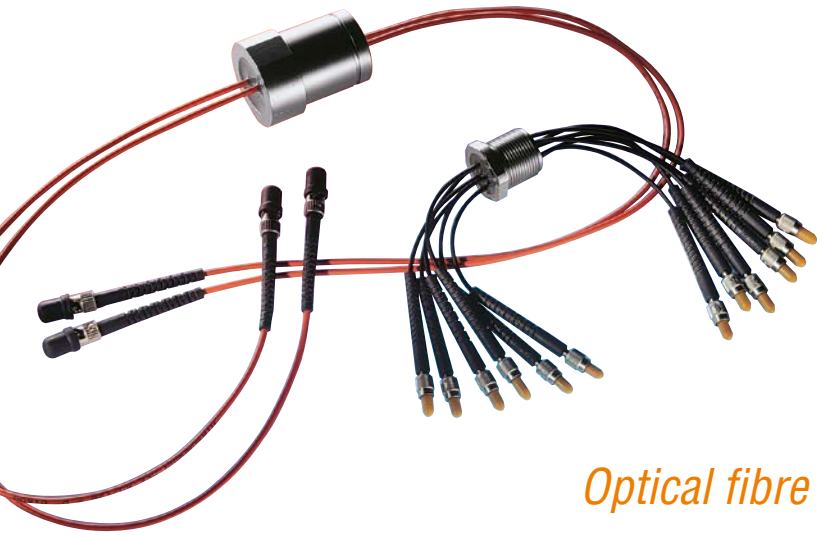


Optical fibre bushing

Features

- Fast, interference free transmission of data in both directions
- Not affected by electromagnetic interference
- High transmission reliability
- High transmission speed
- Corrosion-free contacts
- Simple plug-in connection (low installation costs)
- Reliable signal transmission even over long distances
- Suitable for use under extreme conditions

Description

The optical fibre bushing is used as an optical fibre cable entry into flameproof enclosures located in hazardous areas. They can also be supplied with plug-in connectors.

The optical waveguiders - also known as fibres - are made of glass and resist to mechanical, climatic, chemical and electromagnetic influences. The optical waveguide is most commonly used for carrying signals in the form of electromagnetic waves in the frequency range of visible light.

The type and structure of the cable determines its transmission properties.

Explosion protection

Ex protection type

ATEX Ⓔx II 2G Ex d IIC Gb
Ⓔx I M2 Ex d I Mb

Certification
PTB 99 ATEX 1090 U

IECEx Ex d IIC Gb
Ex d I Mb

Certification
IECEx PTB 13.0030 U

Other approvals and certificates, see www.bartec-group.com

Working temperature
-55 °C to +105 °C depending on the fibre optic cable used (temperature ranges apply to the fixed installation of leads)

Ambient temperature limit switch
-55 °C to +80 °C at T6

Depending on the fibre optic conductor selected, the enclosure heating at the installation site at the max. permissible ambient temperature must be assumed when calculating the max. temperature.

Power limit
Ex d II ≤ 35 mW / 5 mW/mm²
Ex d I ≤ 150 mW / 20 mW/mm²

Standard versions*:

max. quantity of the fibre-optic cables
47 cores

Sleeve size
metric: M16 x 1.5 to M48 x 1.5
non-threaded: ∅ 22 mm to ∅ 40 mm

Sleeve material
Metal, bare, varnished or galvanised

* all other versions on request.
Please use the customer requirements form at the end of the chapter!

Installation instructions

Threaded holes into which threaded bushings are screwed must meet the minimum requirements in EN 60079-0 Section 5.3

These fibre optic line bushings are suitable for installing in electric apparatus marked “d” flame-proof enclosure for the IIA, IIB, and IIC groups.

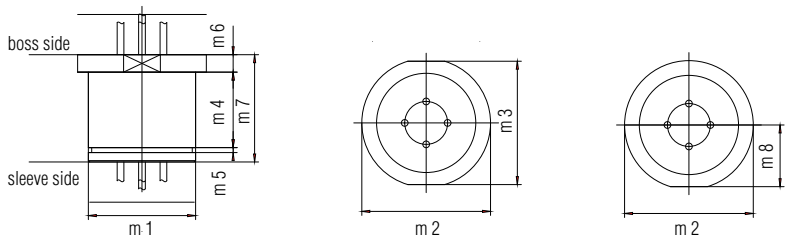
Note

The bushings must be fastened in the electric apparatus in such a way that they are secured against twisting and self-loosening.

03-0330-0182/A-10/2014-BCS-200638/1

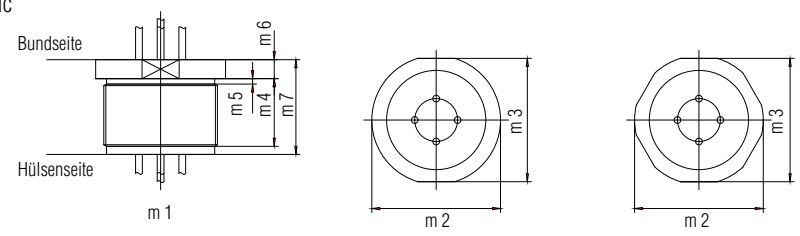
Dimensions								
	m1	m2	m3[1]	m4	m5	m6	m7	m8
threaded	∅ 22 mm (0.87)	∅ 25 mm (0.98)	–	26.1 (1.03)	1.3 (0.05)	2 (0.08)	31 (1.22)	11.1 (0.44)
	∅ 32 mm (1.26)	∅ 36 mm (1.42)	–	26.1 (1.03)	1.6 (0.06)	3 (0.12)	32 (1.26)	17.1 (0.67)
	∅ 36 mm (1.42)	∅ 42 mm (1.65)	SW 40	28.1 (1.12)	1.85 (0.07)	7 (0.28)	39 (1.54)	-
	∅ 40 mm (1.58)	∅ 48 mm (1.89)	SW 46	28.1 (1.12)	1.85 (0.07)	6.5 (0.26)	40 (1.58)	-

Dimensions threaded



Dimensions							
	m1	m2	m3[1]	m4	m5	m6	m7
metric	M16 x 1[2]	∅ 21 mm (0.83)	SW 19	17 (0.67)	max. 1.5 (0.06)	5 (0.2)	25 (0.98)
	M16 x 1.5[2]	∅ 21 mm (0.83)	SW 19	17 (0.67)	max. 2 (0.08)	5 (0.2)	25 (0.98)
	M24 x 1.5[2]	∅ 29 mm (1.14)	SW 27	19 (0.75)	max. 2 (0.08)	5 (0.2)	26 (1.02)
	M33 x 1.5	∅ 38 mm (1.5)	SW 36	18 (0.71)	max. 2 (0.08)	7 (0.28)	30 (1.18)
	M36 x 1.5	∅ 42 mm (1.65)	SW 40	25 (0.98)	max. 2 (0.08)	7 (0.28)	35 (1.38)
	M42 x 1.5[2]	∅ 48 mm (1.89)	SW 46	25 (0.98)	max. 2 (0.08)	7 (0.28)	35 (1.38)

Dimensions
metric



[1] Width across flats
[2] Boss in non-threaded hexagonal version

Selection chart optical fibre line bushing

Sleeve type	Code no.	Fibre type core/jacket	Code no.	Nominal diameter (µm) core/jacket or core/fibre*	Code no.	Sleeve size	Code no.
screw-in, metric	0	single strand/single strand material: glass/glass	A	9/125	1	M16 x 1.5	D
						M24 x 1.5 / ∅ 22 mm	2
non-threaded, joint length 12.5 mm	5			50/125	2	M33 x 1.5 / ∅ 32 mm	3
						M36 x 1.5	4
				62.5/125	3	M38 x 1.5 / ∅ 36 mm	5
non-threaded, joint length 25 mm	6					M42 x 1.5 / ∅ 40 mm	6
				200/230	6	M48 x 1.5	7

*Single mode-lines on request

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Please insert correct code.
Technical data subject to change without notice.

No. of cores