

1. Mounting into 19" rack

The modular 19" system is designed for the mounting in industrial racks with standard 19" measurement. MICROSENS offers the system with 1 HU and 3 HU (see Fig.1). The special nuts for fixing the chassis into the rack are not included at delivery. They are accessories of the 19" rack.

2. Positioning in 19" rack

The 19" grid struts have special openings (3 per HU) for mounting the nuts. 1 HU is marked specially with small spaces between the openings (see Fig.2). For each 1 HU chassis 4 nuts must be used. After mounting the nuts the chassis can be fixed with the screws.

3. Power Supply

The power supply of the 19" media converter is done by a central power supply. One LED shows the status (see fig. 3). If there are special requirements for the security, the converter can be protected with a redundant power supply (see chap. 5).

4. Fuse

The power supply of the device is protected by a fuse. This fuse is located at the back side of the converter between the plug and the on/of switch (see fig. 4). The value for the Ethernet and Fast Ethernet converter are 6.3 A, slow.

5. Redundant Power Supply (optional)

The power supply can be protected with the RPSU interface. To do this the optional power supply unit (RPSU) is necessary. The connection is done with a special connection cable (see fig. 4). It is not allowed to use 230 V at this connector. Use only original accessories!

6. Replaceable fan unit

With the modular design the fan units is replaceable. Replacement units are with the article number MS416990 (standard version) and MS416991 (long life version) available.

The unit is removed by pulling the arrestor. During installation the arrestor should be only pressed after the fan module is snapped in completely.

Attention: For a correct operation of the fans the fan filter should be replaced latest after one year, depending on the level of dust. At delivery there are two spare filters included.

7. Ports

The fiber ports are located on the front side of the converter. The transmit (TX) and receive (RX) connections are labelled. It is necessary that transmit is always connected to receive of the opposite side. A correct connection is indicated by the LED.

The related copper ports to the fiber ports are located on the back side. The ports are twice there (1:1 and crossed). This allows to use always the same patch cables (see fig. 7). A correct connection is indicated again by the LED (see fig. 10).

Attention: The media converter has a special feature called link through. Please refer to the next chapter "Link Through".

Fig 1: Front/rear view

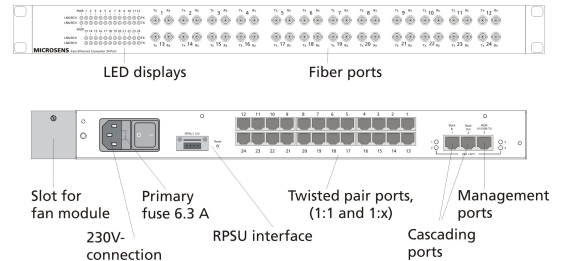


Fig 2: Installation

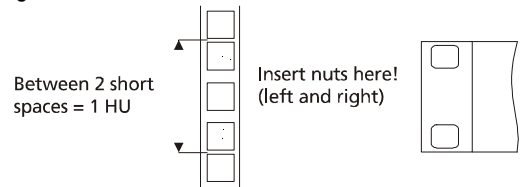


Fig 3: LED displays

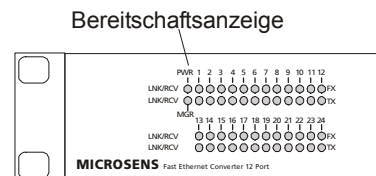


Fig 4: Power supply and fan unit

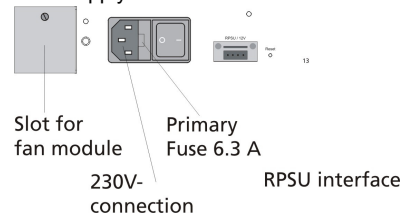


Fig 5: Connections at the front side



8. Link Fault Pass Through (LFPT)

To support the monitoring of the connection status the converter has an integrated link through functionality. The connection status of the fiber segment is forwarded to the copper segment. In case of a broken fiber connection the copper connection is switched off too (link transparency see fig. 8). The same functionality can be configured for the other direction, that means in case of lost copper connection the fiber connection is switched off.

Attention: To make the installation easier the LFPT function is deactivated as default. Due to this the link is transmitted independent of the media. After the installation this function should be activated to ensure a correct monitoring of the connections.

9. Management

The media converter has an integrated management. Via the 10/100Base-TX Ethernet interfaces the user has access to SNMP-, Telnet and web based management.

To reach the agent via TCP/IP the converter has a default IP address **192.168.1.99** (mask 255.255.255.0). To avoid an IP address conflict this address should be changed before connection the converter to the network.

For the management access there are 3 different user levels available:

- **public** Read right with web and Telnet
- **user** Limited write rights in web, read in Telnet
- **admin** Full write right in web and Telnet

Attention: The operation of the converter is independent of the management. The device is ready for operation right from start.

10. RESET button

On the back side of the converter there is a reset button.:

- **Reset:** short pressing (< 1 second) a warm start of the management is started.
- **IP-Request:** In combination with the MICROSENS NMP the configuration of the IP settings are possible. The IP-Request is released after pressing the button two times (<1 second, between pause of < 1 second).
- **Factory-Reset:** Holding the reset button (>5 seconds) resets the settings of the management. The following settings are not set back: MAC address, IP settings, Device Name, Group; location, Contact and prompt (Telnet console). All other setting and **also the passwords** are set back to default. Please note the LED on the back side of the converter!

11. LED displays

To get information about the operation and connection status the converter has 50 LEDs on the front side. On the back side there are some additional LEDs for the operation of the management (see fig 9). They are showing activity on the related 10/100Base-TX port.

12. Safety Notes

Danger! Optical components may emit laser light. ATTENTION: Infrared emissions used for fiber optic data transmission is invisible for the human eye but can cause long term damage to the eyes.

To avoid damages to the eyes:

- Never look direct at the connectors of optical components or optical fibers. Risk of blinding!
- Put covers on all unused connectors.
- Get device under operation only if all connection are made correct.

The active laser components in this converter correspond to laser class 1.

Fig 6a: back side Twisted Pair version

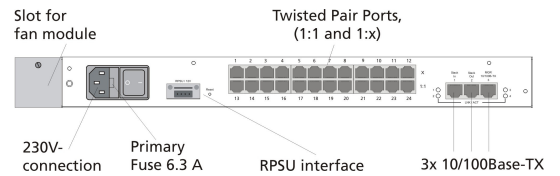


Fig 6b: back side Telco version

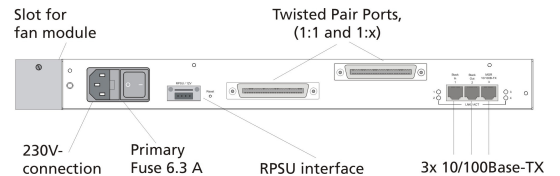


Fig 7: Link Fault Pass Through

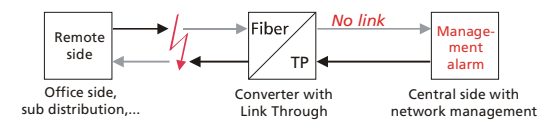


Fig 8: Management

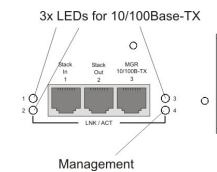


Fig. 9: LEDs

LED	Status	Description
PWR	On	Ready for operation
	Off	No power supply
	Flashing	Failure in power supply (Check main PS and RPSU!)
MGR	On	Management ready for operation
	Flashing	Active fan unit failure
TX per port	On	Twisted Pair link active
	Off	No TP connection
	Flashing	Data receive on TOP port
FX per port	On	Fiber link active
	Off	No fiber connection
	Flashing	Data receive on fiber port
Back side 1-3	On	Ethernet connection for out-band management
	Flashing	Data transmission
4	On	Pushing the button
	Slow Flashing	Management active, normal operation
	Fast Flashing	Procedure of factory reset (button was pressed for >5 seconds)