

Original Operating Manual: Glass Fibre Optics QWS-****-04-T-*(-OP2)

- Silicone rubber protection sheath, for proximity switch measurement method
- QWS-****-04-T-*(-OP2): For using in Ex Zones 1, 2, 21, 22
- QWS-****-04-T-*(-: Applicable in Non-Hazardous Locations

Ex op is IIB T4 Gb / Ex op is IIIB T135°C Db

Technical data	Type	QWS-xxxx-04-T-yy-OP2	QWS-xxxx-04-T-yy
Standard length, scanning width		xxxx= Length in mm, 500, 1000 / yy= scanning width in mm, 30 or 60	
Type of Ex Protection, Gas		Ex op is IIB T4 Gb	none
Type of Ex Protection, Dust		Ex op is IIIB T135°C Db	none
For using in Ex Zones		1, 2, 21, 22	--
Maximum optical input power		≤15mW	Not limited
Maximum potential radiant intensity		≤5mW/mm²	Not limited
Active scanning width, types QWS-****-04-T-30			30 x 0.8mm
Active scanning width, types QWS-****-04-T-60			60 x 0.4mm
Length, types: QWS-500-04-T-*(-OP2)			540mm
Length, types: QWS-1000-04-T-*(-OP2)			1040mm
Active fibre optic diameter			2 x 4mm
Active cross-sectional area			2 x 12.56mm²
Transmission rate, average			50-70%, at 870nm
Optical aperture			appr. 65°, at 870nm
Individual fibre diameter			50µm
Minimum bending radius			50mm (Single bend)
Operating temperature range T _{amb}			-20°C < T _{amb} < +120°C
Enclosure rating, according to EN 60529			IP 68
Material, adaption probe tip			Special steel, 1.4305
Material, probe tip			Special steel, 1.4305
Material, protection sheath			Silicone rubber, special steel reinforced
Accessories, included	--		
Options	--		

ATEX/IECEx RELATED MARKINGS

CE 1258 T_{amb} = -20°C < T_{amb} < +120°C

Manufacturer with address

Date of production: Numerals 5 to 8 of the serial number (year/calendar week)

Certifications IECEx & ATEX:

Type: QWS-xxxx-04-T-yy-OP2

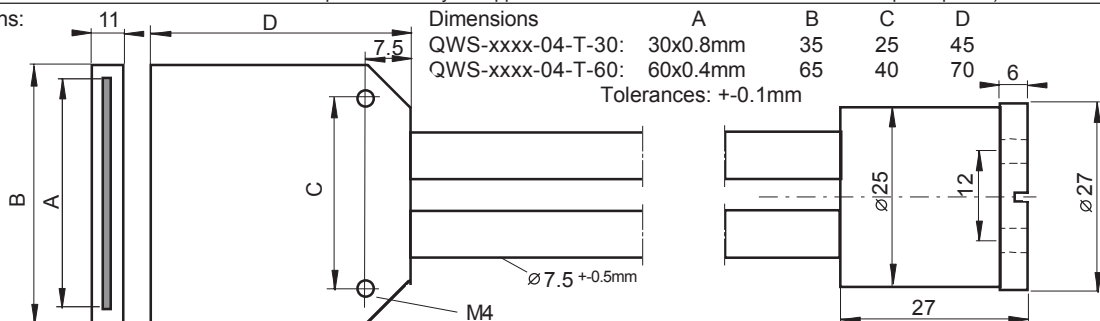
II 2G IIB T4 Gb, II 2D IIIB T135°C Db

ATEX-Certification No: BVS 10 ATEX E 130 X, DEKRA

Ex op is IIB T4 Gb, Ex op is IIIB T135°C Db IECEx-Certification No: IECEx 14.0108X

(X designation of the certification number: Fibre optics must only be applied with sensors with certificated limited optical power)

Dimensions:



Operating Manual / EU - Declaration of Conformity:

Ex mounting prescriptions

Types QWS-****-04-T-*(-OP2:

Only for using in Ex zones 1, 2, 21, 22.

General regulations for all types:

The fibre optics must only be operated with IECEx/ATEX certificated sensors with limited optical output power. The local equipotential bonding have to be done by grounding the fixed sensor. It is necessary to take into consideration the valid international and national rules and regulations (EN 60079-14). 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 QWS-****-04-T-*(-OP2) are designed for the construction of accurate width measurement or positioning with a proximity switch measurement method arrangements 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.

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. No longer usable or irreparable units must be disposed of in accordance with local waste disposal regulations. Equipment must only be repaired or serviced by the manufacturer.

Safety Informations

When installing and operating, it is necessary to take into consideration the relevant international and other national regulations, especially those regarding explosion protection.

EU-Declaration of Conformity

Standards met: EN/IEC 60079-0:2018, IEC 60079-28:2015, IEC 60079-31:2013, ATEX directive 2014/34/EU, Machine directive 2006/42/EC, RoHS directive 2011/65/EU

IECEx certification No. BVS 14.0108X.

ATEX certification: Certification No. BVS 10 ATEX E 130 X, DEKRA EXAM GmbH, Zertifizierungsstelle, Carl-Beyling-Haus, Dinendahlstrasse 9, D-44809 Bochum, Ident No. 0158.

ATEX certification of quality type production of Ex devices in accordance to the directive 94/9/EC, CE 1258, Eurofins. Certification No: SEV 21 ATEX 4580, QAR No. CH/SEV/QAR21.0009/00. The conformity of the devices with the EC standards and directives and the EC-type examination certificate and the observation of the Quality Safety System ISO 9001:2015 with the ATEX module "Production", declares:

Pablo Ledergerber, Matrix Elektronik AG

QWS-xxxx-04-T-xx-OP2-IECEx_e202202-16/MP

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