

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.

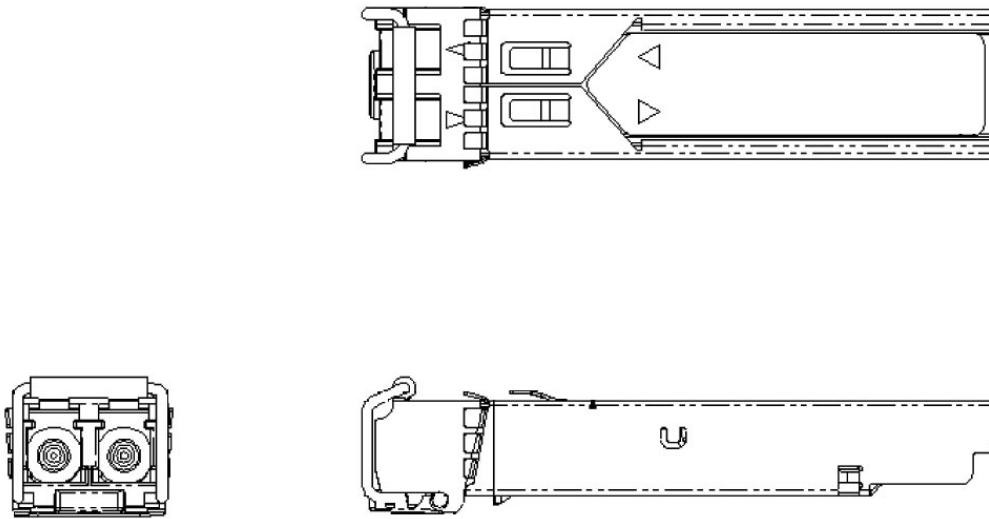
The transceivers are available with different wavelengths. For multimode applications such as Gigabit Ethernet, Fibre Channel or Double Rate Fibre Channel VCSEL lasers with a wavelength of 850 nm are used. This allows to realise distances up to 550 m using a 50/125 µm multimode fiber.

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 10 km up to 120 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	Multimode 62,5/125 or 50/125 µm, duplex, Single Mode 9/125 µm duplex, LC-connector		
Data Rates	622 Mbps to 1.25 Gbps (optional 2.125 Gbps)		
Multimode VCSEL	<i>Wavelength:</i>	850 nm MM	
	<i>min. optical power:</i>	-10 dBm	
	<i>min. opt. sensitivity:</i>	-20 dBm	
	<i>min. distance:</i>	550 m (50 µm), 275 m (62,5 µm)	
Single Mode FP Laser 10 km / 25 km	<i>Wavelength:</i>	1310 nm SM	
	<i>min. optical power:</i>	-8 dBm	-7 dBm
	<i>min. opt. sensitivity:</i>	-22 dBm	-24 dBm
	<i>min. distance:</i>	10 km	25 km
Single Mode DFB Laser 50 km / 80 km / 120 km	<i>Wavelength:</i>	1550 nm SM	
	<i>min. optical power:</i>	-5 dBm	0 dBm 0 dBm
	<i>min. opt. sensitivity:</i>	-24 dBm	-24 dBm -32 dBm
	<i>min. distance:</i>	50 km	80 km 120 km
Standards	CDRH and IEC 825-1 class 1 eye safety		
Operating temperature	0°C to 60° C		
Supply Voltage	3,3 V		

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
MS100200*	SFP, Gigabit Ethernet / Fibre Channel 850 nm Multimode Transceiver, max. 1.25 Gbps	LC duplex
MS100210*	SFP, Gigabit Ethernet / Fibre Channel 1310 nm Single Mode Transceiver, max. 1.25 Gbps, min. 10 km	LC duplex
MS100211*	SFP, Gigabit Ethernet / Fibre Channel 1310 nm Single Mode Transceiver, max. 1.25 Gbps, min. 25 km	LC duplex
MS100213*	SFP, Gigabit Ethernet / Fibre Channel 1550 nm Single Mode Transceiver, max. 1,25 Gbps, min. 50 km	LC duplex
MS100214*	SFP, Gigabit Ethernet / Fibre Channel 1550 nm Single Mode Transceiver, max. 1.25 Gbps, min. 80 km	LC duplex
MS100215*	SFP, Gigabit Ethernet / Fibre Channel 1550 nm Single Mode Transceiver, max. 1.25 Gbps, min. 120 km	LC duplex
MS100240*	SFP, Gigabit Ethernet / Fibre Channel / Double Rate Fibre Channel 850 nm Multimode Transceiver, max. 2,125 Gbps	LC duplex
MS100250*	SFP, Gigabit Ethernet / Fibre Channel / Double Rate Fibre Channel STM-4 / STM-16 / OC-12 / OC-48 1310 nm Single Mode Transceiver, max. 2,488 Gbps, min. 2 km	LC duplex
MS100260*	SFP, Gigabit Ethernet / Fibre Channel / Double Rate Fibre Channel STM-4 / STM-16 / OC-12 / OC-48, 1310 nm Single Mode Transceiver, max. 2,488 Gbps, min. 15 km	LC duplex
MS100270*	SFP, Gigabit Ethernet / Fibre Channel / Double Rate Fibre Channel STM-4 / STM-16 / OC-12 / OC-48, 1550 nm Single Mode Transceiver, max. 2,488 Gbps, min. 15 km	LC duplex

*) Option "D" for Diagnostic Function (e.g. MS100200D)