

MICROSENS

Media Converter
10Base-FL / 10Base-T

Installation Guide



Art.-Nr. MS410501/601/101

General Information

- The MICROSENS media converter offers the direct connection of Twisted-Pair cable (10Base-T) to fiber (10Base-FL) in an Ethernet network (IEEE802.3).
- Because of the direct coupling it is possible to extend Twisted-Pair cable over the limit of 100 m.
- The signals are not regenerated, so that the maximum distance can not be guaranteed (100 m on Twisted-Pair and 2 km on multimode fiber). Reaching these distances, the function should be tested before.
- The colour coded LEDs inform about the status of the converter and can be used for network diagnostics.
- The link status is forwarded by the converter ("Link-Through"), so if the link is missing on the fiber side, there is no copper link generated by the converter. The same in the other direction.

Technical specifications

- Type** Converter for repeaterless connection of 10Base-FL / 10Base-T medias according IEEE802.3
- Connectors** 1 x RJ45
2 x ST*-conn. (MS410501/101)
2 x SC-conn. (MS410601)
1 x jack 2,1 mm (power supply)
- Cable type** Shielded Twisted Pair with RJ45 connector
- Max. cable length** 100 m
- Fiber type** MM 50 or 62,5/125 μ m
- duplex ST* (MS410501)
- duplex SC (MS410601)
SM 9/125 μ m duplex
- duplex ST (MS410101)
- Opt. power** 850 nm Multimode:
Min. -19 dBm (62,5/125 μ m)
1300 nm Monomode:
Min. -24 dBm (9/125 μ m)
- Opt. sensitivity** -32,5 dBm
- Wavelength** 850 nm (MM); 1300 nm (SM)
- Max. Fiber length** 2 km (MS410501/601)
10 km (MS410101, full duplex)
- LED** Power, Receive, Transmit, Link, Polarity, Jabber
- Power supply** external power supply
12 V DC / 3 VA
- Operating temp.** 0°C to 55°C
- Storage temp.** -20°C to 80°C
- Rel. Humidity** 5% to 80% non condensing

* ST is a registered trademark of AT&T

Pinout

- Fig.1 shows the pinout of the RJ-45 connector of the converter.

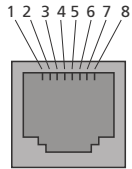


Fig.1: RJ-45 connector

Pin	Signal
1	TD+
2	TD-
3	RD+
4	unused
5	unused
6	RD-
7	unused
8	unused

- The center pin of the power jack shown in Fig.2 is carrying the main positive voltage. The outside pin is carrying the system ground.

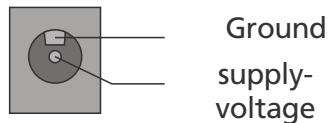
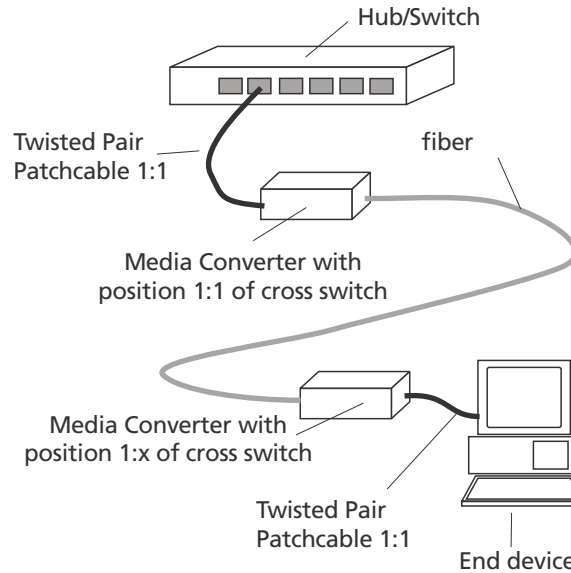


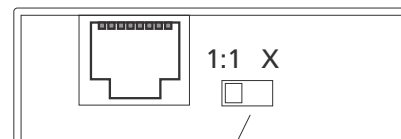
Fig.2: Power supply jack

Installation

- The connection of the converter to a Hub/Switch is done with an uncrossed patchcable.



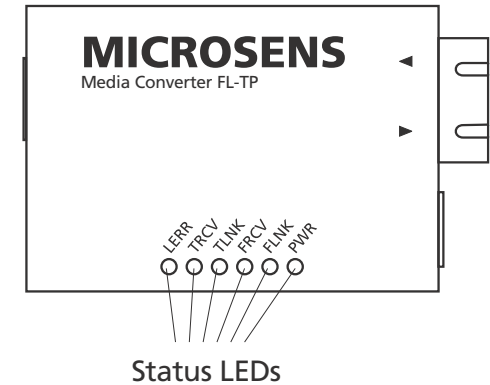
- The connection of the end device can be done with an uncrossed patchcable. In this case the port must be crossed with the integrated cross switch.



Switch to crossover the Twisted Pair port

LEDs

6 colour coded LEDs inform about the status of the media converter.



LED	Function	Description
LERR	Link error	no fiber connection
TRCV	TP receive	Data received at TP-Port
TLNK	TP link	TP Link o.k.
FRCV	fiber receive	Data received at FL-Port
FLNK	fiber link	FL Link o.k.
PWR	power	Ready for operation

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