Fast Ethernet POF media converter:

Optospider™ DMMC 650nm simplex

Description:

The Optospider™ DMMC 650nm simplex POF - media converters allow the media conversion between twisted pair cable (100Base-TX) and standard POF cables (100Base-FX) in an Ethernet network (IEEE 802.3u). Though a one fiber simplex POF cable is used, the conversion operates in full duplex mode. Directivity multiplex transmission mode and 650nm red light LED transmitters at both transmission line sides is applied.
Simplex POF cables with a cross section area of only 50% in comparison with duplex POF cables show a number of advantages:

- lower price,
- less termination effort,
- easier installation,
- maximum inconspicuousness in living rooms especially for transparent bare fiber POF or POF cable with transparent jacket.

The media converter informs about its connection status by two LED indicators in the RJ-45 jack.

Technical Data

Type	POF-Fast Ethernet media converter for coupling between twisted pair (100Base-TX) and simplex POF (100Base-FX)	
Fiber type	standard simplex POF, NA = 0.5, outside cable jacket diameter 2.2mm	
Transmission distance typ.	0m to 30m	At 30m transmission distance there is a system margin of 3dB at least. 30m transmission distance are guaranteed therefore.
Full duplex datarate net	100 Mbit/s	
Operating temperature	0˚C to 70˚C	
Power supply	The media converter's power supply is realized via passive PoE over the supplied network cable. A USB plug on the PC cable side provides the necessary 5V supply voltage, if it is connected to a free USB port in the PC. An external power supply comprising an USB jack connector is available on request. If it is connected to the USB plug of the network cable, it provides the media converter's electrical power.	
Current max.	400mA	
Dimensions	23.5 x 40.6 x 95 mm (H x W x D)	
LED indicators	LED1 on: LED2 on: LED1 and LED2 flash:	electrical data connection active optical data connection active data transfer active

Installation media converter

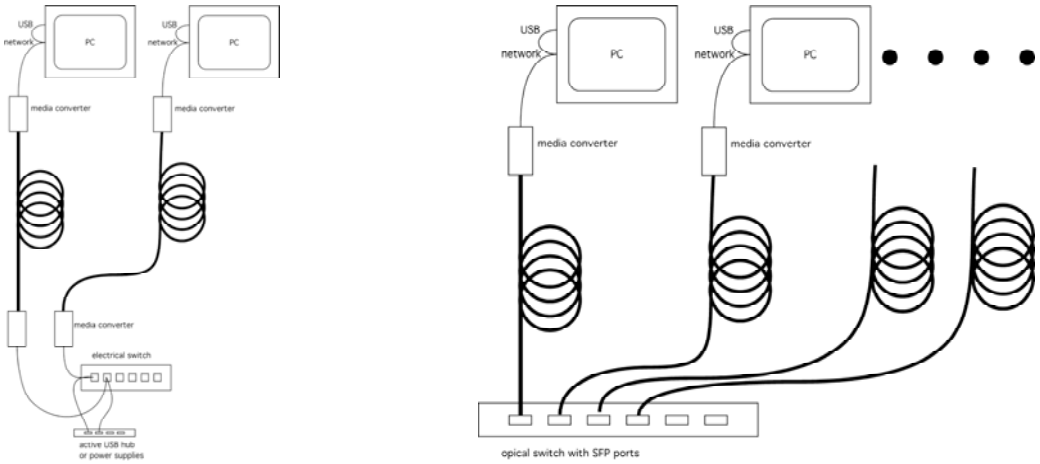
The POF cable termination and media converter connection process in detail: cut, plug to transceiver, connect to network and USB port at the PC, ready for operation

External power supply

An external power supply that provides the electrical power for the media converter (5V, max. 1A) in a USB jack is available. It is connected to the USB port of the network cable. In this configuration the media converter power supply does not occupy an USB port in the PC.

Typical network setup

Typically a POF inhouse data network is designed as star network. From the central switch with data connection to the public network a POF cable is running to each PC or network connected equipment. In a small network with 1 or 2 data links only the data conversion at each POF cable end media converters can do the data conversion at each POF cable (left figure below). Larger networks with more than 3 data links should apply POF SFP transceivers and suitable SFP switches (right figure below).



Media converter based network structure for small POF networks (left) and network structure comprising SFP optical switch unit

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