

1) Output function/Error, 2) Output mode, recvr., L/D, 3) Error, 4) Output curve rising/falling, 5) Pneumatics connection PK-3



## Basic features

|                        |  |
|------------------------|--|
| Additional features    | Contamination compensation to up to 10% loss in intensity. |
| Approval/Conformity    | CE<br>UKCA<br>WEEE   |
| Basic standard         | IEC 60947-5-2  |
| Principle of operation | Fork sensor  |
| Series                 | C  |
| Style                  | Fork<br>Straight connection                                |

## Display/Operation

|          |  |
|----------|--|
| Adjuster | Key (2x)   |
| Display  | Output function- LED yellow<br>Error - 2 x LED yellow, flashing                          |
| Setting  | Switching/error output<br>Output curve rising/falling<br>Sensitivity<br>Light-on/dark-on |

## Electrical connection

|                             |                              |
|-----------------------------|------------------------------|
| Connection                  | Connector, M12x1-Male, 4-pin |
| Polarity reversal protected | yes                          |
| Short-circuit protection    | yes                          |

## Electrical data

|                                    |             |
|------------------------------------|-------------|
| Load capacitance max. at Ue        | 2.2 µF      |
| Load resistance RL min. (Analog V) | 2 kOhm      |
| No-load current Io max. at Ue      | 30 mA       |
| Operating voltage Ub               | 18...30 VDC |
| Rated operating current Ie         | 100 mA      |
| Rated operating voltage Ue DC      | 24 V        |
| Ready delay tv max.                | 100 ms      |
| Ripple max. (% of Ue)              | 10 %        |
| Switching frequency                | 500 Hz      |
| Turn-off delay toff max.           | 1 ms        |
| Turn-on delay ton max.             | 1 ms        |
| Utilization category               | DC -13      |
| Voltage drop Ud max. at Ie         | 1 V         |

## Environmental conditions

|                         |  |
|-------------------------|--|
| Ambient temperature     | -5...55 °C                                 |
| EN 60068-2-27, Shock    | Half-sinus, 30 g <sub>n</sub> , 11 ms, 3x6 |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min            |
| IP rating               | IP65                                       |

## Interface

|                                       |   |
|---------------------------------------|---|
| Analog output                         | Analog, voltage 0...10 V                  |
| Supplementary output                  | Error output PNP                          |
| Switch function, supplementary output | NO/NC                                     |
| Switching output                      | PNP normally open/normally closed (NO/NC) |

## Material

|                          |                     |
|--------------------------|---------------------|
| Housing material         | Aluminium, Anodized |
| Material sensing surface | PMMA                |
| Surface protection       | Anodized            |

## Mechanical data

|               |                   |
|---------------|-------------------|
| Dimension     | 18 x 80 x 93.5 mm |
| Fork opening  | 30 mm             |
| Mounting part | Screw M5          |

## Optical features

|                                |                      |
|--------------------------------|----------------------|
| Ambient light max.             | 5000 Lux             |
| Beam characteristic            | Divergent            |
| LED group per IEC 62471        | Exempt Group         |
| Light beams, number            | 10                   |
| Light spot size                | 3 x 28 mm Light exit |
| Light type                     | LED, red light       |
| Principle of optical operation | Through-beam sensor  |
| Special optical feature        | Light array          |
| Switching function, optical    | dark-on/light-on     |
| Wave length                    | 633 nm               |

## Range/Distance

|                              |           |
|------------------------------|-----------|
| Active length AL 1           | 28 mm     |
| Hysteresis H max.            | 0.4 mm    |
| Repeat accuracy lateral max. | 150 µm    |
| Resolution                   | ≤ 0.08 mm |

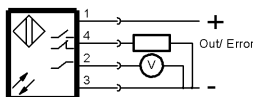
## Remarks

For additional information, refer to user's guide.  
 Order accessories separately.  
 Do not press key using a pointed tool.  
 Reference object (target): Steel plate, 50 x 50, thickness 0.5 mm, lateral approach.  
 The sensor is functional again after the overload has been eliminated.

## Connector Drawings



## Wiring Diagrams (Schematic)



## Opto Symbols

