



CONTENTS	PAGE
----------	------

Ha-VIS SFP Modules

Introduction + Features	A-6 2
-------------------------	-------

Ha-VIS SFP modules 100 Mbit/s	A-6 3
-------------------------------	-------

Ha-VIS SFP modules 1000 Mbit/s	A-6 4
--------------------------------	-------

Ha-VIS Memory cards	A-6 5
----------------------------	-------

Ha-VIS 19" DIN-Rail Mounting kit	A-6 6
---	-------



Accessories
Ha-VIS SFP modules

General description

SFPs (Small Form-factor Pluggable) are small standardized modules for network connections.

These modules are a specification for a new generation of modular optical transceivers. The devices are constructed as connecting plugs for extremely quick network connections.

The SFPs are available in a variety of models, depending on the cable type (multi-mode or single-mode), the wave length (850 nm, 1300 nm, 1550 nm or CWDM), data rate or range.

Copper-based SFP are also available.

Features

- Highly flexible
- Easily swapped out in event of malfunction
- Hot swappable
- Variants:

	SM fibre	MM fibre
100 Mbit/s	X	X
1000 Mbit/s	X	X

Advantages

- SFP used as connecting plug for extremely quick network connections
- Standardized modules for network connections

Application fields

- Railway applications
- Industrial automation
- Automotive industry
- Wind power



Accessories Ha-VIS SFP modules

SFP:

Type	SFP Fast Ethernet Transceiver 155 Mbit/s MM	SFP Fast Ethernet Transceiver 155 Mbit/s SM	SFP Fast Ethernet Transceiver 155 Mbit/s SM	SFP Fast Ethernet Transceiver 155 Mbit/s SM
Wave length	1310 nm	1310 nm	1310 nm	1550 nm
Mode	Multimode	Singlemode	Singlemode	Singlemode
Fiber	50 / 125 µm or 62.5 / 125 µm	9 / 125 µm	9 / 125 µm	9 / 125 µm
Max. cable length*	2 km	15 km	40 km	80 km
Connector	LC connector duplex	LC connector duplex	LC connector duplex	LC connector duplex
Optical budget	min. 8.2 dB	min. 8.2 dB	min. 10 dB	min. 10 dB
Data rate	155 Mbit/s	155 Mbit/s	155 Mbit/s	155 Mbit/s

* Typical cable length depending on attenuation of each specific application.

Identification	Part number	Drawing	Dimensions in mm
----------------	-------------	---------	------------------

<p>SFP modules</p> <p>SFP Fast Ethernet Transceiver 155 Mbit/s MM</p> <p>SFP Fast Ethernet Transceiver 155 Mbit/s SM</p> <p>SFP Fast Ethernet Transceiver L40 155 Mbit/s SM</p> <p>SFP Fast Ethernet Transceiver L80 155 Mbit/s SM</p> <p>other types on request</p>	<p>20 76 000 0300</p> <p>20 76 020 0300</p> <p>20 76 024 0300</p> <p>20 76 028 0300</p>		
---	---	--	--



Accessories

Ha-VIS SFP modules 1000 Mbit/s

SFP:

Type	SFP Gigabit Ethernet Transceiver 1.25 Gbit/s MM	SFP Gigabit Ethernet Transceiver 1.25 Gbit/s SM	SFP Gigabit Ethernet Transceiver 1.25 Gbit/s SM	SFP Gigabit Ethernet Transceiver 1.25 Gbit/s SM
Wave length	850 nm	1310 nm	1310 nm	1310 nm
Mode	Multimode	Singlemode	Singlemode	Singlemode
Fiber	50 / 125 µm or 62.5 / 125 µm	9 / 125 µm	9 / 125 µm	9 / 125 µm
Max. cable length*	550 m (50 / 125) 275 m (62.5 / 125)	10 km	40 km	80 km
Connector	LC connector duplex	LC connector duplex	LC connector duplex	LC connector duplex
Optical budget	min. 9 dB	min. 9 dB	min. 9 dB	min. 9 dB
Data rate	1250 Mbit/s	1250 Mbit/s	1250 Mbit/s	1250 Mbit/s

* Typical cable length depending on attenuation of each specific application.

Identification	Part number	Drawing	Dimensions in mm
SFP modules			
SFP Gigabit Ethernet Transceiver 1,25 Gbit/s MM	20 76 010 0300		
SFP Gigabit Ethernet Transceiver 1,25 Gbit/s SM	20 76 030 0300		
SFP Gigabit Ethernet Transceiver L40 1,25 Gbit/s SM	20 76 034 0300		
SFP Gigabit Ethernet Transceiver L80 1,25 Gbit/s SM	20 76 038 0300		
other types on request			



Accessories Ha-VIS Memory cards

The HARTING SD cards are used for saving the switch configuration. The web interface can be used to save the current configuration to the SD card.

If an SD card is inserted in the back of the switch, the switch will use the configuration saved on the card when it boots.

So it's quite easy when replacing a switch to transfer the entire configuration to the new switch. The old SD card with your current configuration is simply pushed into the new switch which then boots with these settings. No special network expertise is required.

Note: The HARTING Ethernet Switches are not compatible with conventional memory cards.

MRP memory cards allow you to activate the MRP functionality (media redundancy protocol) when using switches from the FTS 3000 and mCon 3000 series (with firmware ver. 3.0.0.1 and later). For example, in order to operate the device as an MRP slave, you need only have the corresponding MRP slave card inserted during operations.

Operating temperature -40 °C ... +70 °C

Memory space 128 MB

SD Memory cards

Configuration memory	20 89 900 1000
MRP Slave	20 89 900 1001
MRP Master	20 89 900 1002



Ha-VIS 19" DIN-Rail Mounting kit

The 19" mounting kit has been designed to install DIN-Rail mounted systems in a standard 19" rack.

The mounting kit is modular and very flexible. The DIN-Rail position can be changed in a very easy way. It can be installed in a horizontal or in a vertical position.

Each mounting kit has a cable management at the backside.

Features:

- 19 inch / 3 U
- Flexible installation
- Variable mounting
- Integrated mounting rail
- Robust design

Identification	Part number	Drawing	Dimensions in mm
----------------	-------------	---------	------------------

Ha-VIS 19" DIN-Rail Mounting kit

20 80 000 0007

