



# MM08-60APS-ZTK

MM

MAGNETIC PROXIMITY SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

| Type           | Part no. |
|----------------|----------|
| MM08-60APS-ZTK | 1040067  |

**Included in delivery:** BEF-MU-M08 (2)

Other models and accessories → [www.sick.com/MM](http://www.sick.com/MM)



### Detailed technical data

#### Features

|  |                              |
|--|------------------------------|
| <b>Housing</b>                             | Cylindrical thread design    |
| <b>Housing</b>                             | Short-body                   |
| <b>Thread size</b>                         | M8 x 1                       |
| <b>Diameter</b>                            | Ø 8 mm                       |
| <b>Sensing range <math>S_n</math></b>      | 0 mm ... 60 mm <sup>1)</sup> |
| <b>Safe sensing range <math>S_a</math></b> | 48.6 mm                      |
| <b>Magnetic sensitivity</b>                | 1 mT                         |
| <b>Switching frequency</b>                 | 1,000 Hz                     |
| <b>Connection type</b>                     | Connector M8, 3-pin          |
| <b>Switching output</b>                    | PNP                          |
| <b>Output function</b>                     | NO                           |
| <b>Electrical wiring</b>                   | DC 3-wire                    |
| <b>Magnetic alignment</b>                  | Axial                        |
| <b>Enclosure rating</b>                    | IP67 <sup>2)</sup>           |

<sup>1)</sup> Sensing range based on installation in non-magnetic material using Magnet MAG-3010-B (M4.0).

<sup>2)</sup> According to EN 60529.

#### Mechanics/electronics

|                            |                      |
|----------------------------|----------------------|
| <b>Supply voltage</b>      | 10 V DC ... 30 V DC  |
| <b>Ripple</b>              | ≤ 10 % <sup>1)</sup> |
| <b>Voltage drop</b>        | ≤ 2 V <sup>2)</sup>  |
| <b>Current consumption</b> | 10 mA <sup>3)</sup>  |

<sup>1)</sup> Of  $V_S$ .

<sup>2)</sup> At  $I_a$  max.

<sup>3)</sup> Without load.

<sup>4)</sup> Von  $S_r$  ( $V_S$  und  $T_a$  constant).

<sup>5)</sup> Pulsed.

|   |   |
|---|---|
| <b>Time delay before availability</b>       | ≤ 20 ms                                 |
| <b>Hysteresis</b>                           | 1 % ... 10 %                            |
| <b>Reproducibility</b>                      | ≤ 1 % <sup>4)</sup>                     |
| <b>Temperature drift (of S<sub>r</sub>)</b> | ± 10 %                                  |
| <b>EMC</b>                                  | According to EN 60947-5-2               |
| <b>Continuous current I<sub>a</sub></b>     | ≤ 200 mA                                |
| <b>Short-circuit protection</b>             | ✓ <sup>5)</sup>                         |
| <b>Reverse polarity protection</b>          | ✓                                       |
| <b>Power-up pulse protection</b>            | ✓                                       |
| <b>Shock and vibration resistance</b>       | 30 g, 11 ms / 10 ... 55 Hz, 1 mm        |
| <b>Ambient operating temperature</b>        | -25 °C ... +75 °C                       |
| <b>Housing material</b>                     | Metal, Nickel-plated brass              |
| <b>Housing length</b>                       | 46 mm                                   |
| <b>Thread length</b>                        | 29.5 mm                                 |
| <b>Tightening torque, max.</b>              | 6 Nm                                    |
| <b>Items supplied</b>                       | Mounting nut, brass, nickel-plated (2x) |

<sup>1)</sup> Of V<sub>S</sub>.

<sup>2)</sup> At I<sub>a</sub> max.

<sup>3)</sup> Without load.

<sup>4)</sup> Von Sr (VS und Ta constant).

<sup>5)</sup> Pulsed.

#### Safety-related parameters

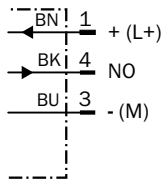
|                         |             |
|-------------------------|-------------|
| <b>MTTF<sub>D</sub></b> | 2,339 years |
| <b>DC<sub>avg</sub></b> | 0%          |

#### Classifications

|                       |          |
|-----------------------|----------|
| <b>ECl@ss 5.0</b>     | 27270104 |
| <b>ECl@ss 5.1.4</b>   | 27270104 |
| <b>ECl@ss 6.0</b>     | 27270104 |
| <b>ECl@ss 6.2</b>     | 27270104 |
| <b>ECl@ss 7.0</b>     | 27270104 |
| <b>ECl@ss 8.0</b>     | 27270104 |
| <b>ECl@ss 8.1</b>     | 27270104 |
| <b>ECl@ss 9.0</b>     | 27270104 |
| <b>ECl@ss 10.0</b>    | 27270104 |
| <b>ECl@ss 11.0</b>    | 27270104 |
| <b>ETIM 5.0</b>       | EC002544 |
| <b>ETIM 6.0</b>       | EC002544 |
| <b>ETIM 7.0</b>       | EC002544 |
| <b>UNSPSC 16.0901</b> | 39122230 |

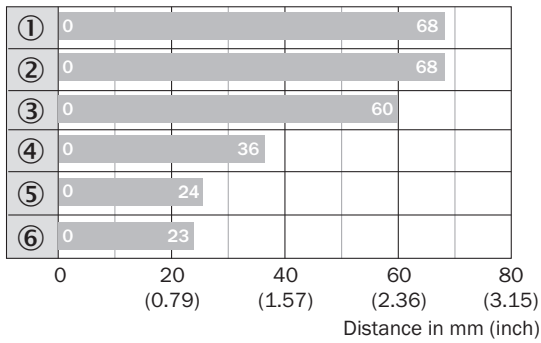
Connection diagram

Cd-002



Sensing range diagram

Sensing range

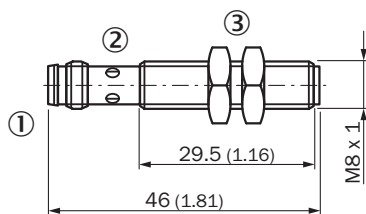


■ Max. sensing range  $S_n$ , flush or non-flush installation, non-magnetizable material

| Magnet type          | Part no. |
|----------------------|----------|
| ① MAG-3315-B (M 5.1) | 7902086  |
| ② MAG-3015-B (M 5.0) | 7901786  |
| ③ MAG-3010-B (M 4.0) | 7901785  |
| ④ MAG-2006-B (M 3.0) | 7901784  |
| ⑤ MAG-0625-A (M 2.0) | 7901783  |
| ⑥ MAG-1003-S (M 1.0) | 7901782  |

Dimensional drawing (Dimensions in mm (inch))

MM08, connector, short-body housing








- ① Connection
- ② Indication LED
- ③ Fastening nuts (2 x); width across 13, plastic

## Recommended accessories

Other models and accessories → [www.sick.com/MM](http://www.sick.com/MM)

|   | Brief description  | Type               | Part no. |
|---|--|--------------------|----------|
| <b>Mounting brackets and plates</b>   |  |                    |          |
|    | Mounting plate for M8 sensors, steel, zinc coated, without mounting hardware   | BEF-WG-M08         | 5321722  |
|    | Mounting bracket for M8 sensors, steel, zinc coated, without mounting hardware   | BEF-WN-M08         | 5321721  |
| <b>Terminal and alignment brackets</b>  |  |                    |          |
|    | Clamping block for round sensors M8, without fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included                        | BEF-KH-M08         | 2051477  |
|   | Clamping block for round sensors M8, with fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included                           | BEF-KHF-M08        | 2051478  |
| <b>Magnets</b>  |  |                    |          |
|    | Magnet without mounting hole, Ø 6 mm, height 25 mm   | MAG-0625-A         | 7901783  |
|    | Magnet without mounting hole, Ø 10 mm, height 3 mm   | MAG-1003-S         | 7901782  |
|   | Magnet with mounting hole for M4 countersunk screw, Ø 20 mm, height 6.5 mm   | MAG-2006-B         | 7901784  |
|  | Magnet without mounting hole, Ø 30 mm, height 10 mm  | MAG-3010-B         | 7901785  |
|  | Magnet with mounting hole for M5 flat head screw, Ø 31 mm, height 15 mm  | MAG-3015-B         | 7901786  |
|  | Magnet with mounting hole for M5 flat head screw, Ø 36 mm, height 19.5 mm  | MAG-3515-B         | 7902086  |
| <b>Plug connectors and cables</b>   |  |                    |          |
|  | Head A: female connector, M8, 3-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YF8U13-020UA1XLEAX | 2094782  |
|  | Head A: female connector, M8, 3-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 2 m               | YF8U13-020VA1XLEAX | 2095860  |
|  | Head A: female connector, M8, 3-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m | YF8U13-050UA1XLEAX | 2094788  |
|  | Head A: female connector, M8, 3-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 5 m               | YF8U13-050VA1XLEAX | 2095884  |
|  | Head A: female connector, M8, 3-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m   | YG8U13-020UA1XLEAX | 2094794  |

|   | Brief description  | Type               | Part no. |
|---|--|--------------------|----------|
|  | Head A: female connector, M8, 3-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 2 m               | YG8U13-020VA1XLEAX | 2096165  |
|  | Head A: female connector, M8, 3-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m | YG8U13-050UA1XLEAX | 2095586  |
|  | Head A: female connector, M8, 3-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 5 m               | YG8U13-050VA1XLEAX | 2096166  |
|  | Head A: female connector, M8, 3-pin, straight<br>Head B: -<br>Cable: unshielded  | DOS-0803-G         | 7902077  |
|  | Head A: female connector, M8, 3-pin, angled<br>Head B: -<br>Cable: unshielded  | DOS-0803-W         | 7902078  |
|  | Head A: male connector, M8, 3-pin, straight<br>Head B: -<br>Cable: unshielded  | STE-0803-G         | 6037322  |

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)