

1) Teach-In button, 2) Sensing surface, 3) Output 1 active, 4) Output 2 active, 5) LED Power, 6) Null point



### Basic features

<b>Application</b>	Pneumatic cylinder with T-slot. For dimensions, see sketch in product view.
<b>Approval/Conformity</b>	CE UKCA cULus WEEE
<b>Basic standard</b>	IEC 60947-5-2
<b>Not incl. in scope of delivery</b>	Offset screwdriver
<b>Operating mode</b>	IO-Link SIO Mode
<b>Principle of operation</b>	Magnetic field sensor
<b>Scope of delivery</b>	Cable clip for T-slot
<b>Teach function</b>	8 switching points

### Display/Operation

<b>Function indicator</b>	yes
<b>Power indicator</b>	yes

### Electrical connection

<b>Cable</b>	PUR, 0.3 m
<b>Cable diameter D</b>	2.40 mm
<b>Connection</b>	M8x1-Male, 4-pin
<b>Polarity reversal protected</b>	yes
<b>Protection against device mix-ups</b>	yes
<b>Short-circuit protection</b>	yes

### Electrical data

<b>Load capacitance max. at Ue</b>	0.02 µF
<b>No-load current I<sub>o</sub> max., undamped</b>	10 mA
<b>Operating voltage U<sub>b</sub></b>	10...30 VDC
<b>Rated insulation voltage U<sub>i</sub></b>	75 V DC
<b>Rated operating current I<sub>e</sub></b>	100 mA
<b>Rated operating voltage U<sub>e</sub> DC</b>	24 V
<b>Rated short circuit current</b>	100 A
<b>Residual current I<sub>r</sub> max.</b>	10 µA
<b>Ripple max. (% of U<sub>e</sub>)</b>	15 %
<b>Turn-off delay t<sub>off</sub> max.</b>	25 ms
<b>Turn-on delay t<sub>on</sub> max.</b>	25 ms
<b>Utilization category</b>	DC -13
<b>Voltage drop static max.</b>	1.5 V

### Environmental conditions

<b>Ambient temperature</b>	-25...80 °C
<b>Contamination scale</b>	3
<b>EN 60068-2-27, Shock</b>	Half-sinus, 30 g <sub>n</sub> , 11 ms
<b>EN 60068-2-6, Vibration</b>	55 Hz, amplitude 1 mm, 3x30 min
<b>ESD</b>	2A (4 kV)
<b>Emission</b>	Group 1, Class B
<b>IP rating</b>	IP67

### Functional safety

<b>MTTF (40 °C)</b>	320 a
---------------------	-------

Magnetic Sensors  
**BMF 235K-H-PI-C-A8-S75-00,3**  
**Order Code: BMF00LA**



**IO-Link**

IO-Link Profil IDs	0x0001 SSP0
--------------------	-------------

**Interface**

Baud rate	COM2 (38.4 kBaud)
Interface	IO-Link 1.1
Interface setting option	Normally open/Normally closed Teach-In of switchpoints Hyst. (overtravel) /10 levels Factory setting Reset
Process data IN	8 switchpoints active/inactive Inside/outside the measuring range Teaching active/inactive
Process data OUT	None
Process data cycle min.	2.6 ms
SIO mode	yes

**Material**

Clamping screw material	Bronze
Housing material	PA 12
Material jacket	PUR
Material sensing surface	PA 12

**Mechanical data**

Dimension	23.5 x 6.2 x 5 mm
Mounting part	can be installed in T-slot from above
Tightening torque clamping screw	0.4 Nm

**Range/Distance**

Reproducibility	0.2 mm
Teach range	-30...30 mm
Teach range max.	30 mm
Teach range min.	-30 mm

**Remarks**

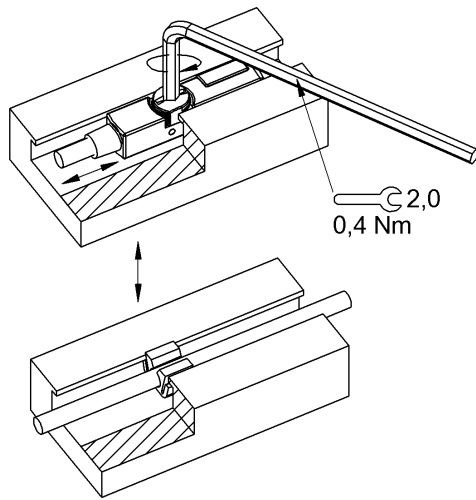
Please refer to manual at balluff.com.  
 Effective operating current  $I_e$  for thermally coupled installation of operating part on metal.  
 Teach-In must be performed only when installed.  
 Do not press key using a pointed tool.  
 The sensor is functional again after the overload has been eliminated.  
 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.

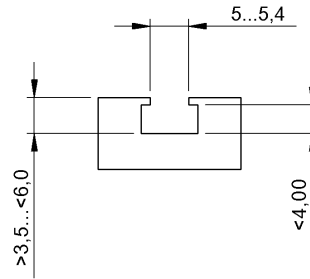
**Connector Drawings**

**Wiring Diagrams**

## Help Views



2)



Innensechskantschlüssel 2,0 mm: max.  
Anzugsmoment 0,4 Nm  
Schraubendreher 4x0,8 mm: max.  
Anzugsmoment 0,4 Nm