

1) Optical axis, 2) Output function, 3) Stability, 4) Sn



#### Basic features

|                        |                                  |
|------------------------|----------------------------------|
| Approval/Conformity    | CE<br>UKCA<br>cULus<br>WEEE      |
| Basic standard         | IEC 60947-5-2                    |
| Principle of operation | Photoelectric sensor             |
| Series                 | 18KF                             |
| Style                  | Flat cylinder<br>Straight optics |
| Trademark              | Global                           |

#### Display/Operation

|          |  |
|----------|--|
| Adjuster | Potentiometer 270°                                   |
| Display  | Output function- LED yellow<br>Stability - LED green |
| Setting  | Rated switching distance (Sn)                        |

#### Electrical connection

|                             |                      |
|-----------------------------|----------------------|
| Cable diameter D            | 4.00 mm              |
| Cable length L              | 2 m                  |
| Conductor cross-section     | 0.14 mm <sup>2</sup> |
| Connection                  | Cable, 2.00 m, PVC   |
| Number of conductors        | 4                    |
| Polarity reversal protected | yes                  |
| Short-circuit protection    | yes                  |

#### Electrical data

|   |             |
|---|-------------|
| No-load current I <sub>0</sub> max. at U <sub>e</sub> | 35 mA       |
| Operating voltage U <sub>b</sub>                      | 10...30 VDC |
| Rated insulation voltage U <sub>i</sub>               | 75 V DC     |
| Rated operating current I <sub>e</sub>                | 100 mA      |
| Rated operating voltage U <sub>e</sub> DC             | 24 V        |
| Ripple max. (% of U <sub>e</sub> )                    | 8 %         |
| Switching frequency                                   | 1000 Hz     |
| Turn-off delay t <sub>off</sub> max.                  | 0.5 ms      |
| Turn-on delay t <sub>on</sub> max.                    | 0.5 ms      |
| Voltage drop U <sub>d</sub> max. at I <sub>e</sub>    | 2 V         |

Environmental conditions

|                         |  |
|-------------------------|--|
| Ambient temperature     | -25...55 °C                                |
| EN 60068-2-27, Shock    | Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6 |
| EN 60068-2-6, Vibration | 10...55 Hz, amplitude 0.5 mm,<br>3x30 min  |
| IP rating               | IP67                                       |

Functional safety

|              |       |
|--------------|-------|
| MTTF (40 °C) | 774 a |
|--------------|-------|

Interface

|                  |   |
|------------------|---|
| Switching output | NPN normally closed (NC)<br>NPN normally open (NO) Pins 4-2 |
|------------------|---|

Material

|                          |      |
|--------------------------|------|
| Housing material         | PBT  |
| Material jacket          | PVC  |
| Material sensing surface | PMMA |

Remarks

Reference object (target): gray card, 200 x 200, 90 % remission, axial approach.  
The sensor is functional again after the overload has been eliminated.  
For additional information, refer to user's guide.  
Order accessories separately.  
For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

Mechanical data

|                        |                     |
|------------------------|---------------------|
| Dimension              | Ø 18 x 77 mm        |
| Mounting part          | Screw M3            |
| Tightening torque max. | Nut M18x1<br>1.5 Nm |

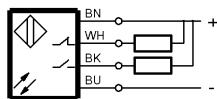
Optical features

|                                |                           |
|--------------------------------|---------------------------|
| Ambient light max.             | 5000 Lux                  |
| Beam characteristic            | Divergent                 |
| Light type                     | LED infrared              |
| Principle of optical operation | Diffuse sensor, energetic |
| Switching function, optical    | Light-on                  |
| Wave length                    | 880 nm                    |

Range/Distance

|                             |                    |
|-----------------------------|--------------------|
| Range                       | 0...400 mm         |
| Rated operating distance Sn | 400 mm, Adjustable |

Wiring Diagrams



Opto Symbols

