ISO 9001:2015

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

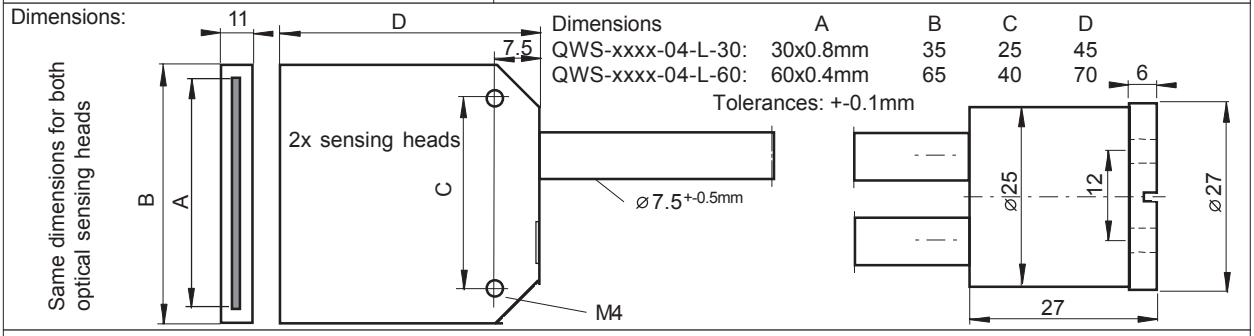
- Silicone rubber protection sheath, for light barrier measurement method
- QWV-****-04-L-**-OP2: For using in Ex Zones 1, 2, 21, 22
- QWV-****-04-L-**: Applicable in Non-Hazardous Locations

CE 1258
IECEx BVS 14.0108X

Ex op is IIC T4 Gb

Technical data / Type	QWS-xxxx-04-L-yy-OP2	QWS-xxxx-04-L-yy
Standard length, scanning width	xxxx= Length in mm, 500, 1000, 2500 / yy= scanning width in mm, 30 or 60	
Type of Ex Protection, Gas	Ex op is IIC T4 Gb	none
Type of Ex Protection, Dust	none	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 QWV-****-04-L-30	30 x 0.8mm	
Active scanning width, types QWV-****-04-L-60	60 x 0.4mm	
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	50um	
Minimum bending radius	50mm (Single bend)	
Operating temperature range T_{amb}	-20°C < T_{amb} < +120°C	
Enclosure rating, according to EN 60529	IP68	
Material, adaption probe tip	Special steel, 1.4305	
Material, probe tip Material, protection sheath	Special steel, 1.4305 Silicone rubber, special steel reinforced	
Accessories, included	--	
Options	**S342**: Spezial-Schutzschlauch	
EX Designation of the fibre optics	CE 1258 Type marking: QWS-****-04-L-**-OP2 EC-Certification No: BVS 10 ATEX E130X. IECEx Certification No: IECEx BVS 14.0108X T_a: -20°C < T_{amb} < +120°C, Production date: Numerals 5 to 8 of the serial number(Y/W) (X designation of the certification number: Fibre optics must only be applicated with sensors with certificated limited optical power)	Manufacturer with address Ex op is IIC T4 Gb

Dimensions:



Dimensions	A	B	C	D
QWS-xxxx-04-L-30:	30x0.8mm	35	25	45
QWS-xxxx-04-L-60:	60x0.4mm	65	40	70

Tolerances: +-0.1mm

Operating Manual / EU - Declaration of Conformity:

Ex mounting prescriptions
Types QWS-**-04-L-**-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 then 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-L-**(-OP2) are designed for the construction of accurate width measurement or positioning with a light barrier 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, 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 2014/34/EU, CE 1258, Eurofins. Certification No: SEV 21 ATEX 4580, QAR No. CH/SEV/QAR21.0009. 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

Tippkemper - Matrix GmbH
Meegener Str. 43 D-51491 Overath
Tel.:+49 2206 9566-0 Fax -19
info@tippkemper-matrix.com

Matrix Elektronik AG (Manufacturer)
Kirchweg 24 CH-5420 Ehrendingen
Tel.:+41 56 20400-20 Fax -29
info@matrix-elektronik.com