Tippkemper®

ISO 9001:2008 / ATEX

MATRIX elektronik ag

CE 0158

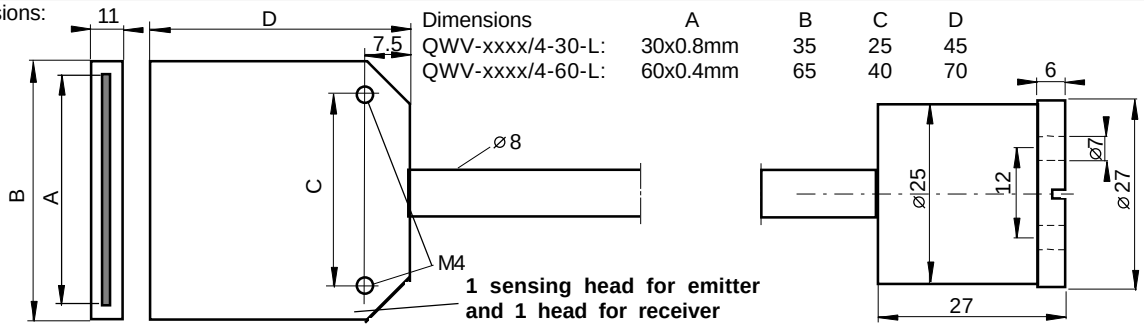
Ex II 1 G IIC T4 Ga
II 1D IIIB T135°C Da
or
II 2 G IIB T4 Gb
II 2D IIIB T135°C Db

Glass Fibre Optics
series QWV-xxxx-4-zz-L

- Stainless steel protection sheath, for light barrier measurement method
- QWV-..../4-..-L-1GD: Applicable in Ex Zones 0, 1, 2, 20, 21, 22
- QWV-..../4-..-L-2GD: Applicable in Ex Zones 1, 2, 21, 22
- QWV-..../4-..-L: Applicable in Non-Hazardous Locations up to Ta +200°C

Technical data / Type	QWV-x-4-z-L-1GD	QWV-x-4-z-L-2GD	QWV-x-4-z-L
Standard length Standard sensing area	"x" of the designation: Length in mm 500, 1000, 2500 "z" of the designation: Sensing area in mm 30mm, 60mm		
Type of Ex Protection, Gas	II 1G IIC T4 Ga	II 2G IIB T4 Gb	none
Type of Ex Protection, Dust	II 1D IIIB T135°C Da	II 2D IIIB T135°C Db	none
Applicable in Ex Zones	0, 1, 2, 20, 21, 22	1, 2, 21, 22	--
Requirement at connected sensors	Ex op is Ga/Da	Ex op is Gb/Db	none
Maximum optical input power	<=15mW	<=35mW	Not limited
Maximum potential radiant intensity	<= 5mW/mm²	<= 5mW/mm²	Not limited
Active fibre optic diameter	4 mm		
Active cross-sectional area	12.6mm²		
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 Tamb	0°C < Tamb < +120°C		-20°C <Tamb< +200°C
Enclosure rating at EN 60529	IP 68		
Material, adaption	Special steel, 1.4305 (V2A)		
Material, probe tip	Special steel, 1.4305 (V2A)		
Material, protection sheath	Special steel, 1.4305 (V2A)		
Accessories, included	2 x Shrink-down plastic tubing	--	
Options	Fibre optics with different length for emitter and receiver part, on request. Ordering No. QWV-xxxx/yyyy-4-zz-L: xxxx = length of part 1, yyyy = length of part 2, zzzz = sensing area		
ATEX related designation of the fibre optics	CE 0158 TA: 0°C < T_{amb} < +120°C Manufacturer with address Type marking: QWV-..-1GD Ex II 1 G IIC T4 Ga, II 1D IIIB T135°C Da Type marking: QWV-..-2GD Ex II 2 G IIB T4 Gb, II 2D IIIB T135°C Db EC-Certification No: BVS 10 ATEX E 130 X. DEKRA Production date: Numerals 5 to 8 of the serial number (Year/Week) (X designation of the certification number: Fibre optics must only be applicated with sensors with certificated limited optical output power)		

Dimensions:



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

1 sensing head for emitter and 1 head for receiver

Operating Manual / EC - Declaration of Conformity:

Ex mounting prescriptions
QWV-...-..-1GD: Applicable in Ex zones 0, 1, 2, 20, 21, 22.
QWV-...-..-2GD: Only applicable in Ex zones 1, 2, 21, 22.
General regulations for all types:
The maximum rated optical input power must not be exceeded. 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). 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. With the additional shrink-down plastic tubings (only types QWV..-1GD) a required change over can be realized.
Function
The fibre optics series QWV.. are designed for the construction of 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. 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. EN 60079-14, ATEX 118a, single directive 1999/92/EC.
Standards met:
- EN 13463-1:2009-07, EN 60079-28:2007
- Ex-Protection: 94/9/EC
- Machine directive: 2006/42/EC
- RoHS: 2002/95/EC

General Notes, disposal
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.

EC-Declaration of Conformity:
QWV-.-.GD: ATEX EC type certification No: BVS 10 ATEX E 130 X. DEKRA. ATEX certification of quality type production of Ex devices at the directive 94/9/EC, CE 0158. 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 9001:2008 with the ATEX module "Production", declares:

Hans Bracher, 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