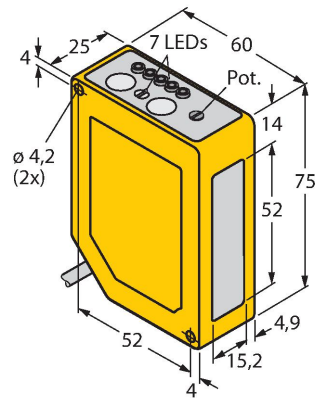


# Q60BB6AF2000QPMA

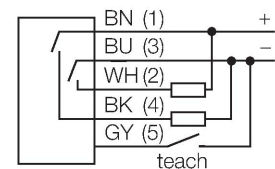
## Photoelectric Sensor – Diffuse Mode Sensor with Adjustable Background Suppression



### Features

- Cable with male end M12 × 1, 5-pin, PUR, 150 mm
- Protection class IP67
- 5-segment LED display
- Signal indication
- Keylock
- Switch ON/OFF delay, adjustable between 8...16 ms
- Operating voltage: 10...30 VDC
- Switching output, bipolar
- Light or dark operation

### Wiring diagram



### Technical data

|                             |                                            |
|-----------------------------|--------------------------------------------|
| Type                        | Q60BB6AF2000QPMA                           |
| ID no.                      | 3072293                                    |
| <b>Optical data</b>         |                                            |
| Function                    | Proximity switch                           |
| Operating mode              | Background suppression, adjustable         |
| Light type                  | IR                                         |
| Wavelength                  | 880 nm                                     |
| Range                       | 200...2000 mm                              |
| <b>Electrical data</b>      |                                            |
| Operating voltage           | 10...30 VDC                                |
| Residual ripple             | < 10 % U <sub>ss</sub>                     |
| No-load current             | ≤ 50 mA                                    |
| Reverse polarity protection | yes                                        |
| Output function             | NO contact, PNP/NPN                        |
| Switching frequency         | ≤ 250 Hz                                   |
| Readiness delay             | ≤ 150 ms                                   |
| Response time typical       | < 2 ms                                     |
| Setting option              | Screw Adjustment<br>Remote Teach           |
| <b>Mechanical data</b>      |                                            |
| Design                      | Rectangular, Q60                           |
| Dimensions                  | 60 x 25 x 75 mm                            |
| Housing material            | Plastic, Thermoplastic material, Yellow    |
| Lens                        | plastic, Acrylic                           |
| Electrical connection       | Cable with connector, M12 × 1, 0.15 m, PUR |

### Functional principle

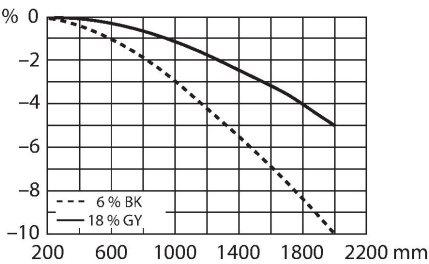
Diffuse mode sensors with background suppression operate with a single emitter and several receiver elements. The target position and the photoelectric structure of the sensor determine which of the receiving elements receives the most light. The sensor electronics determine whether the reflecting object is within or outside the measuring range. The sensors come with an adjustable or fixed cut-off point.

#### Deviation curve

Deviation of the cut-off point of a 18 % grey or 6 % black target relative to the cut-off point of a white target

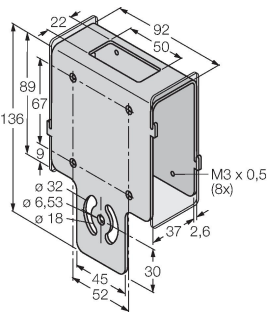
Technical data

|                        |                                          |
|------------------------|------------------------------------------|
| Number of cores        | 5                                        |
| Ambient temperature    | -20...+55 °C                             |
| Protection class       | IP67                                     |
| Special features       | keep/defer                               |
| Power-on indication    | LED, Green                               |
| Switching state        | LED, Yellow                              |
| Error indication       | LED                                      |
| Excess gain indication | LED, green, flashing                     |
| Tests/approvals        |                                          |
| MTTF                   | 64 years acc. to SN 29500 (Ed. 99) 40 °C |
| Approvals              | CE, cURus                                |



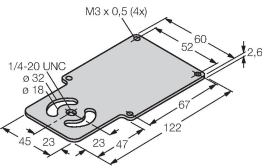
Accessories

SMBAMSQ60IP 3073441



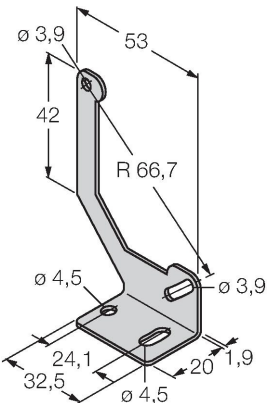
Protective housing with safety glass panel, stainless steel, for Q60

SMBAMSQ60P 3073133



Backplane, stainless steel, for Q60 series

SMBQ60 3067592



Mounting bracket, stainless steel, for Q60 series