

### Basic features

Approval/Conformity	CE UKCA cULus WEEE
Basic standard	IEC 60947-5-2 IEC 60947-5-7

### Display/Operation

Function indicator	Adjustment indicator
Power indicator	no

### Electrical connection

Connection	M12x1-Male, 4-pin, A-coded
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 min.	2000 Ohm
No-load current I <sub>o max.</sub> at U <sub>e</sub>	15 mA
Operating voltage U <sub>b</sub>	15...30 VDC
Protection class	II
Rated insulation voltage U <sub>i</sub>	250 V AC
Rated operating voltage U <sub>e DC</sub>	24 V
Ripple max. (% of U <sub>e</sub> )	15 %
Slope U	1.47 V/mm
Temperature output	-9 mV/°C

### 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	IP67

### Functional safety

MTTF (40 °C)	550 a
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### Interface

Analog output	Analog, voltage 0...10 V
Output characteristic	falling on approach
Output voltage at S <sub>I max.</sub>	10 V
Output voltage at S <sub>I min.</sub>	0 V
Output voltage at S <sub>e</sub>	5 V

### Material

Housing material	Brass, Nickel-free coated
Material sensing surface	LCP

### Mechanical data

Dimension	Ø 12 x 50 mm
Installation	non-flush
Mounting length	28.9 mm
Size	M12x1
Tightening torque	10 Nm

### Range/Distance

Linearity range SI	0.2...7 mm
Measuring range	0.2...7 mm

Non-linearity max.	±70 µm
Repeat accuracy per BWN	±7 µm
Temperature drift max. from end value	±8.0 %

### 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-009-S04 programmer (order code BAE00MN).

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.

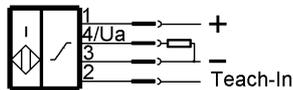
For more information about MTTF and B10d see MTTF / B10d Certificate

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.

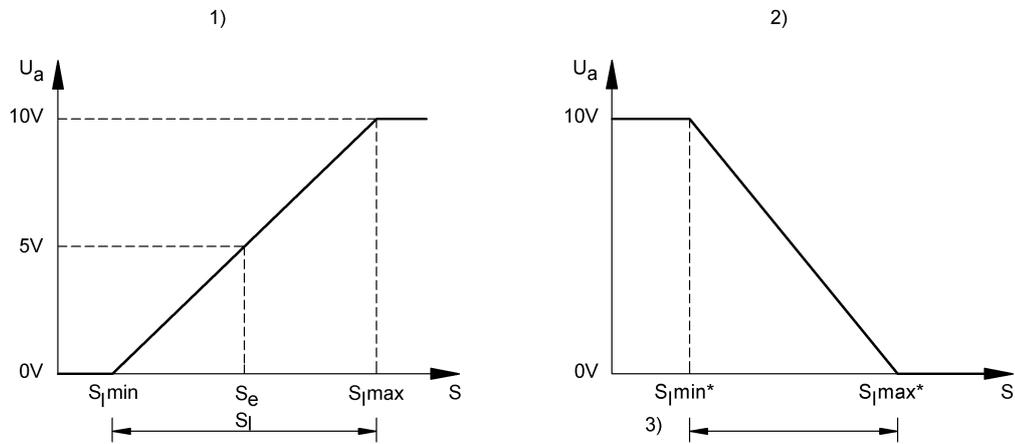
### Connector Drawings



### Wiring Diagrams (Schematic)



## Technical Drawings



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