

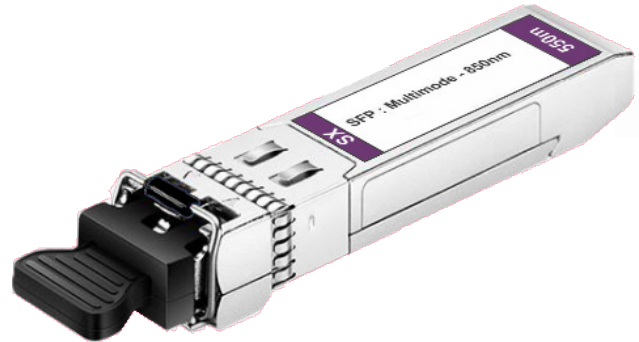
# INST-SFP-MM-01-K



## iNS SFP Multi-Mode Fibre Optic Transceiver

### Features

- ▶ Operating data rates up to 1.25Gbps
- ▶ 850nm FP laser transmitter
- ▶ 550m Reach for 62.5/125µm multi-mode fibre
- ▶ Single 3.3V power supply and TTL Logic Interface
- ▶ Hot-pluggable SFP footprint duplex LC connector interface.
- ▶ Class 1 FDA and IEC60825-1 laser safety compliant.
- ▶ Commercial temperature range: -40~+85°C
- ▶ Compliant with SFF-8472 MSA
- ▶ Built-in digital diagnostic functions, including optical power monitoring



### Description

INST-SFP-MM-01-K is a fibre optic transceiver for use with multi-mode fibre optic cable and operates at a nominal wavelength of 850nm. This dongle is locked and pre-configured for use with the Kentec DNP-R-2F/FC-K Passive Dual Port Optic Fibre/RS485 Medium Converter.

INST-SFP-MM-01-K transceivers are hot-pluggable making it quick easy to replace and also swap between alternate fibre optic modes. Maximum range will be dependent upon the fibre optic cable used 62.5/125µm range of 550m, 50/125µm can extend the range up to 1km. The transmitter section uses a Vertical Cavity Surface Emitted Laser and is class 1 laser compliant according to International Safety Standard IEC60825.

The receiver section uses an Integrated GaAs detector pre-amplifier (IDP) mounted in an optical header and a limiting post-amplifier IC. INST-SFP-MM-01-K is designed to be compliant with SFF-8472 MSA.

Built in digital diagnostic functions allow monitoring of the transceiver by the DNP-R-2F/FC-K converter module and subsequently the IVIEW software tool. This allows performance monitoring along with early warning of a potential issue to enable preventative maintenance.

### iNS Product

INST-SFP-MM-01-K	iNS SFP Multi-mode fibre optic transceiver [550m]
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### Specifications

#### General Product Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
Bit Rate	BR			1.25	Gb/s
Max. Supported Link Length	L(max)			550	m

#### Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit
Storage Temperature	T <sub>(case)</sub>	-40	+85	°C
Supply Voltage	V <sub>cc</sub>	-0.5	3.6	V
Storage Ambient Humidity	H <sub>A</sub>	5	95	%

Optical Characteristics					
Parameter	Symbol	Min.	Typ	Max.	Unit
50µm Core Diameter MMF	L		1000		m
Data Rate			1.25		Gb/s
<b>Transmitter</b>					
Centre Wavelength	$\lambda_c$	830	850	860	nm
Spectral Width (RMS)	$\Delta\lambda$			0.85	nm
Average Output Power	P out	-9.5		-3	dBm
Extinction Ratio	ER	9			dB
Rise/Fall Time (20%~80%)	tr/tf			0.26	ns
Total Jitter	T <sub>j</sub>			0.43	UI
Output Optical Eye	IEEE802.3ah-2004 Compliant				
TX_Dissable Assert Time	T <sub>off</sub>			10	µs
<b>Receiver</b>					
Centre Wavelength	$\lambda_c$	760		860	nm
Receiver Sensitivity	P <sub>min</sub>			-17	dBm
Receiver Overload	P <sub>max</sub>	-3			dBm
Return Loss		12			dB
LOS De-assert	LOSD			-18	dB
LOS Assert	LOSA	-35			dBm
LOS Hysteresis		1			dB