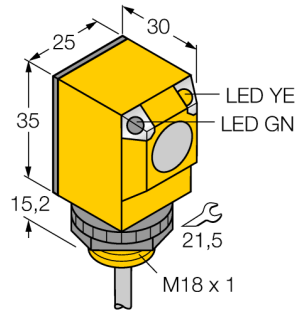


**Photoelectric sensor  
opposed mode sensor (emitter)  
Q256E**



- Cable, 2 m
- Protection class IP67
- Ambient temperature: -40...+70 °C
- Operating voltage: 10...30 VDC

**Wiring diagram**

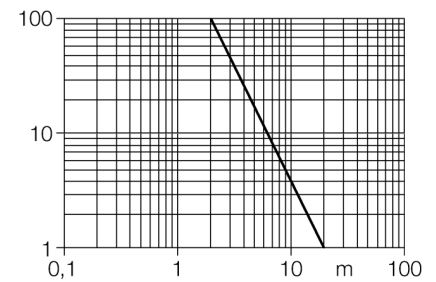


**Functional principle**

Opposed mode sensors consist of an emitter and receiver. They are installed opposite to each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque targets. The excellent light/dark contrast and the high excess gain allow operation over larger distances and under difficult conditions.

**Excess gain curve**

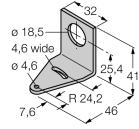
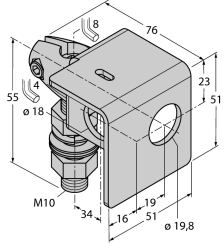
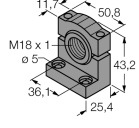
Excess gain in relation to the distance



|                                |                               |
|--------------------------------|-------------------------------|
| <b>Type code</b>               | Q256E                         |
| Ident no.                      | 3031926                       |
| <b>Operating mode</b>          | opposed mode sensor (emitter) |
| Light type                     | IR                            |
| Wavelength                     | 950 nm                        |
| Range                          | 0...20000 mm                  |
| Ambient temperature            | -40...+70 °C                  |
| <b>Operating voltage</b>       | 10...30VDC                    |
| Residual ripple                | < 10 % U <sub>s</sub>         |
| No-load current I <sub>0</sub> | ≤ 20 mA                       |
| <b>Design</b>                  | rectangular, Q25              |
| Dimensions                     | 30 x 25 x 50.2 mm             |
| Housing material               | plastic, PBT                  |
| Lens                           | plastic, Lexan                |
| Connection                     | cable                         |
| Cable length                   | 2 m                           |
| Cable cross section            | 2 x 0.5 mm <sup>2</sup>       |
| Protection class               | IP67                          |
| <b>Power-on indication</b>     | LED green                     |

Photoelectric sensor  
 opposed mode sensor (emitter)  
 Q256E

**Accessories**

| Type code   | Ident no. | Description   | Dimension drawing   |
|-------------|-----------|---|---|
| SMB18A      | 3033200   | Mounting bracket, stainless steel, for sensors with 18 mm thread                |  <p>Technical drawing of the SMB18A mounting bracket. Dimensions include: top width 32, hole diameter <math>\phi 18.5</math>, hole offset 4.6, hole diameter <math>\phi 4.6</math>, hole offset 25.4, hole diameter <math>\phi 4.6</math>, hole offset 7.6, radius R 24.2, and total width 46.</p>   |
| SMB18AFAM10 | 3012558   | Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm |  <p>Technical drawing of the SMB18AFAM10 mounting bracket. Dimensions include: top width 76, hole diameter <math>\phi 18</math>, hole offset 55, hole diameter <math>\phi 5</math>, hole offset 4, hole diameter 8, hole offset 19, hole diameter <math>\phi 19.8</math>, hole offset 16, hole diameter M10, hole offset 34, hole diameter 19, hole offset 51, and hole diameter 23.</p> |
| SMB18SF     | 3052519   | Mounting bracket, PTB black steel, for sensors with 18 mm thread                |  <p>Technical drawing of the SMB18SF mounting bracket. Dimensions include: top width 50.8, hole diameter <math>\phi 18 \times 1</math>, hole offset 11.7, hole diameter <math>\phi 5</math>, hole offset 36.1, hole diameter 43.2, and hole diameter 25.4.</p>   |