SFP Transceiver
up to 2.7 Gbps

MICROSENS

Description

The actual SFP transceivers from MICROSENS offer an optical transmission over multimode or single mode fiber. Depending on the model the transceiver can cover distances up to 120 km.

The SFP (Small Form Factor Pluggable) is based on the same principle as the GBIC. The main difference is the size of the transceiver with only half of the width (mechanical dimensions) due to the use of the LC connector.

The optical transceiver from MICROSENS comply to the SFP specifications Revision 5.4.. Additional they are compliant to the Gigabit Ethernet specifications according IEEE Std. 802.3®, the Fibre Channel specifications FC-PH, PH2, PH3, FC-PI 10.0 and all common ATM (OC-12, OC-48) and Sonet (SDH STM-4, SDH STM-16) standards.

The transceivers are available with different wavelengths. For multimode applications such as Gigabit Ethernet, Fibre Channel or Double Rate Fibre Channel VCSEL lasers with a wavelength of 850 nm are used. This allows to realise distances up to 550 m using a 50/125 µm multimode fiber.

For single mode applications there are FP and DFB lasers with the wavelengths of 1310 and 1550 nm available. Depending on the model it is possible to cover distances from 2 km up to 80 km. The transceivers offer the highest flexibility and can be installed during operation (hot swap).

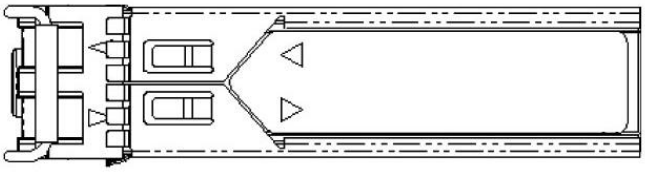
Technical Specifications

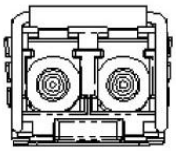
Type	SFP (Small Form Factor Pluggable) Transceiver for data transmission up to Gigabit speed
Fiber type	Single Mode 9/125 µm duplex, LC-connector
Data Rates	up to 2.7 Gbps
Standards	CDRH and IEC 825-1 class 1 eye safety
Operating temperature	0°C to 60° C
Supply Voltage	3.3 V

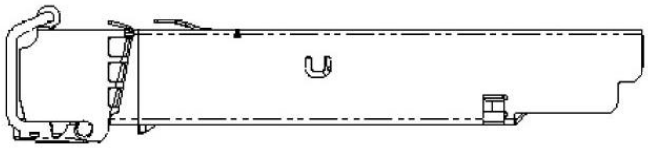
Optical Parameters

Article No.	Wavelength	Min opt. Power	Min. opt. Sensitivity	Min. Distance
MS100060*	1310 nm	-10 dBm	-20 dBm	2 km
MS100061*	1310 nm	-5 dBm	-20 dBm	15 km
MS100062*	1550 nm	-5 dBm	-20 dBm	40 km
MS100063*	1550 nm	-2 dBm	-27 dBm	40 km
MS100064*	1550 nm	-2 dBm	-28 dBm	80 km
MS100250*	1310 nm	-9.5 dBm	-18 dBm	2 km
MS100260*	1310 nm	-5 dBm	-18 dBm	15 km
MS100270*	1550 nm	-5 dBm	-18 dBm	15 km
MS100271*	1310 nm	-2 dBm	-27 dBm	40 km
MS100272*	1550 nm	0 dBm	-28 dBm	80 km

Construction







Diagnostic Function (optional)

Optional the transceivers are available with Diagnostic function (Extension of article number with “D”, e.g. MS100200D), to monitor detailed all operating information.

This offers to read information such as optical transmit power, receive power, the optical budget, the resulting possible distances and the real used data rate via the management system.

This feature is particular useful in combination with the MICROSENS xWDM systems, because it increases the functionality significant.

Eye Safety

Attention: Visible and invisible light emitted from fiber optical component may cause permanent damage to your eyes!

To avoid damage to the eyes

- *never look straight into the output of fiber optic components – danger of blinding!*
- *cover all unused optical connections with caps.*
- *commission the transmission link only after completing all connections.*

The active laser components used with this product comply with the provisions of **Laser Class 1**.

Order Information

Art.-No.	Description	Connectors
MS100060*	"Local Interface (SFP) SR-1 2km, 1310nm, LC connector, Multirate 100..2700 MBit/s, OC-3/12/48 STM-1/4/16, GBE, 1x/2x FC"	LC duplex
MS100061*	"Local Interface (SFP) IR-1 15km, 1310nm, LC connector, Multirate 100..2700 MBit/s, OC-3/12/48 STM-1/4/16, GBE, 1x/2x FC"	LC duplex
MS100062*	"Local Interface (SFP) IR-2 40km, 1550nm, LC connector, Multirate 100..2700 MBit/s, OC-3/12/48 STM-1/4/16, GBE, 1x/2x FC"	LC duplex
MS100063*	"Local Interface (SFP) LR-1 40km, 1310nm, LC connector, Multirate 100..2700 MBit/s, OC-3/12/48 STM-1/4/16, GBE, 1x/2x FC"	LC duplex
MS100064*	"Local Interface (SFP) LR-2 80km, 1550nm, LC connector, Multirate 100..2700 MBit/s, OC-3/12/48 STM-1/4/16, GBE, 1x/2x FC"	LC duplex
MS100250*	"Local Interface (SFP), short reach 2km, 1310nm, LC connector, 2,488 GBit/s, OC-48/STM-16"	LC duplex
MS100260*	"Local Interface (SFP) IR-1 15km, 1310nm, LC connector, max. 2,488 GBit/s, OC-3/12/48 STM-1/4/16, GBE, 1x/2x FC"	LC duplex
MS100270*	"Local Interface (SFP) IR-1 15km, 1550nm, LC connector max. 2,7 GBit/s, OC-3/12/48 STM-1/4/16, GBE, 1x/2x FC"	LC duplex
MS100271*	"Local Interface (SFP) LR-1, 40km, 1310nm, LC connector, max. 2,7 GBit/s, OC-3/12/48 STM-1/4/16, GBE, 1x/2x FC"	LC duplex
MS100272*	"Local Interface (SFP) LR-2, 80km, 1550nm, LC connector, max. 2,7 GBit/s, OC-3/12/48 STM-1/4/16, GBE, 1x/2x FC"	LC duplex

*) Option "D" for Diagnostic Function (e.g. MS100240D)