ISO 9001:2015

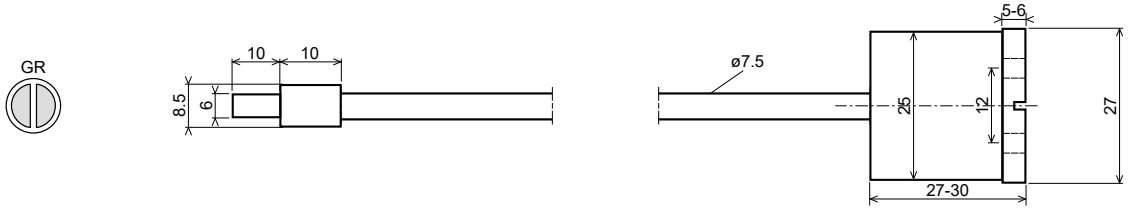
# SKM-****-02-T-GR-OP2
# Glass fibre optics

1258

- Silicone rubber protection sheath with a stainless steel reinforcement for proximity switch measurement method.

| Technical Data | SKM-****-02-T-GR-OP2 | |
|---|---|---|
| Gas Ex protection designation | II 2G Ex op is IIC T4 Gb | |
| For use in Ex Zones | 1 and 2 | |
| Permitted sensors | Only for operating with ATEX/IECEx certificated sensors from Matrix Elektronik AG | |
| Maximum optical input power | <=35mW | |
| Maximum optical input intensity | <=5mW/mm$^2$ | |
| Total length | ****=Length in mm, 200, 500, 1000, 1500, 2000 (Overall length) | |
| Length tolerance | ±50mm | |
| Active fibre optic diameter | 2mm | |
| Active cross-sectional area | 3.14mm$^2$ | |
| Single fiber diameter | 50um | |
| Average transmission | 50-70%, at 870nm | |
| Optical acceptance angle | approx. 65°, at 870nm | |
| Minimum bending radius | 50mm (Single bend) | |
| Materials | adaption probe tip: Special steel, 1.4305<br>probe tip: Special steel, 1.4305<br>protection sheath: Silicone rubber with stainless steel reinforcement | |
| Enclosure rating | IP68 | |
| Ambient working temperature range, $T_{amb}$ | –20°C up to +120°C | |
| Accessories | **Included** | **Optional**<br>• Additional optics type OT-VA (Material: brass) |

**Dimensions**




**EX related markings**

CE 1258 — Manufacturing date: Digits 5 to 8 of the serial number(Year / CW)

Gas: II 2G Ex op is IIC T4 Gb

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. **In gas applications, the silicone fiber optic cables must be protected against electrostatic charging.**
The product SKM-****-02-T-GR-OP2 is applicable in Ex zones 1 and 2.

**Function**
The fibre optics series SKM-****-02-T-GR-OP2 are designed for the construction of proximity switch measurement method arrangements in hazardous locations and for high ambient temperatures. The fibre optics can 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 / ISH 1:2019, EN 60079-28:2015, ATEX directive 2014/34/EU, Machine directive 2006/42/EC, RoHS directive 2011/65/EU
ATEX/IECEx-Designation:
Gas: II 2G Ex op is IIC T4 Gb
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, 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, directives and EC-type examination certificates and the observation of the Quality Management System ISO 9001:2015, declares:

Ehrendingen, 17.4.2025

Pablo Ledergerber, Matrix Elektronik AG

SKM-xxxx-02-T-GR-OP2_e2/2025–04–17/MP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