



# MM18-00APS-ZUK

MME

MAGNETIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

| Type           | Part no. |
|----------------|----------|
| MM18-00APS-ZUK | 1077120  |

Included in delivery: BEF-MU-M18 (1)

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



### Detailed technical data

#### Features

|  |   |
|--|---|
| <b>Housing</b>                             | Cylindrical thread design               |
| <b>Housing</b>                             | Short-body                              |
| <b>Thread size</b>                         | M18 x 1                                 |
| <b>Diameter</b>                            | Ø 18 mm                                 |
| <b>Sensing range <math>S_n</math></b>      | 5 mm ... 120 mm<br><sup>1)</sup>        |
| <b>Safe sensing range <math>S_a</math></b> | 97.2 mm<br><sup>2) 2) 3)</sup>          |
| <b>Magnetic sensitivity</b>                | 0.4 mT                                  |
| <b>Switching frequency</b>                 | 5,000 Hz                                |
| <b>Connection type</b>                     | Cable, 3-wire, 2 m                      |
| <b>Switching output</b>                    | PNP                                     |
| <b>Output function</b>                     | NO                                      |
| <b>Electrical wiring</b>                   | DC 3-wire                               |
| <b>Enclosure rating</b>                    | IP67 <sup>4)</sup>                      |
| <b>Items supplied</b>                      | Mounting nut, brass, nickel-plated (2x) |

<sup>1)</sup> Max. flux density allowed at the sensor: 280mT.

<sup>2)</sup> Excluding the geomagnetic field.

<sup>3)</sup> Based on M4.0 magnet.

<sup>4)</sup> According to EN 60529.

#### Mechanics/electronics

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

<sup>1)</sup> At  $I_a$  max.

<sup>2)</sup> Without load.

<sup>3)</sup> Supply voltage  $U_B$  and constant ambient temperature  $T_a$ .

<sup>4)</sup> Of  $S_r$ .

|   |                                   |
|---|-----------------------------------|
| <b>Time delay before availability</b>       | ≤ 100 ms                          |
| <b>Hysteresis</b>                           | 10 % ... 20 %                     |
| <b>Reproducibility</b>                      | ≤ 1 % <sup>3) 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>Cable material</b>                       | PUR                               |
| <b>Short-circuit protection</b>             | ✓                                 |
| <b>Reverse polarity protection</b>          | ✓                                 |
| <b>Power-up pulse protection</b>            | ✓                                 |
| <b>Shock and vibration resistance</b>       | 30 g, 11 ms/10 Hz ... 55 Hz, 1 mm |
| <b>Ambient operating temperature</b>        | -40 °C ... +75 °C                 |
| <b>Housing material</b>                     | Metal, Nickel-plated brass        |
| <b>Sensing face material</b>                | Plastic                           |
| <b>Housing length</b>                       | 58 mm                             |
| <b>Thread length</b>                        | 42 mm                             |
| <b>Tightening torque, max.</b>              | ≤ 40 Nm                           |
| <b>Protection class</b>                     | III                               |

1) At I<sub>a</sub> max.

2) Without load.

3) Supply voltage U<sub>B</sub> and constant ambient temperature T<sub>a</sub>.

4) Of S<sub>r</sub>.

### Safety-related parameters

|                                     |             |
|-------------------------------------|-------------|
| <b>MTTF<sub>D</sub></b>             | 2,238 years |
| <b>DC<sub>avg</sub></b>             | 0 %         |
| <b>T<sub>M</sub> (mission time)</b> | 20 years    |

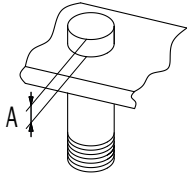
### Classifications

|                     |          |
|---------------------|----------|
| <b>ECLASS 5.0</b>   | 27270104 |
| <b>ECLASS 5.1.4</b> | 27270104 |
| <b>ECLASS 6.0</b>   | 27270104 |
| <b>ECLASS 6.2</b>   | 27270104 |
| <b>ECLASS 7.0</b>   | 27270104 |
| <b>ECLASS 8.0</b>   | 27270104 |
| <b>ECLASS 8.1</b>   | 27270104 |
| <b>ECLASS 9.0</b>   | 27270104 |
| <b>ECLASS 10.0</b>  | 27270104 |
| <b>ECLASS 11.0</b>  | 27270104 |
| <b>ECLASS 12.0</b>  | 27274301 |
| <b>ETIM 5.0</b>     | EC002544 |
| <b>ETIM 6.0</b>     | EC002544 |
| <b>ETIM 7.0</b>     | EC002544 |

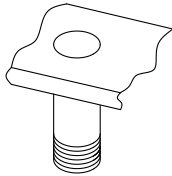

|                       |          |
|-----------------------|----------|
| <b>ETIM 8.0</b>       | EC002544 |
| <b>UNSPSC 16.0901</b> | 39122230 |

### Installation note

installation in magnetizable material



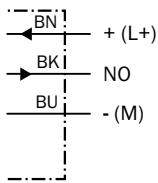
installation in non-magnetizable material

| Ø   | A<br>(mm) | M<br>(Nm) |
|-----|-----------|-----------|
| M18 | 20        | < 40      |

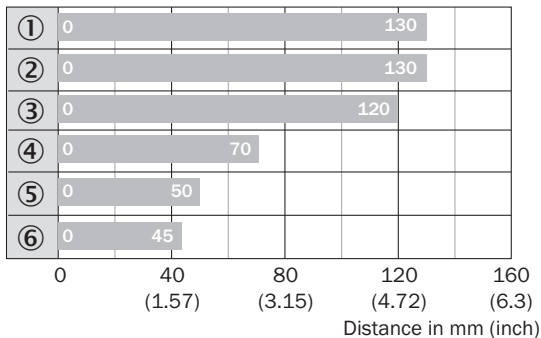
### Connection diagram

Cd-001



### Sensing range diagram

Sensing range



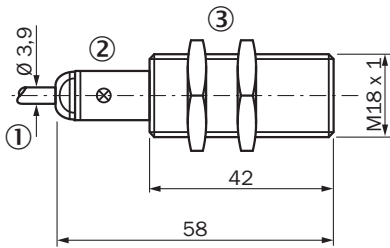
■ Max. sensing range  $S_n$ , flush or non-flush installation, non-magnetizable material

#### Magnet type

| 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))





MM18 Namur, cable



- ① Connection
- ② Display LED
- ③ Fastening nuts (2x); width across 24, metal

**Recommended accessories**

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

|   | <b>Brief description</b>  | <b>Type</b>  | <b>Part no.</b> |
|---|---|--------------|-----------------|
| <b>Universal bar clamp systems</b>  |   |              |                 |
|    | Plate N06 for universal clamp bracket, M18, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware     | BEF-KHS-N06  | 2051612         |
|   | Plate N06N for universal clamp bracket, M18, Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp), Universal clamp (5322627), mounting hardware | BEF-KHS-N06N | 2051622         |
| <b>Mounting brackets and plates</b>   |   |              |                 |
|  | Mounting plate for M18 sensors, steel, zinc coated, without mounting hardware   | BEF-WG-M18   | 5321870         |
|  | Mounting bracket for M18 sensors, steel, zinc coated, without mounting hardware   | BEF-WN-M18   | 5308446         |
| <b>Terminal and alignment brackets</b>  |   |              |                 |
|  | Clamping block for round sensors M18, without fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included                              | BEF-KH-M18   | 2051481         |
|   | Clamping block for round sensors M18, with fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included                                 | BEF-KHF-M18  | 2051482         |

## 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)