

Diffuse reflective sensor, Sn=40mm, 4L, 10-30VDC, NPN, PNP, M18, insulated material, M12



Part no. **13102AQD07**  
**135593**

| General specifications                                       |  |  |
|--|--|--|
| Product name   |  | Eaton Moeller® series E58 Diffuse reflective sensor  |
| Part no.   |  | 13102AQD07   |
| EAN  |  | 4015081323869  |
| Product Length/Depth   |  | 127 millimetre   |
| Product height   |  | 50.8 millimetre  |
| Product width  |  | 152.4 millimetre   |
| Product weight   |  | 0.3 kilogram   |
| Certifications   |  | CSA-C22.2 No. 14<br>UL File No.: E117028<br>CSA<br>CSA File No.: 50513<br>CE<br>IEC/EN 60947-5-2<br>CSA Class No.: 3211-07<br>UL Category Control No.: NRKH, NRKH7<br>UL<br>UL 508 |
| Product Tradename  |  | E58  |
| Product Type   |  | Diffuse reflective sensor  |
| Product Sub Type   |  | None   |
| Product Specification Details                                |  |  |
| Adjustment type  |  | Manual adjustment  |
| Ambient operating temperature - max                          |  | 70 °C  |
| Ambient operating temperature - min                          |  | -40 °C   |
| Cable sheath material  |  | Polyvinyl chloride (PVC)   |
| Connection type  |  | Plug-in connection M12 x 1<br>4-wire   |
| Degree of protection   |  | IP67<br>NEMA 6   |
| Diameter sensor  |  | 18 mm  |
| Electric connection type                                     |  | Plug-in connection   |
| Enclosure material   |  | Plastic  |
| Enclosure type   |  | Cylinder, screw-thread   |
| Explosion safety category for dust                           |  | None   |
| Explosion safety category for gas                            |  | None   |
| Features   |  | Focused, forward viewing beam  |
| Functions  |  | Reflected-light beam<br>Protection against polarity reversal<br>Short-circuit protection   |
| Interface type   |  | Other  |
| Laser protection class                                       |  | None   |
| LED indicator  |  | Status indication of Switching state: Red LED  |
| Light dot size   |  | 0 mm <sup>2</sup>  |
| Light type   |  | Visible red light<br>Polarity free red light   |
| Load current   |  | Max. 100 mA (Ie, PNP)<br>Max. 250 mA (Ie, NPN, 120 > 50°C)   |
| Number of contact energized outputs with signalling function |  | 0  |
| Number of outputs (protected contact energized)              |  | 0  |
| Number of outputs (protected semiconductor)                  |  | 0  |
| Number of outputs (semiconductor with signaling function)    |  | 2  |
| Operating distance - max                                     |  | 0 mm   |
| Operating distance - min                                     |  | 0 mm   |

|   |  |   |
|---|--|---|
| Operating mode  |  | Switching principle: Adjustable bright/dark switching |
| Operation agent-safety class                              |  | Safety class 2  |
| Operational current (Ib) in the switched state at 24 V DC |  | 30 A  |
| Optical surface material                                  |  | Plastic   |
| Output current (mA) - max                                 |  | 250 mA  |
| Output current at protected output - max                  |  | 0 mA  |
| Product category  |  | Comet Series  |
| Rated control supply voltage (Us) at AC, 50 Hz - max      |  | 0 V   |
| Rated control supply voltage (Us) at AC, 50 Hz - min      |  | 0 V   |
| Rated control supply voltage (Us) at AC, 60 Hz - max      |  | 0 V   |
| Rated control supply voltage (Us) at AC, 60 Hz - min      |  | 0 V   |
| Rated control supply voltage (Us) at DC - max             |  | 30 V  |
| Rated control supply voltage (Us) at DC - min             |  | 10 V  |
| Rated switching distance (Sn)                             |  | 40 mm   |
| Reflector distance - min                                  |  | 0 mm  |
| Response time   |  | 1 ms  |
| Safety type (IEC 61496-1)                                 |  | 1   |
| Sensing mode  |  | Light-/dark switching                                 |
| Sensor height   |  | 0 mm  |
| Sensor length   |  | 66 mm   |
| Sensor material   |  | Insulated material                                    |
| Shock resistance  |  | 100 g, Mechanical, Shock duration 3 ms                |
| Switch function type                                      |  | Other   |
| Switching distance - max                                  |  | 40 mm   |
| Switching frequency                                       |  | 500 Hz  |
| Switching output type                                     |  | PNP/NPN   |
| Switching voltage of OSSD at state "high"                 |  | 0 V   |
| Transmission range of the safety field                    |  | 0 m   |
| Type  |  | Optical sensors                                       |
| Voltage rating - max                                      |  | 30 V  |
| Voltage type  |  | DC  |
| Wavelength of the sensor                                  |  | 0 nm  |
| Width sensor  |  | 0 mm  |
| Wire size   |  | 22  |

## Technical data ETIM 9.0

|  |    |                   |
|--|----|-------------------|
| Sensors (EG000026) / Diffuse reflective photoelectric sensor (EC001821)  |    |                   |
| Electric engineering, automation, process control engineering / Sensor technology, safety-related sensor technology / Optoelectronic sensor / Light scanner (ecl@ss13-27-27-09-03 [AKP252018]) |    |                   |
| Operating distance   | mm | 0 - 0             |
| Pre failure notice   |    | No                |
| With time function   |    | No                |
| Max. switching distance  | mm | 40                |
| Max. output current  | mA | 250               |
| With reflector   |    | No                |
| Analogue output 0 V ... 10 V   |    | No                |
| Analogue output 0 mA ... 20 mA   |    | No                |
| Analogue output 4 mA ... 20 mA   |    | No                |
| Analogue output -10 V ... +10 V  |    | No                |
| With other analogue output   |    | No                |
| Setting procedure  |    | Manual adjustment |
| With communication interface analogue  |    | No                |
| With communication interface AS-Interface  |    | No                |
| With communication interface CANOpen   |    | No                |
| With communication interface DeviceNet   |    | No                |
| With communication interface Ethernet  |    | No                |

|  |                 |                          |
|--|-----------------|--------------------------|
| With communication interface INTERBUS                        |                 | No                       |
| With communication interface PROFIBUS                        |                 | No                       |
| With communication interface RS-232                          |                 | No                       |
| With communication interface RS-422                          |                 | No                       |
| With communication interface RS-485                          |                 | No                       |
| With communication interface SSD                             |                 | No                       |
| With communication interface SSI                             |                 | No                       |
| Number of semiconductor outputs with signalling function     |                 | 2                        |
| Number of contact energized outputs with signalling function |                 | 0                        |
| Number of protected semiconductor outputs                    |                 | 0                        |
| Number of protected contact energized outputs                |                 | 0                        |
| Type of interface for safety communication                   |                 | Other                    |
| Type of electric connection                                  |                 | Plug-in connection       |
| Type of switching output                                     |                 | PNP/NPN                  |
| Type of switch function                                      |                 | Other                    |
| Operation agent-safety class                                 |                 | Safety class 2           |
| Explosion safety category for gas                            |                 | None                     |
| Explosion safety category for dust                           |                 | None                     |
| Construction type housing                                    |                 | Cylinder, screw-thread   |
| Width sensor   | mm              | 0                        |
| Diameter sensor  | mm              | 18                       |
| Height of sensor   | mm              | 0                        |
| Length of sensor   | mm              | 66                       |
| Sensing mode   |                 | Light-/dark switching    |
| Material of optical surface                                  |                 | Plastic                  |
| Housing material   |                 | Plastic                  |
| Max. output current at protected output                      | mA              | 0                        |
| Min. reflector distance                                      | mm              | 0                        |
| Response time  | ms              | 1                        |
| Transmission range of the safety field                       | m               | 0                        |
| Switching frequency  | Hz              | 500                      |
| Type of safety according to IEC 61496-1                      |                 | 1                        |
| Switching voltage of OSSD at state "high"                    | V               | 0                        |
| Voltage type   |                 | DC                       |
| With monitoring function downstream switching devices        |                 | No                       |
| Laser protection class                                       |                 | None                     |
| Wavelength of the sensor                                     | nm              | 0                        |
| Type of light  |                 | Polarity free red light  |
| Light dot  | mm <sup>2</sup> | 0                        |
| AWG-number   |                 | 22                       |
| Material of cable sheath                                     |                 | Polyvinyl chloride (PVC) |
| With restart blockage  |                 | No                       |
| Suitable for safety functions                                |                 | No                       |
| Degree of protection (IP)                                    |                 | IP67                     |
| Degree of protection (NEMA)                                  |                 | 6                        |
| Ambient temperature  | °C              | -40 - 70                 |
| Rated control supply voltage AC 50 Hz                        | V               | 0 - 0                    |
| Rated control supply voltage AC 60 Hz                        | V               | 0 - 0                    |
| Rated control supply voltage DC                              | V               | 10 - 30                  |