

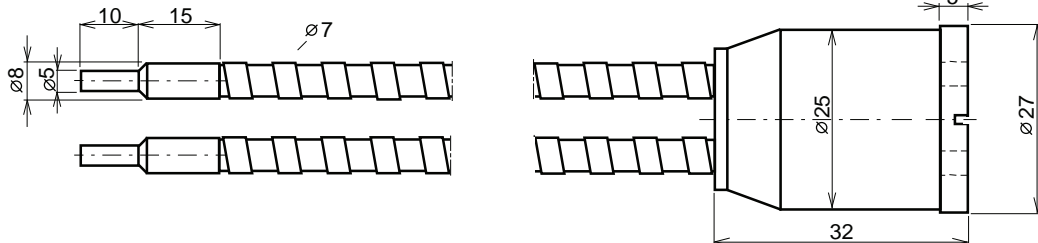

 II 2 G IIB T4
 II 3 D IP68 T135°C

Glass Fibre Optics ES-xxxx-4-L-2G3D / ES-xxxx-4-L

- Alloyed special steel protection sheath V2A
- For light barrier function
- ES-....-4-L-2G3D: Applicable in Ex Zones 1, 2, 22
- ES-....-4-L: Applicable in Non-Hazardous Locations up to TA=+200°C

Technical Data	Type	ES-xxxx-4-L-2G3D	ES-xxxx-4-L
		Applicable in Ex Zones	Not for Hazardous Locations
Standard length		ES-xxxx-4-L-(-2G/3D) (xxxx=Length in mm, 200, 500, 1000, 1500, 2000)	
Type of Ex Protection: Protection by constructional safety at EN 13463-5:2002		Yes	No
Applicable in Hazardous Locations, Zones		1, 2, 22	--
Category / Grouping		II 2G3D IIB T135°C(T4)	--
Requirement on connected sensors		Limited optical power at DMT 99 ATEX E056	None
Maximum optical input power		<=35mW	Not limited
Maximum potential radiant intensity		<= 5mW/mm ²	Not limited
Active fibre optic diameter		4mm	
Active cross-sectional area		12.6mm ²	
Transmission rate, average		50-70%, at 880nm wave length	
Optical aperture		appr. 65°	
Individual fibre diameter		50um	
Minimum bending radius		50mm (Single bend)	
Operating temperature range TA		-20°C < TA < +120°C	-20°C <TA< +200°C
Enclosure rating at EN 60529		IP 68	
Material of adaption and probe tip		Anticorodal 110	Anticorodal 110
Material of the protection sheath		Special steel, V2A	Special steel, V2A
Options		- Other length on request	
ATEX Designation of the fibre optics		CE 0158 Declaration by manufacturer at 94/9/EC Tech. File Ref.: AN_EXLWL TA: 0°C < TA < +120°C	Manufacturer with address II 2G3D IIB T135°C(T4) Production date: Numerals 4 to 7 of the serial number

Dimensions:


Operating Manual / EC - Declaration of Conformity:
Ex protection:
General regulations for all types of Ex devices:

The fibre optics series ES-...-2G3D is only applicable in hazardous location / zones 1, 2, 22. The fibre optics must be operated with ATEX certificated sensors with limited optical output power, at DMT 99 ATEX E056. It is necessary to take into consideration the valid international and national rules and regulations. The maximum rated optical input power must not be exceeded. Other than original manufacturer, additional optical lenses are not allowed in hazardous locations. The fibre optics have to be installed in a manner to avoid tensile stress and frictional heat. If fibre optics and associated sensors are not mounted in the same hazardous location, the change over of the different areas must be realized in accordance with the valid regulations.

Function

The fibre optics series ES. are designed for the construction of a light barrier function in hazardous locations and for high ambient temperatures. The fibre optics can be operated with certificated Matrix sensors, with an optical wave length from 500nm to 900nm. The fibre optics must not be buckled or laid with a small radius. Buckled or bad laid fibre optics results to a strong decrease of performance. Avoid performance decreasing and failures caused by wear, by a functional mounting of the fibre optics.

Maintenance

The fibre optics are maintenance-free. Protect the fibre optics against pollution. If they are contaminated, clean with alcohol. Do not use aggressive solvents. Equipment must only be repaired or serviced by the manufacturer.

General Notes

We reserve the right to modify our equipment. Our equipment is designed such way, that it has the least possible adverse effect on the environment. It neither emit or contain any damaging or siliconized substances and use a minimum of energy and resources. No longer usable or irreparable units must be disposed of in accordance with local waste disposal regulations.

Safety Informations

When installing and operating with the fibre optic, it is necessary to take into consideration the relevant international and other national regulations. ATEX 118a, ElexV, TRbF, TRD, UVV, EX-RL, BetrSichV. Standards met:

- EN 13463-1:2002, EN 13463-5:2002, EN 1197-1:1997; IEC 60079-28 Ed.1.0 CDV; EN 60529:2000
- Ex-Protection: 94/9/EC (ATEX 100a)
- Machine directive: 98/37/EC
- Tech. File Ref.: AN_EXLWL
- RoHS: 2002/95/EC

CE Declaration of Conformity:

Declaration of conformity by manufacturer. Tech. File Ref.: AN_EXLWL. ATEX certification of quality type production of Ex devices at the directive 94/9/EC Certification No: BVS 03 ATEX ZQS / E118. The conformity of the devices with the EC standards and directives and the observation of the Quality Safety System ISO 9001:2000 with the ATEX module "Production", declares:

Hans Bracher, Matrix Elektronik AG

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