

# IMT 12-S-B2-PSL-L4M

## Ordering information

|                          |                                                                                 |
|--------------------------|---------------------------------------------------------------------------------|
| Designation for ordering | IMT 12-S-B2-PSL-L4M                                                             |
| Part number              | 996-01008                                                                       |
| Order text               | Inductive sensor, M12 housing, flush, Sn= 4 mm, PNP/NO, M12 4-pin plug, IO-Link |



## Functions

|                     |                            |
|---------------------|----------------------------|
| Display, LED yellow | Switching output indicator |
| Setting options     |                            |
| Default settings    | NO                         |

## IO-Link

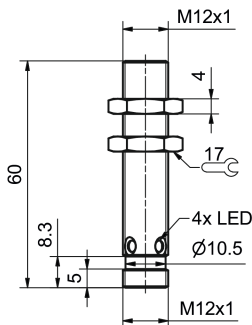
|                                  |              |
|----------------------------------|--------------|
| Data storage                     | No           |
| Communication mode               | COM 2        |
| Length of the process data [Bit] | 2            |
| Min. cycle time [ms]             | 10.4         |
| SIO mode                         | is supported |
| IO-Link specification            | 1.1          |

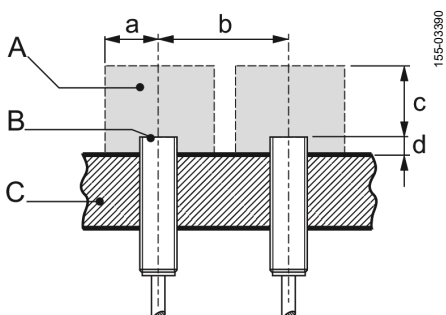
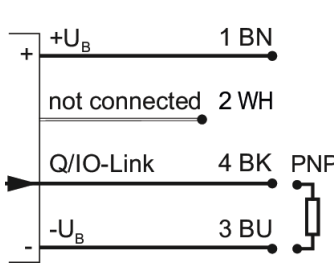
## Electrical data

|                                |                                     |
|--------------------------------|-------------------------------------|
| Operating voltage UB [V DC]    | 10 ... 30                           |
| No-load current [mA]           | ≤ 10                                |
| Output current [mA]            | ≤ 200                               |
| Readiness delay [ms]           | ≤ 60                                |
| Reverse polarity protection    | Yes                                 |
| Short circuit protection       | Yes                                 |
| Output function                | N.O./N.C.                           |
| Explanation of output function | Can be set / configured via IO-Link |
| Residual current, Ir [μA]      | ≤ 100.0                             |
| Residual ripple [%]            | ≤ 20                                |
| Switching output Q             | PNP                                 |
| Voltage drop U [V]             | 2.0                                 |
| Explanation of voltage drop U  | ≤ 2.0 V DC at 100 mA                |
| Inductive protection           | Yes                                 |

| Mechanical data                     |                                   |
|-------------------------------------|-----------------------------------|
| Length [mm]                         | 60.0                              |
| Weight [g]                          | ~ 25                              |
| Housing material                    | Brass, nickel-plated              |
| Material, active surface            | PBTP                              |
| Ambient temperature: operation [°C] | -25 ... 70                        |
| Ambient temperature: storage [°C]   | -25 ... 70                        |
| Protection class                    | IP 67                             |
| Explanation of protection class     | with IP 67 plug connected         |
| Vibration and shock resistance      | EN IEC 60947-5-2                  |
| Connection name                     | Metal plug, M12x1, 4-pin, IO-Link |
| - Number of pins                    | 4                                 |
| - Thread                            | M12x1                             |
| Installation                        | flush                             |
| Housing type                        | Cylindrical                       |
| Max. tightening torque [Nm]         | 10.00                             |
| Standard measurement plate          | 12 mm x 12 mm x 1 mm (FE 360)     |

| Technical data                    |          |
|-----------------------------------|----------|
| Reduction factor, Al              | 0.44     |
| Reduction factor, Cu              | 0.40     |
| Reduction factor, steel FE 360    | 1.00     |
| Correction factor, V2A            | 0.80     |
| Correction factor, CuZn           | 0.54     |
| Repeatability [mm]                | ≤ 0.20   |
| Temperature drift [mm/K]          | 0.080    |
| Explanation of temperature drift  | ≤ 10% Sr |
| Rated switching distance, Sn [mm] | 4.0      |
| Switching frequency ≤ [Hz]        | ≤ 2,500  |
| Ensured switching distance [mm]   | ≤ 3.240  |

| Technical drawings  |                                                                                     |
|---------------------|-------------------------------------------------------------------------------------|
| Dimensional drawing |  |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |                                            |                   |                                            |                     |                                            |  |                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------|-------------------|--------------------------------------------|---------------------|--------------------------------------------|--|---------------------------------------|
| <b>Assembly</b>     | <div><table><tr><td>A: Metal-free zone</td><td>a: 10 mm<sup>1</sup> / 20 mm<sup>2</sup></td></tr><tr><td>B: Active surface</td><td>b: 24 mm<sup>1</sup> / 45 mm<sup>2</sup></td></tr><tr><td>C: Backing material</td><td>c: 12 mm<sup>1</sup> / 24 mm<sup>2</sup></td></tr><tr><td></td><td>d: -<sup>1</sup> / 9 mm<sup>2</sup></td></tr></table><p><sup>1</sup> Flush devices    <sup>2</sup> Non-flush devices</p></div> | A: Metal-free zone | a: 10 mm <sup>1</sup> / 20 mm <sup>2</sup> | B: Active surface | b: 24 mm <sup>1</sup> / 45 mm <sup>2</sup> | C: Backing material | c: 12 mm <sup>1</sup> / 24 mm <sup>2</sup> |  | d: - <sup>1</sup> / 9 mm <sup>2</sup> |
| A: Metal-free zone  | a: 10 mm <sup>1</sup> / 20 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                                            |                   |                                            |                     |                                            |  |                                       |
| B: Active surface   | b: 24 mm <sup>1</sup> / 45 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                                            |                   |                                            |                     |                                            |  |                                       |
| C: Backing material | c: 12 mm <sup>1</sup> / 24 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                    |                                            |                   |                                            |                     |                                            |  |                                       |
|                     | d: - <sup>1</sup> / 9 mm <sup>2</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |                                            |                   |                                            |                     |                                            |  |                                       |
| <b>Connections</b>  | <div><b>4-pin, IO-Link</b><br/><p>154-00586</p></div>                                                                                                                                                                                                                                                                                                                                                                      |                    |                                            |                   |                                            |                     |                                            |  |                                       |

**Product link**

<https://www.sensopart.com/en/products/details/996-01008>



All data measured according to standard EN IEC 60947-5-2 with  $U_B = 20 \dots 30 \text{ V DC}$ ,  $T_A = 23 \text{ }^\circ\text{C} \pm 5 \text{ }^\circ\text{C}$ .  
The switching distance of the sensor must be multiplied by the correction factor of the material. This means that the switching distance on aluminum  $\text{Sn AL} = \text{Sn} \times \text{CFAL}$ . For flush mounting, the distance is multiplied by the additional correction factor of the carrier, i.e.  $\text{Sn AI} = \text{Sn} \times \text{CFAL} \times \text{CF installation site}$ .