

1) LED function indicator, 3) Teach-In button, 4) Encoder



### Basic features

|                            |                                |
|----------------------------|--------------------------------|
| <b>Application</b>         | Positioning                    |
| <b>Approval/Conformity</b> | CE<br>cURus<br>WEEE            |
| <b>Basic standard</b>      | IEC 60947-5-2<br>IEC 60947-5-7 |

### Display/Operation

|                           |                             |
|---------------------------|-----------------------------|
| <b>Function indicator</b> | Adjustment indicator<br>yes |
| <b>Power indicator</b>    | no                          |

### Electrical connection

|  |                                      |
|--|--------------------------------------|
| <b>Bending radius min., fixed cable</b>  | 3 x D                                |
| <b>Cable diameter D</b>                  | 3.3...3.5 mm                         |
| <b>Cable length L</b>                    | 200 mm                               |
| <b>Conductor cross-section</b>           | 0.34 mm <sup>2</sup>                 |
| <b>Connection</b>                        | M12x1-Male, 3-pin, A-coded           |
| <b>Connection type</b>                   | Cable with connector, 200 mm,<br>PUR |
| <b>Number of conductors</b>              | 3                                    |
| <b>Polarity reversal protected</b>       | yes                                  |
| <b>Protection against device mix-ups</b> | yes                                  |
| <b>Short-circuit protection</b>          | yes                                  |

Inductive Sensors  
**BIP AD0-B014-01-EP00,2-S4-503**  
**Order Code: BIP0022**



**Electrical data**

|                                     |             |
|-------------------------------------|-------------|
| Load resistance $R_L$ min.          | 2000 Ohm    |
| No-load current $I_0$ max. at $U_e$ | 20 mA       |
| Operating voltage $U_b$             | 15...30 VDC |
| Rated insulation voltage $U_i$      | 75 V DC     |
| Rated operating voltage $U_e$ DC    | 24 V        |
| Ripple max. (% of $U_e$ )           | 10 %        |
| Slope $U$                           | 0.71 V/mm   |

**Environmental conditions**

|                         |                                 |
|-------------------------|---------------------------------|
| Ambient temperature     | -25...70 °C                     |
| Contamination scale     | 3                               |
| EN 60068-2-27, Shock    | Half-sinus, 30 $g_n$ , 11 ms    |
| EN 60068-2-6, Vibration | 55 Hz, amplitude 1 mm, 3x30 min |
| IP rating               | IP67                            |

**Functional safety**

|              |       |
|--------------|-------|
| MTTF (40 °C) | 250 a |
|--------------|-------|

**Interface**

|                           |                          |
|---------------------------|--------------------------|
| Analog output             | Analog, voltage 0...10 V |
| Output characteristic     | Adjustable               |
| Output voltage at SI max. | 10 V                     |
| Output voltage at SI min. | 0 V                      |
| Output voltage at Se      | 5 V                      |

**Material**

|                          |     |
|--------------------------|-----|
| Cable shield             | yes |
| Housing material         | PA  |
| Material jacket          | PUR |
| Material sensing surface | PA  |

**Mechanical data**

|                        |                 |
|------------------------|-----------------|
| Dimension              | 35 x 35 x 31 mm |
| Tightening torque max. | 0.5 Nm          |

**Range/Distance**

|                                       |              |
|---------------------------------------|--------------|
| Linearity range SI                    | 0...14 mm    |
| Measuring range                       | 0...14 mm    |
| Non-linearity max.                    | ±250 $\mu$ m |
| Repeat accuracy per BWN               | ±80 $\mu$ m  |
| Temperature drift max. from end value | ±3.0 %       |

**Remarks**

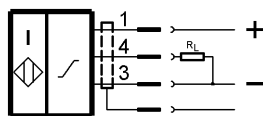
Please refer to manual.  
 The working range is teachable with the aid of the scanner.  
 Specification applies to the recommended position encoders BAM TG-XE-001 and BAM TG-XE-002 at D = 2 mm  
 For more information about MTTF and B10d see MTTF / B10d Certificate

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.

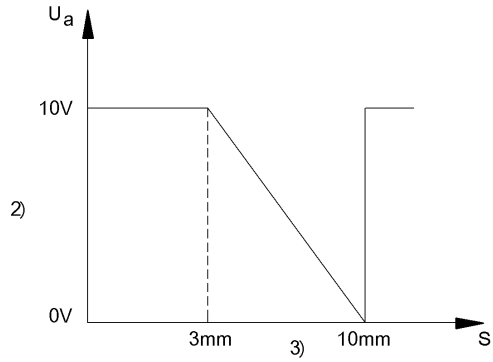
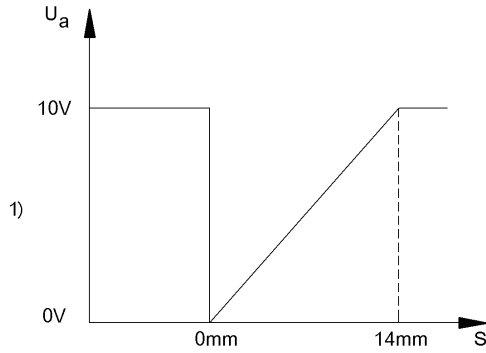
**Connector Drawings**



**Wiring Diagrams**



## Technical Drawings



- 1) Standard characteristic curve
- 2) Reduced measuring range
- 3) Minimum width 7 mm