



## Broad beam optical fibre QW...-1GD

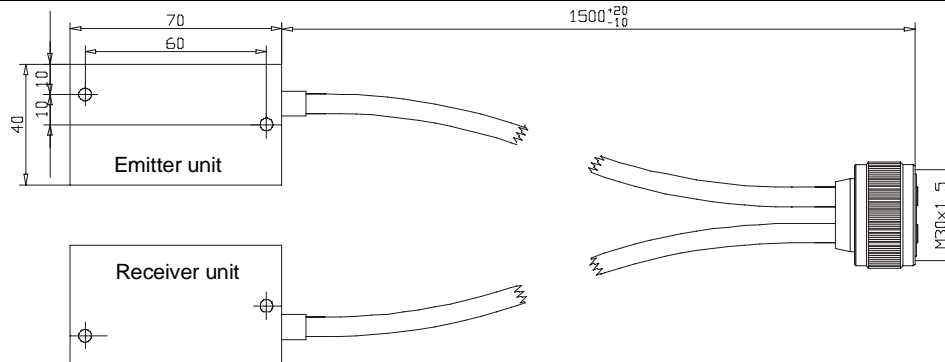


II 1 GD IIB T135°C (T4)

- ATEX certified for Ex zones 0, 1, 2, 20, 21, 22
- Applicable for width deviation measurement, detection of small objects and other applications
- Applicable with ATEX certified analog sensors IRD-2A(I) S93

Type	QW-1500/2,3-50-U-SE-1GD
<b>Technical Data</b>	
Type of Ex protection	Protection by constructive safety, at EN 13463-5:2002
Applicable in Ex zones	Zones 0, 1, 2 and 20, 21, 22
Permitted sensors	Only for operating with ATEX certified sensors DMT 99 ATEX E056
Maximum optical input power	≤ 22.8mW
Maximum radiation intensity	≤ 5mW/mm <sup>2</sup>
Detection pattern	50mm
Length of the optical fibre	1500mm, other dimensions on request
Fixing, sensing head	Bore holes for screws M4
Adapter fixing at the sensor	Coupling nut M30
Material, adaptor and sensing heads	Stainless steel, V2A
Material, protection covering	Flexible stainless steel, V2A
Optical transmission ratio, average	50-70%, at 880nm
Optic axial angle	appr. 65°, at 880nm
Single fiber diameter	50µm
Minimum bending radius	50mm (single bending)
Operating temperature range TA	0°C < TA < +120°C
Enclosure rating at EN 60529	IP 68
ATEX related designations	CE 0158 Device type: QW...-1GD Certification number: BVS 03 ATEX H 047 X TA: 0°C < TA < 120°C, Date of construction: Numeral 4 to 7 of the serial number

Dimensions:



### Operating Manual / EC - Declaration of Conformity:

#### Mounting prescriptions

##### Ex Protection:

The optical fibres series QW...-1GD are applicable in Ex Zones 0, 1, 2 and 20, 21, 22. It is necessary to take into consideration the valid international and national rules and regulations. The optical fibre must only be operated with ATEX homologated sensors at DMT 99 ATEX E056. The local equipotential bonding have to be done by grounding the fixed ATEX sensor. The maximum allowed optical input power must not be exceeded. Protect the optical fibre against damages and frictional heat. If the optical fibre and the sensor are not mounted in the same Ex zone, the zone transition point must be secured at EN 50014 by using the additional shrinkingdown plastic tubing. Other than original manufacturer, additional optical lenses are not allowed in hazardous locations.

##### Function

The optical fibre, type QW together with analog sensor IRD-2A(I) S93, gives the possibility the realize a precision line scanning or width measurement of different objects.

##### Maintenance

Protect the fibre optic adaptor and the sensing heads against pollution. If the fibre optics is 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.

#### General Safety Informations

When installing and operating with the sensor, it is necessary to take into consideration the relevant international and other national regulations.

ATEX 118a, ElexV, TRbF, TRD, UVV, EX-RL(BGR 104), BetrSichV(ATEX 137), single directive 1999/92/EG, 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/EG (ATEX 100a)
- Machine directive: 98/37/EG

#### Homologation / Declaration of conformity

**Certification No.: BVS 03 ATEX H 047 X**

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 with the ATEX module "Production", declares:

Hans Bracher, Matrix Elektronik AG

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