ISO 9001:2015

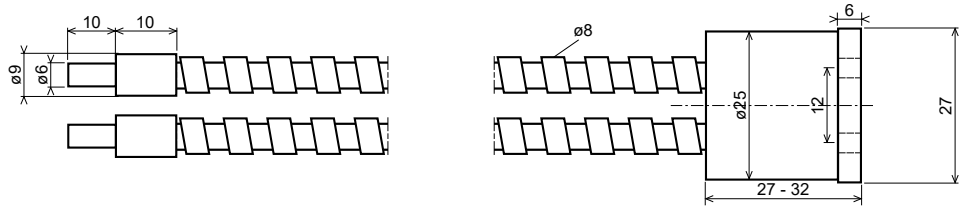
VAM-****-05-L-GR-OP1
Fibre optics

1258

- Fibre optics with special steel, 1.4301 protection sheath and stainless steel reinforcement for light barrier measurement arrangements.

Technical Data	VAM-****-05-L-GR-OP1
Gas Ex protection designation	II 1G Ex op is IIC T4 Ga
Dust Ex protection designation	II 1D Ex op is IIIC T135°C Da
For use in Ex Zones	0, 1, 2, 20, 21 and 22
Permitted sensors	Only for operating with ATEX/IECEx certificated sensors from Matrix Elektronik AG
Maximum optical input power	<=15mW
Maximum optical input intensity	<=5mW/mm^2
Total length	****=Length in mm, 500, 1000, 2000 (Overall length)
Active fibre optic diameter	4.7mm
Active cross-sectional area	17.34mm^2
Single fiber diameter	50um
Average transmission	50-70% at 870nm
Optical acceptance angle	approx. 65° at 870nm
Minimum bending radius	50mm (Single bend)
Materials	protection sheath: Special steel, 1.4301 probe tip: Special steel, 1.4305 adaption probe tip: Special steel, 1.4305
Enclosure rating	IP68
Ambient working temperature range, T_{amb}	–20°C up to +120°C
Accessories	**Included**: • 2x Shrink-down plastic tubing **Optional**

Dimensions



EX related markings

CE 1258	Manufacturing date: Digits 5 to 8 of the serial number(Year / CW)
Gas: II 1G Ex op is IIC T4 Ga	Dust: II 1D Ex op is IIIC T135°C Da
ATEX:	BVS 10 ATEX E 130 X
IECEx:	IECEx BVS 14.0108X
Tamb: –20°C up to +120°C	Manufacturer with address

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

Operating Manual / EU-declaration of conformity

Ex installation prescriptions
It is necessary to take into consideration the valid international and national rules and regulations (IEC 60079-14). The optical fibre must only be operated with ATEX/IECEx homologated sensors from Matrix Elektronik AG. The maximum rated optical input power must not be exceeded. The local equipotential bonding have to be done by grounding the fixed sensor. Other then original manufacturer, additional optical lenses are not allowed in hazardous locations. The fibre optics have to be installed in a manner that avoids 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. The product VAM-****-05-L-GR-OP1 is applicable in Ex zones 0, 1, 2, 20, 21 and 22.

Function
The fibre optics series VAM-****-05-L-GR-OP1 are designed for the construction of light barrier measurement method arrangements in hazardous locations and for high ambient temperatures. The fibre optics must only be operated with certificated Matrix sensors, with limited optical radiation power and 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.

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

Maintenance
No special maintenance is required.
Protect the product and any optical ports (if applicable) from pollution. Clean with **non-aggressive** solvents only. Strong solvents may damage certain fibre optics. The equipment must only be repaired or serviced by the manufacturer.

General notes and disposal
We reserve the right to modify our products. Our products are designed in such a way, that it has the least possible adverse effect on the environment. It neither emits or contains 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.

EU-Declaration of Conformity
The product meets the requirements of the following standards and directives:
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
ATEX/IECEx-Designation:
Gas: II 1G Ex op is IIC T4 Ga
Dust: II 1D Ex op is IIIC T135°C Da
ATEX EU-type examination certificate No.: BVS 10 ATEX E 130 X
IECEx CoC No.: IECEx BVS 14.0108X
Ex CB IECEx: DEKRA Testing and Certification GmbH, Carl-Beyling-Haus, Dinendahlstrasse 9, D-44809 Bochum.
ATEX certification of quality management system, type production of Ex devices, in accordance to the directive 2014/34/EU:
Certification No.: SEV 21 ATEX 4580, QAR No.: CH/SEV/QAR21.0009/00, CB: Eurofins Electric & Electronic Product Testing AG, Luppmenstrasse 3, CH-8320 Fehraltorf CE 1258 Ident. Number: 1258
Pablo Ledergerber, Matrix Elektronik AG, is authorized to generation of documentation.
The conformity of the devices with all used standards and directives and the EC-type examination certificate and the observation of the Quality Management System ISO 9001:2015, declares:

Ehrendingen, 17.4.2023

Pablo Ledergerber, Matrix Elektronik AG

VAM-xxxx-05-L-GR-OP1_e1/2023–04–17/MP

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