order Information

Desription	Art.-No. 12-Port	Art.-No. 24-Port	
Multiport converter			
Multiport converter 100Base-TX (RJ-45) /100Base-FX (SC Multimode 1310nm), 19"1U	MS416951M	MS416901M	
Multiportkonverter 100Base-TX (RJ-45) /100Base-FX (SC Singlemode 1310nm), 19"1U	MS416956M	MS416906M	
Fan Unit			
Fan/Filter-Unit, long-life for 12/24 Port Converter MS4169xxM		MS416991	