CE 0102

FM APPROVED

## Model Number

**MC60-12GM50-1N-V1**

## Features

- **60 mm flush with permanent magnet DM 60-31-15**

## Accessories

**BF 12**
Mounting flange, 12 mm

**EXG-12**
Quick mounting bracket with dead stop

**DM 60-31-15**
Permanent magnet for magnetic field sensors

**DM 25-32-07**
Permanent magnet for magnetic field sensors

**V1-G**
Female connector, M12, 4-pin, field attachable

**V1-W**
Female connector, M12, 4-pin, field attachable

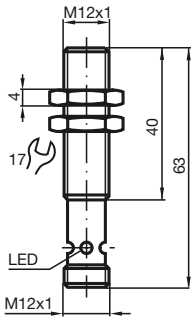
**V1-G-N-2M-PUR**
Female cordset, M12, 2-pin, NAMUR, PUR cable

**V1-W-N-2M-PUR**
Female cordset, M12, 2-pin, NAMUR, PUR cable

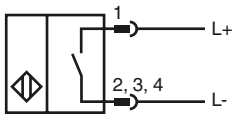
## Technical Data

| | | |
|---|---|---|
| **General specifications** | | |
| Switching element function | | NAMUR, NO |
| Rated operating distance | $s_n$ | 60 mm |
| Installation | | flush in non-magnetic metal |
| Output polarity | | NAMUR |
| Assured operating distance | $s_a$ | 10 ... 48.6 mm |
| **Nominal ratings** | | |
| Nominal voltage | $U_o$ | 8.2 V ($R_i$ approx. 1 kΩ) |
| Switching frequency | f | 0 ... 5000 Hz |
| Current consumption | | |
| Magnet detected | | ≥ 2.5 mA |
| Magnet not detected | | ≤ 1 mA |
| Switching state indication | | LED, yellow |
| **Ambient conditions** | | |
| Ambient temperature | | -25 ... 70 °C (-13 ... 158 °F) |
| **Mechanical specifications** | | |
| Connection type | | Connector M12 x 1 , 4-pin |
| Housing material | | Stainless steel 1.4404 / AISI 316L |
| Sensing face | | Stainless steel 1.4404 / AISI 316L |
| Protection degree | | IP67 |
| **General information** | | |
| Use in the hazardous area | | see instruction manuals |
| Category | | 2G |
| **Compliance with standards and directives** | | |
| Standard conformity | | |
| NAMUR | | EN 60947-5-6:2000 |
| Standards | | EN 60947-5-2:2007 |
| **Approvals and certificates** | | |
| FM approval | | |
| Control drawing | | 116-0165F |
| CCC approval | | CCC approval / marking not required for products rated ≤36 V |

## Dimensions




## Electrical Connection

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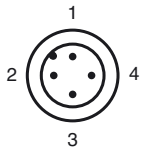
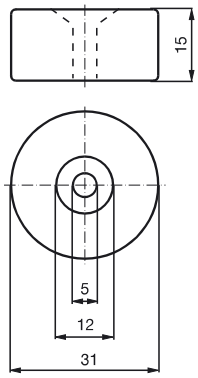
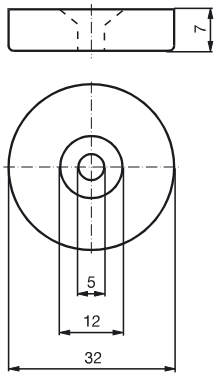
## Pinout




### Magnet DM 60-31-15




### Magnet DM 25-32-07

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**ATEX 2G**

| | |
|---|---|
| Instruction | **Manual electrical apparatus for hazardous areas** |
| **Device category 2G** | for use in hazardous areas with gas, vapour and mist |
| EC-Type Examination Certificate | TÜV 01 ATEX 1718 |
| CE marking | CE 0102 |
| ATEX marking | Ex II 2G Ex ib IIC T6 Gb |
| Directive conformity | 94/9/EG |
| Standards | EN 60079-0:2009, EN 60079-11:2007<br>Ignition protection "Intrinsic safety"<br>Use is restricted to the following stated conditions |
| Appropriate type | MC60-12GM50-1N-V1 |
| Effective internal capacitance $C_i$ | ≤ 15 nF ; a cable length of 10 m is considered. |
| Effective internal inductance $L_i$ | ≤ 35 µH ; a cable length of 10 m is considered. |
| General | The apparatus has to be operated according to the appropriate data in the data sheet and in this instruction manual. The EC-Type Examination Certificate has to be observed. The special conditions must be adhered to!<br>Directive 94/9/EG and hence also EC-Type Examination Certificates apply in general only to the use of electrical apparatus under atmospheric conditions.<br>The use in ambient temperatures of > 60 °C was tested with regard to hot surfaces by the mentioned certification authority.<br>If the equipment is not used under atmospheric conditions, a reduction of the permissible minimum ignition energies may have to be taken into consideration. |
| Installation, Comissioning | Laws and/or regulations and standards governing the use or intended usage goal must be observed. The intrinsic safety is only assured in connection with an appropriate related apparatus and according to the proof of intrinsic safety. |
| Maintenance | No changes can be made to apparatus, which are operated in hazardous areas. Repairs to these apparatus are not possible. |

**Specific conditions**

| | |
|---|---|
| Electrostatic charging | Electrostatic charges must be avoided on the mechanical housing components. Dangerous electrostatic charges on the mechanical housing components can be avoided by incorporating these in the equipotential bonding. |

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