

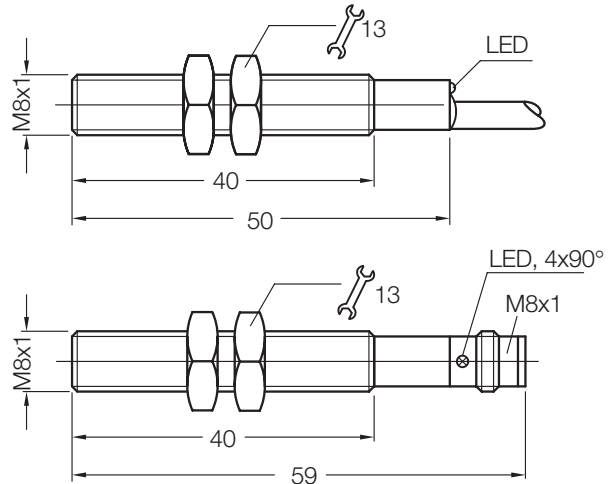


# Magnetic proximity sensors

## MM 08 series, sensing range 60 mm

### DC 3-wire, metal housing

Dimensions in mm



#### Features

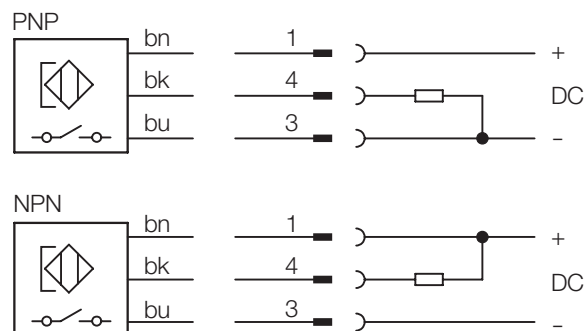


- ▶ Can be installed flush and non-flush in metal
- ▶ Sensing range up to 60 mm
- ▶ PNP or NPN output
- ▶ High switching frequency
- ▶ Short-circuit protection (pulsed)
- ▶ Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- ▶ Cable or connector
- ▶ Enclosure rating IP 67
- ▶ LED status indicator

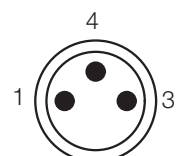
#### Accessories

Round connectors  
Magnets

#### Connection diagram



| Wire colour | Colour | Contact | Assignment |
|-------------|--------|---------|------------|
| bn          | brown  | 1       | + V DC     |
| bk          | black  | 4       | NO         |
| bu          | blue   | 3       | - V DC     |



## Electrical and mechanical data

|   |                      |  |  |
|---|----------------------|--|--|
| <b>Operating voltage</b> $U_b$                        | 10 ... 30 V DC       | <b>Wire-break protection</b>             | yes  |
| <b>Ripple</b> $U_{pp}$                                | $\leq 10\%$ of $U_b$ | <b>Short-circuit protection (pulsed)</b> | yes  |
| <b>Voltage drop</b> $U_d$<br>(at $I_a$ max.)          | $\leq 1.5$ V         | <b>Reverse polarity protection</b>       | yes  |
| <b>Power consumption</b><br>(without load)            | $\leq 10$ mA         | <b>Power-up pulse suppression</b>        | yes  |
| <b>Continuous current</b> $I_a$                       | $\leq 300$ mA        | <b>Enclosure rating</b> to EN 60529      | IP 67  |
| <b>Time delay before availability</b> $t_v$           | $\leq 2$ ms          | <b>Shock and vibration stress</b>        | 30 g, 11 ms<br>10 to 55 Hz, 1 mm   |
| <b>Hysteresis</b> H                                   | 1% - 10% of $s_r$    | <b>Ambient temperature</b> $T_a$         | - 25 ... + 75 °C   |
| <b>Repeatability</b> R<br>( $U_b$ and $T_a$ constant) | $\leq 1\%$ of $s_r$  | <b>Housing material</b>                  | Brass, nickel-plated,<br>plastic   |
| <b>Temperature drift</b>                              | $\pm 10\%$ of $s_r$  | <b>Tightening torque</b>                 | 0.8 Nm (with plastic nuts,<br>included in package)<br>2.0 Nm (with metal nuts) |
| <b>EMC</b>  | to EN 60 947-5-2     | <b>Connection cable</b>                  | PUR-PVC, 3 x 0.25 mm <sup>2</sup>  |

## Selection table

| Sensing range $s_n^*$<br>mm | Magnetic alignment | Switching output | Output function | Switching frequency f<br>in Hz | Connection          | Type           | Order number |
|-----------------------------|--------------------|------------------|-----------------|--------------------------------|---------------------|----------------|--------------|
| 60                          | Axial              | PNP              |                 | 5000                           | Cable 2 m           | MM08-60APS-ZU0 | 7900264      |
| 60                          | Axial              | PNP              |                 | 5000                           | Connector M8 x 1 mm | MM08-60APS-ZT0 | 7900266      |

\* Sensing range  $s_n$  based on installation in non-magnetizable material using magnet MAG-3010-B (M 4.0)

Output NPN on request

## Sensing ranges (Typical values)

| Magnet type              | Sensing range $s_n$<br>Any sensor installation type (flush or non-flush)<br>in non-magnetizable material | Sensing range $s_n$<br>Flush sensor installation in magnetizable material<br>(e.g. iron) |
|--------------------------|--|--|
| MAG-1003-S               | 23 mm  | 12 mm  |
| MAG-0625-A               | 24 mm  | 10 mm  |
| MAG-2006-B               | 36 mm  | 15 mm  |
| MAG-3010-B               | 60 mm  | 20 mm  |
| MAG-3015-B<br>MAG-3515-B | 68 mm  | 25 mm  |