

### Basic features

Approval/Conformity	CE cULus EAC 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 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 gn, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

### Functional safety

MTTF (40 °C)	533 a
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### Material

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

### Mechanical data

Dimension	Ø 12 x 65 mm
Installation	for flush mounting
Size	M12x1
Tightening torque	10 Nm

### Output/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

Inductive Sensors  
**BAW M12MI-ICC35C-S04G**  
**Order Code: BAW004U**



**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 %

**Remarks**

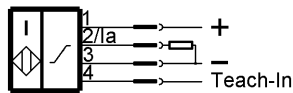
Values referenced to axial approach of St 37 target. For other materials correction factors are applied.  
 We recommend to connect the teach line to the negative lead (L-) when not in use.  
 The working range can be taught using the Teach line or the BAE PD-AW-008-S04 programmer (order code BAE00MP).  
 Scattering (e.g. due to manufacturing tolerances) is described by the tolerance T at Se. This can be approximated by the formula:  $T = (sl_{max} + sl_{min}) / 20 = \pm xx \text{ mm}$ .  
 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.

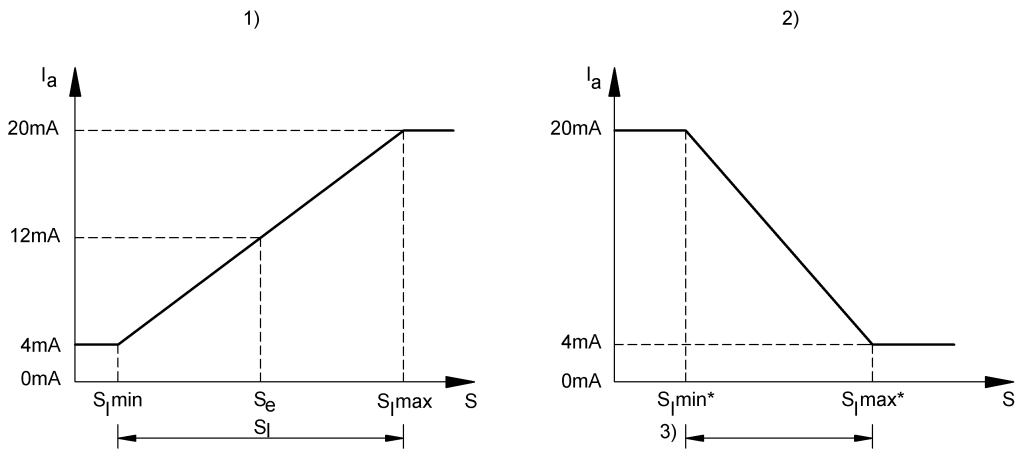
**Connector Drawings**



**Wiring Diagrams**



## Technical Drawings



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