

Optospider™

A Family of Optical Polymer Fiber (POF) - Fast Ethernet Media Converters 100Base-TX/100Base-FX

Description:

The DieMount Optospider 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). For all types of cables, duplex and simplex, the conversion operates in full duplex mode. Optimized transmitters at low POF attenuation wavelengths are available, in particular at 650nm and 470nm.

Very low cross talk POF splitter components in the transceiver module that suppress sufficiently the cross talk between transmitter and receiver signal allow the set-up of novel simplex cable media converter systems. These systems operate in full duplex mode over a single waveguide core cable, i.e. a simplex POF cable.

Each media converter informs about its status by eight LED indicators and can be used for network diagnostics.



Technical Data

Type	POF-Fast Ethernet media converter for coupling between twisted pair (100Base-TX) and simplex POF (100Base-FX)		
Fiber type	standard POF, duplex or simplex (NA = 0.5, outside cable jacket diameter 2.2mm, coupling elements for bare fiber installation available)		
Transmission distance typ.	Optospider™ 650nm duplex:	0m to 70m	
	Optospider™ 650nm duplex power:	30m to 100m	
	Optospider™ 650nm simplex:	0m to 30m	
	Optospider™ 470nm duplex:	0m to 120m	
	Optospider™ 470nm simplex:	0m to 70m	
Full duplex datarate net	100 Mbit/s		
Operating temperature	0°C to 70°C		
Operating humidity	10% to 90% (non-condensing)		
Power supply	5V DC, 1A over an external enclosed plug power supply		
Dimensions	22 x 64 x 117 mm (H x W x D)		
LED indicators	100Mbit/s, fiber full duplex, UTP full duplex, fiber link, UTP link, fiber signal detect, fiber far-end-fault detect, power		



Optospider transceiver parameters

	Optospider™ 650nm duplex	Optospider™ 650nm duplex power	Optospider™ 650nm simplex	Optospider™ 470nm duplex	Optospider™ 470nm simplex
wavelength	650nm	650nm	650nm	470nm	470nm
spectral width	25nm	20nm	19nm	30nm	30nm
transmitted optical power	-3dBm	+4dBm	-7dBm	+4dBm	-1dBm
receiver sensitivity typ.	-20dBm	-18dBm	-17dBm	-17dBm	-14dBm

Connector:

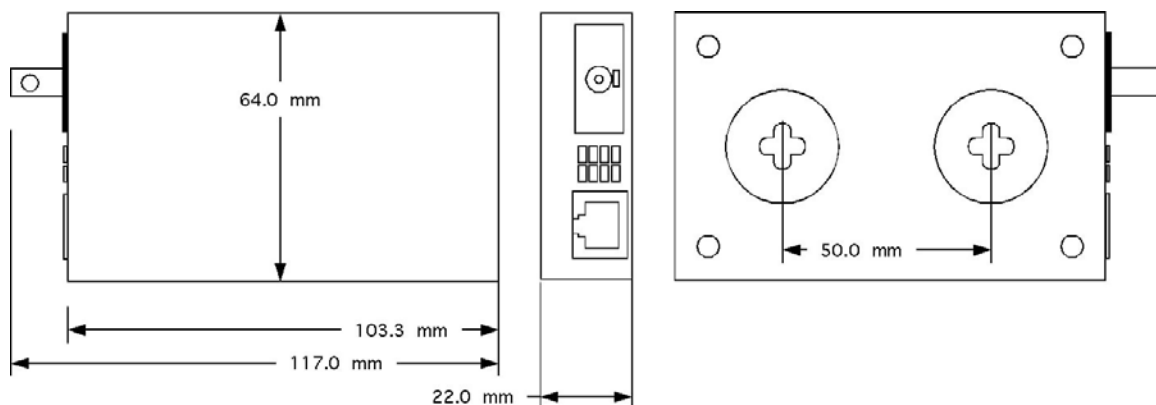
The Optospider™ family uses a “connectorless” connection system. The POF cable is cut (and polished, if necessary) and introduced without any additional connector to the optical transceiver. A knurled-head screw fixes the POF cable without any necessary tool. Even if the screw is turned up to stop, the POF lightguide core will not be destroyed.

If bare fiber installation is used, a small, about 20mm long fiber jacket piece is used to couple the fiber to the transceiver.



Housing:

The housing of Optospider™ media converters is available in two colours: white and black. The white housing is used preferably in the environment of private flats and houses.



Two screws (distance 50mm) can fix the Optospider™ media converter housing on any wall or vertical surface via two slotted openings in the housing back.

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