



DAXLVN-0900BA080000M01

DAX®

**SICK**  
Sensor Intelligence.



Illustration may differ

### Ordering information

| Type                   | Part no. |
|------------------------|----------|
| DAXLVN-0900BA080000M01 | 1133531  |

Mounting brackets and position magnet enclosed. Mounting material for base not included.

Other models and accessories → [www.sick.com/DAX](http://www.sick.com/DAX)



### Detailed technical data

#### Performance

|                                       |   |
|---------------------------------------|---|
| <b>Linearity</b>                      | ≤ 0.03% F.S. (Minimum 90 µm) <sup>1) 2)</sup> |
| <b>Repeatability</b>                  | ≤ ± 20 µm                                     |
| <b>Measured values</b>                | Positioning                                   |
| <b>Measuring range</b>                | 0 mm ... 900 mm                               |
| <b>Unusable range</b>                 |   |
| Null zone                             | 55 mm   |
| Damping zone                          | 63 mm   |
| <b>Magnet type</b>                    |   |
| Magnet shape                          | Block magnet                                  |
| Number of magnets                     | 1 piece                                       |
| <b>Magnet travel speed</b>            | Any   |
| <b>Measuring frequency (internal)</b> | < 2 ms  |

<sup>1)</sup> Systematic position measurement deviation according to DIN ISO 1319-1 (value includes all systematic errors or deviations from the actual position value, e.g. repeatability and hysteresis).

<sup>2)</sup> In principle, the size of the measurement deviation is limited by the resolution of the interface.

#### Interfaces

|                                       |   |
|---------------------------------------|---|
| <b>Communication interface</b>        | Analog  |
| <b>Communication Interface detail</b> | Voltage   |
| <b>Output signal</b>                  | 0 V DC ... 10 V DC  |
| <b>Signals</b>                        |   |
| Number of signals                     | 2 output signals (one output signal + an inverted second output signal) |
| Sequence of signals                   | Signal 1: rising, signal 2: falling                                     |

#### Electrical data

|                                    |                            |
|------------------------------------|----------------------------|
| <b>Connection type</b>             | Male connector, M12, 8-pin |
| <b>Male connector coding</b>       | A-coded                    |
| <b>Supply voltage</b>              | 24 V DC (± 20%)            |
| <b>Reverse polarity protection</b> | Up to -30 V DC             |

<sup>1)</sup> This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 40°C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

|  |                               |
|--|-------------------------------|
| <b>Residual ripple</b>                       | ≤ 0.28 V <sub>pp</sub>        |
| <b>Dielectric strength</b>                   | 500 V DC, 0 V against housing |
| <b>Over voltage protection</b>               | ≤ 36 V DC                     |
| <b>MTTFd: mean time to dangerous failure</b> | 123 years <sup>1)</sup>       |

<sup>1)</sup> This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 40 °C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

## Mechanical data

|                          |   |
|--------------------------|---|
| <b>Mechanical design</b> | DAX® Low Profile                                  |
| <b>Material</b>          |   |
| Housing                  | Aluminum (anodised), zinc, stainless steel, brass |

## Ambient data

|                                      |  |
|--------------------------------------|--|
| <b>EMC</b>                           | According to EN 61000-6-2 and EN 61000-6-4                   |
| <b>Enclosure rating</b>              | IP65 / IP67 <sup>1)</sup>                                    |
| <b>Temperature</b>                   |  |
| Operating temperature range          | -40 °C ... +85 °C  |
| Storage temperature range            | -40 °C ... +85 °C  |
| <b>Permissible relative humidity</b> | 90 % (Condensation not permitted)                            |
| <b>Resistance to shocks</b>          | 100 g, 6 ms (IEC 60068-2-27)                                 |
| <b>Resistance to vibration</b>       | 8 g / 10...2,000 Hz according to IEC 60068-2-6 <sup>2)</sup> |

<sup>1)</sup> In correctly assembled mating connector.

<sup>2)</sup> Resonance frequencies can influence signal quality.

## General notes

|                       |  |
|-----------------------|--|
| <b>Items supplied</b> | Mounting brackets and position magnet enclosed. Mounting material for base not included. |
|-----------------------|--|

## Classifications

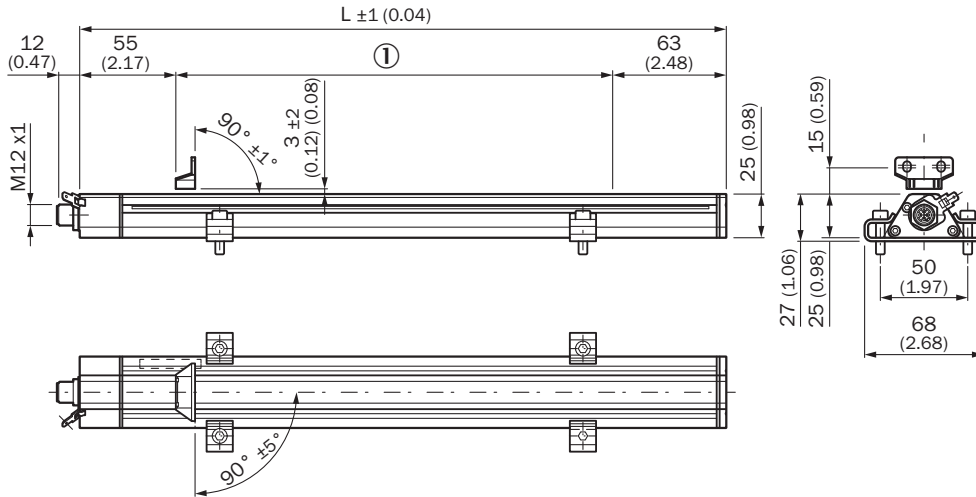
|                     |          |
|---------------------|----------|
| <b>eCl@ss 5.0</b>   | 27270705 |
| <b>eCl@ss 5.1.4</b> | 27270705 |
| <b>eCl@ss 6.0</b>   | 27270705 |
| <b>eCl@ss 6.2</b>   | 27270705 |
| <b>eCl@ss 7.0</b>   | 27270705 |
| <b>eCl@ss 8.0</b>   | 27270705 |
| <b>eCl@ss 8.1</b>   | 27270705 |
| <b>eCl@ss 9.0</b>   | 27270705 |
| <b>eCl@ss 10.0</b>  | 27270705 |
| <b>eCl@ss 11.0</b>  | 27270705 |
| <b>eCl@ss 12.0</b>  | 27274304 |
| <b>ETIM 5.0</b>     | EC002544 |
| <b>ETIM 6.0</b>     | EC002544 |
| <b>ETIM 7.0</b>     | EC002544 |
| <b>ETIM 8.0</b>     | EC002544 |

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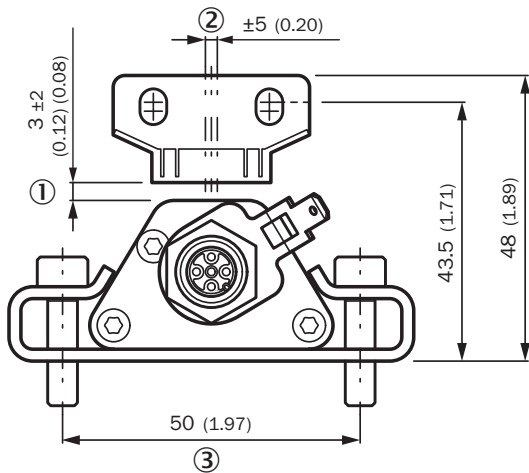
Dimensional drawing (Dimensions in mm (inch))

DAX® Low Profile



① Measuring range

Distance tolerance

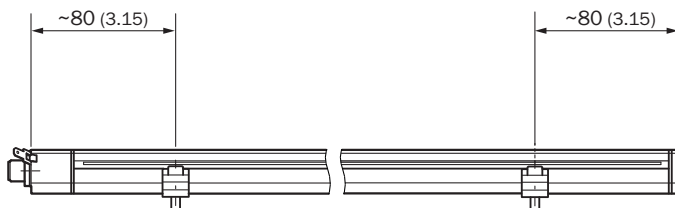


① Nominal distance + permissible amount of distance tolerance

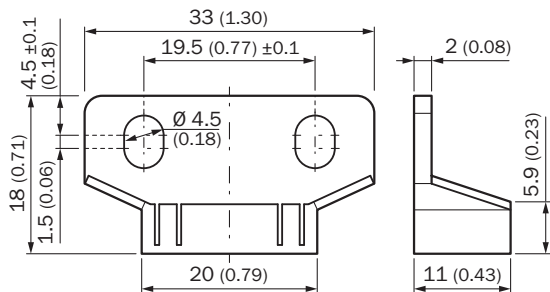
② Permissible center offset

③ Recommendation: M5 x 20

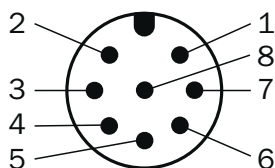
Positioning of mounting bracket



Block magnet






PIN assignment





| M12 male connector, 8-pin | Signal                           |
|---------------------------|----------------------------------|
| 1                         | Output signal ground (0 V PIN 3) |
| 2                         | Output signal ground (0 V PIN 5) |
| 3                         | Signal 2                         |
| 4                         | n.c.                             |
| 5                         | Signal 1                         |
| 6                         | Power Ground                     |
| 7                         | +24 V DC                         |
| 8                         | n.c.                             |

Recommended accessories

Other models and accessories → [www.sick.com/DAX](http://www.sick.com/DAX)

|   | Brief description   | Type           | Part no. |
|---|---|----------------|----------|
| <b>Magnets</b>  |   |                |          |
|  | Compact block magnet for magnetostrictive linear encoders   | MAG-B-180-01   | 2129171  |
| <b>Plug connectors and cables</b>   |   |                |          |
|  | Head A: cable<br>Head B: Flying leads<br>Cable: SSI, Incremental, HIPERFACE®, PUR, halogen-free, shielded | LTG-2308-MWENC | 6027529  |
|  | Head A: cable<br>Head B: Flying leads<br>Cable: SSI, TTL, HTL, Incremental, PUR, halogen-free, shielded   | LTG-2612-MW    | 6028516  |

|   | Brief description  | Type             | Part no. |
|---|--|------------------|----------|
|  | Head A: female connector, M12, 8-pin, straight<br>Head B: Flying leads<br>Cable: Incremental, SSI, PUR, halogen-free, shielded, 2 m  | DOL-1208-G02MAC1 | 6032866  |
|   | Head A: female connector, M12, 8-pin, straight<br>Head B: Flying leads<br>Cable: Incremental, SSI, PUR, halogen-free, shielded, 5 m  | DOL-1208-G05MAC1 | 6032867  |
|   | Head A: female connector, M12, 8-pin, straight<br>Head B: Flying leads<br>Cable: Incremental, SSI, PUR, halogen-free, shielded, 10 m | DOL-1208-G10MAC1 | 6032868  |
|   | Head A: female connector, M12, 8-pin, straight<br>Head B: Flying leads<br>Cable: Incremental, SSI, PUR, halogen-free, shielded, 20 m | DOL-1208-G20MAC1 | 6032869  |
|   | Head A: female connector, M12, 8-pin, straight<br>Head B: Flying leads<br>Cable: Incremental, SSI, PUR, halogen-free, shielded, 25 m | DOL-1208-G25MAC1 | 6067859  |
|  | Head A: female connector, M12, 8-pin, straight, A-coded<br>Cable: Incremental, SSI, shielded   | DOS-1208-GA01    | 6045001  |
| <b>Terminal and alignment brackets</b>  |  |                  |          |
|  | Replacement clamping bracket for DAX® Low Profile without fastening material, 2 pieces   | BEF-KH-LP1-02    | 2125244  |
|   | Replacement clamping bracket for DAX® Low Profile without fastening material, 3 pieces   | BEF-KH-LP1-03    | 2125245  |
|   | Replacement clamping bracket for DAX® Low Profile without fastening material, 4 pieces   | BEF-KH-LP1-04    | 2125246  |

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)