

### Basic features

|                     |                                |
|---------------------|--------------------------------|
| Approval/Conformity | CE<br>UKCA<br>cULus<br>WEEE    |
| Basic standard      | IEC 60947-5-2<br>IEC 60947-5-7 |

### Display/Operation

|                    |                      |
|--------------------|----------------------|
| Function indicator | Adjustment indicator |
| Power indicator    | no                   |

### Electrical connection

|                                   |                      |
|-----------------------------------|----------------------|
| Cable diameter D                  | 4.60 mm              |
| Cable length L                    | 2 m                  |
| Conductor cross-section           | 0.25 mm <sup>2</sup> |
| Connection type                   | Cable, 2.00 m, PUR   |
| Number of conductors              | 4                    |
| Polarity reversal protected       | yes                  |
| Protection against device mix-ups | yes                  |
| Short-circuit protection          | yes                  |

### Electrical data

|   |             |
|---|-------------|
| Limit frequency -3 dB                                 | 1000 Hz     |
| Load resistance RL max.                               | 500 Ohm     |
| No-load current I <sub>o</sub> max. at U <sub>e</sub> | 15 mA       |
| Operating voltage U <sub>b</sub>                      | 16...30 VDC |
| Protection class                                      | II          |
| Rated insulation voltage U <sub>i</sub>               | 250 V AC    |
| Rated operating voltage U <sub>e</sub> DC             | 24 V        |
| Ripple max. (% of U <sub>e</sub> )                    | 15 %        |
| Slope I   | 4.85 mA/mm  |

### Environmental conditions

|                         |                                       |
|-------------------------|---------------------------------------|
| Ambient temperature     | -40...80 °C                           |
| Contamination scale     | 3                                     |
| EN 60068-2-27, Shock    | Half-sinus, 30 g <sub>n</sub> , 11 ms |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min       |
| IP rating               | IP68                                  |

### Functional safety

|              |       |
|--------------|-------|
| MTTF (40 °C) | 533 a |
|--------------|-------|

### Interface

|                           |                           |
|---------------------------|---------------------------|
| Analog output             | Analog, current 4...20 mA |
| Output characteristic     | falling on approach       |
| Output current at SI max. | 20 mA                     |
| Output current at SI min. | 4 mA                      |
| Output current at Se      | 12 mA                     |

**Material**

|                          |                           |
|--------------------------|---------------------------|
| Housing material         | Brass, Nickel-free coated |
| Material jacket          | PUR                       |
| Material sensing surface | PBT                       |

**Range/Distance**

|                                       |              |
|---------------------------------------|--------------|
| Linearity range SI                    | 0.2...3.5 mm |
| Measuring range                       | 0.2...3.5 mm |
| Non-linearity max.                    | ±53 µm       |
| Repeat accuracy per BWN               | ±7 µm        |
| Temperature drift max. from end value | ±5.0 %       |

**Mechanical data**

|                   |                    |
|-------------------|--------------------|
| Dimension         | Ø 12 x 63 mm       |
| Installation      | for flush mounting |
| Mounting length   | 60.1 mm            |
| Size              | M12x1              |
| Tightening torque | 10 Nm              |

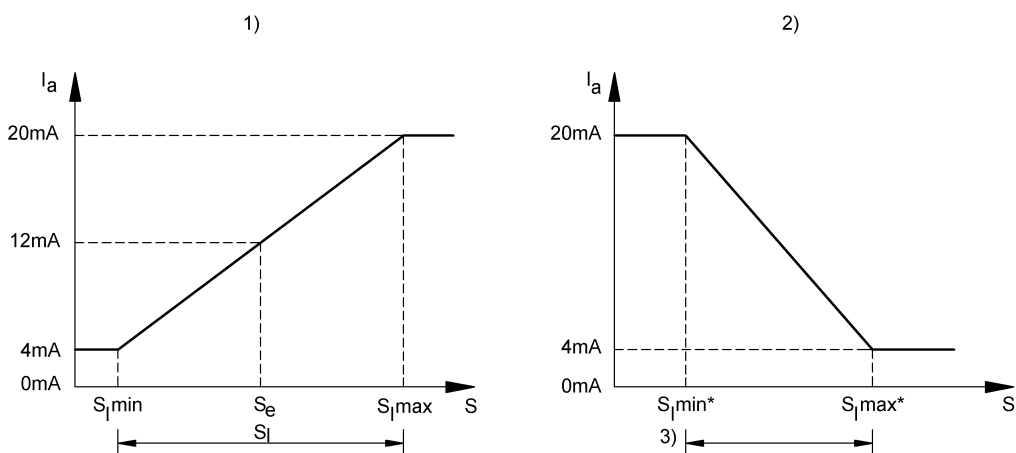
**Remarks**

Values referenced to axial approach of St 37 target. For other materials correction factors are applied.  
 We recommend to connect the teach line to the negative lead (L-) when not in use.  
 The working range can be taught using the Teach line or the BAE PD-AW-008-S04 programmer (order code BAE00MP).  
 At temperatures below -25°C the cable must be fixed in place.  
 Scattering (e.g. due to manufacturing tolerances) is described by the tolerance T at Se. This can be approximated using the formula:  $T = (sl_{max} + sl_{min}) / 20 = \pm xx \text{ mm}$ .  
 UL-MARKINGS: - For use in NFPA 79 Applications only - Adapters providing field wiring means are available from the manufacturer. Refer to manufacturers information.  
 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.

**Wiring Diagrams (Schematic)**

The diagram shows a rectangular sensor housing with four terminals on the right side labeled BN, WH, BU, and BK. A separate terminal labeled 'Teach-In' is also shown. The BN and WH terminals are connected to a positive (+) power supply. The BU and BK terminals are connected to a negative (-) power supply. The Teach-In terminal is connected to the negative (-) power supply.

## Technical Drawings



- 1) Standard characteristic curve
- 2) Reduced measuring range
- 3) Minimum width  $S_I/3$