



FS02 BraggMETER Filter

High Speed Optical Tunable Filter

Hottinger Baldwin Messtechnik GmbH
Im Tiefen See 45
D-64239 Darmstadt
Tel. +49 6151 803-0
Fax +49 6151 803-9100
info@hbm.com
www.hbm.com

HBM FiberSensing, S.A.
Optical Business
Rua Vasconcelos Costa, 277
4470-640 Maia
Portugal
Tel. +351 229 613 010
Fax +351 229 613 020
fibersensing@hbm.com
www.hbm.com/fs

Mat.: 7-2002.4715
DVS: A4715-1.0 HBM: public
03.2017

Filter version: v1.0

© Hottinger Baldwin Messtechnik GmbH.

Subject to modifications.
All product descriptions are for general information only.
They are not to be understood as a guarantee of quality or
durability.

1	Technical Details	4
1.1	General Information	4
1.2	Technical Data	4
2	Regulatory and Certification Considerations	6
2.1	Environment Considerations	6
2.1.1	Disposal of your Old Appliance	6
3	Operation	7
3.1	Connectors	7
3.2	Control	7
3.2.1	Power	7
3.2.2	Optical	8

1 Technical Details

1.1 General Information

FS02 – BraggMETER Filter is a high speed optical tunable filter that integrates a proprietary cavity design without guiding optics, resulting in a compact, robust and vibration-resistant device. The filter is encapsulated in an athermal package that ensures excellent thermal stability.

This document applies to the following part numbers:

1-FS02-08-10-101-3	High Speed Optical Tunable Filter 80 nm NC
1-FS02-08-11-101-3	High Speed Optical Tunable Filter 80 nm FC/APC
1-FS02-10-10-101-3	High Speed Optical Tunable Filter 100 nm NC
1-FS02-10-11-101-3	High Speed Optical Tunable Filter 100 nm FC/APC

1.2 Technical Data

Optical	
Central Operation Wavelength	1550 nm
Insertion loss	<2.5 dB
Fiber type	SMF28
Free tuning range	≥80 nm or ≥100 nm
Finesse	700 (typical)
Side band rejection	>20 dB
Maximum power spectral density	50 mW/nm

Electrical	
Scan frequency	DC – 40 kHz
Capacitance	0.4 μ F
Tuning voltage @DC	14 V/FSR
Tuning voltage range	-10 to 50 V
Environmental	
Operation Temperature	10°C to 60°C
Storage Temperature	-10°C to 70°C
Thermal drift	<1 nm/°C (1550 nm)
Mechanical	
Cable	\varnothing 250 μ m acrylate
Cable length	1m (typical)
Connector	NC or FC/APC
Case	Anodized aluminum
Dimensions	11.0 x 17.8 x 45.7 mm
Weight	80 g
M2 mounting threads	13.72 x 41.66 mm (center)

2 Regulatory and Certification Considerations

2.1 Environment Considerations

2.1.1 Disposal of your Old Appliance



When the attached symbol combination - crossed-out wheeled bin and solid bar symbol – is attached to a product it means the product is covered by the European Directive 2002/96/EC and is applicable in the European Union and other countries with separate collection systems.

All electrical and electronic products should be disposed of separately from the municipal waste stream or household via designated collection facilities appointed by the government or the local authorities. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or distributor that purchased the product.

HBM FiberSensing is a manufacturer registered in the ANREEE - "Associação Nacional para o Registo de Equipamentos Eléctricos e Electrónicos" under number PT001434. FiberSensing celebrated a "Utente" type contract with Amb3E - "Associação Portuguesa de Gestão de Resíduos de Equipamentos Eléctricos e Electrónicos", which ensures the transfer of Electrical and Electronic appliance waste management, i.e. placing Electronic and Electrical appliances in the Portuguese market, from the manufacturer (HBM FiberSensing) to Amb3E.

3 Operation

3.1 Connectors

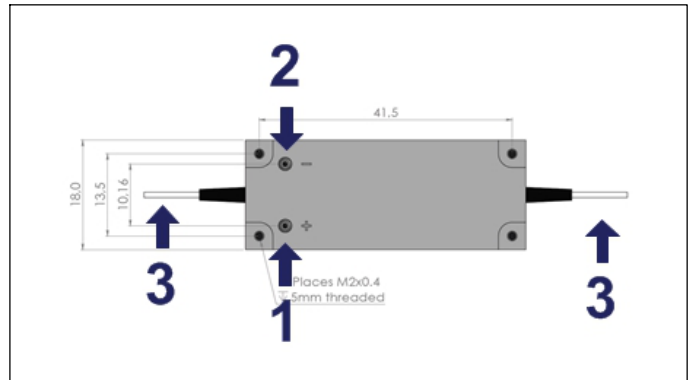


Fig. 3.1

The numbers in Fig. 3.1 indicate the following:

- 1 Power pin - +
- 2 Power pin - -
- 3 Lead fibers

3.2 Control

3.2.1 Power

Connect the power pins to your power source (Tuning voltage @DC19 V/FSR; tuning voltage range -10 V to 50 V) ensuring the polarity is respected.



WARNING

Reversing the polarity can permanently damage the BraggMETER Filter

3.2.2 Optical

The FS02 BraggMETER Filter can be supplied with FC/ APC connectors or without connectors.

HBM Test and Measurement

Tel. +49 6151 803-0

Fax +49 6151 803-9100

info@hbm.com

measure and predict with confidence



www.hbm.com