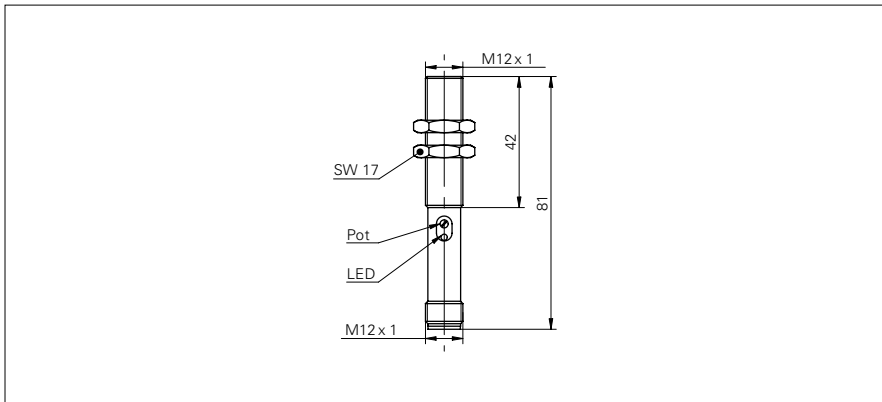


# Diffuse sensors with intensity difference

## FZAM 12

**sample drawing**



**general data**

|                                     |                          |
|-------------------------------------|--------------------------|
| type                                | intensity difference     |
| light source                        | pulsed infrared diode    |
| sensing distance Tw                 | 30 ... 200 mm            |
| alignment / soiled lens indicator   | flashing light indicator |
| light indicator                     | LED yellow               |
| sensitivity adjustment              | potentiometer, 270°      |
| wave length                         | 880 nm                   |
| suppression of reciprocal influence | yes                      |

**electrical data**

|                                    |               |
|------------------------------------|---------------|
| response time / release time       | < 1 ms        |
| voltage supply range +Vs           | 10 ... 30 VDC |
| current consumption max. (no load) | 42 mA         |
| current consumption typ.           | 24 mA         |
| voltage drop Vd                    | < 1,8 VDC     |
| output current                     | < 200 mA      |
| short circuit protection           | yes           |
| reverse polarity protection        | yes           |

**mechanical data**

|                  |                      |
|------------------|----------------------|
| width / diameter | 12 mm                |
| type             | cylindrical threaded |
| housing material | brass nickel plated  |
| front (optics)   | PC                   |

**ambient conditions**

|                       |                |
|-----------------------|----------------|
| operating temperature | -25 ... +65 °C |
| protection class      | IP 65          |

**sample picture**



| order reference         | height / length | connection types    | output circuit | output function |
|-------------------------|-----------------|---------------------|----------------|-----------------|
| <b>FZAM 12N1104/S14</b> | 80 mm           | connector M12 4 pin | NPN            | light operate   |
| <b>FZAM 12N3104</b>     | 70 mm           | cable 3 pin, 2 m    | NPN            | dark operate    |
| <b>FZAM 12N3104/S14</b> | 80 mm           | connector M12 4 pin | NPN            | dark operate    |
| <b>FZAM 12P1104</b>     | 70 mm           | cable 3 pin, 2 m    | PNP            | light operate   |
| <b>FZAM 12P1104/S14</b> | 80 mm           | connector M12 4 pin | PNP            | light operate   |
| <b>FZAM 12P3104</b>     | 70 mm           | cable 3 pin, 2 m    | PNP            | dark operate    |
| <b>FZAM 12P3104/S14</b> | 80 mm           | connector M12 4 pin | PNP            | dark operate    |