



# MPS-G50CSH15D43ZZZ

MPS-G

POSITION SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

| Type               | Part no. |
|--------------------|----------|
| MPS-G50CSH15D43ZZZ | 1108673  |

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



### Detailed technical data

#### Features

|                                    |  |
|------------------------------------|--|
| <b>Cylinder type</b>               | C-slot   |
| <b>Preferred manufacturer slot</b> | SMC, Schunk, PHD, Bimba  |
| <b>Detection zone</b>              | 0 mm ... 50 mm <sup>1)</sup>   |
| <b>Cylinder types with adapter</b> | T-slot cylinders<br>Round body cylinder<br>Profile cylinders and tie-rod cylinders   |
| <b>Measuring range</b>             | 50 mm  |
| <b>Housing length</b>              | 25 mm  |
| <b>Output function</b>             | Analog   |
| <b>Electrical wiring</b>           | DC 4-wire  |
| <b>Analog output (voltage)</b>     | 0 V ... 10 V   |
| <b>Enclosure rating</b>            | IP67   |
| <b>Adjustment</b>                  | Teach-in button<br>Initialization of dynamic teach for measuring range<br>Resetting of measuring range<br>Manual adjustment of measuring range |
| <b>Special features</b>            | Completely embedded mounting in the slot, providing protection   |

<sup>1)</sup> Deviations are possible depending on the drive.

#### Mechanics/electronics

|                                       |                                   |
|---------------------------------------|-----------------------------------|
| <b>Supply voltage</b>                 | 13 V DC ... 30 V DC <sup>1)</sup> |
| <b>Min. load resistance</b>           | ≥ 2 kΩ                            |
| <b>Protection class</b>               | III                               |
| <b>Time delay before availability</b> | 0.15 s                            |
| <b>Power consumption</b>              | ≤ 550 mW                          |

<sup>1)</sup> 12 V DC ... 30 V DC for deactivated out-of-range display.

<sup>2)</sup> The sensor must not be subjected to magnetic fields strengths of > 20 mT!

<sup>3)</sup> For measuring range > 37 mm, the following applies for the resolution: Measuring range / 3,723.

<sup>4)</sup> At 25 ° C, linearity error (maximum deviation) depending on response curve and minimal deviation function.

<sup>5)</sup> At 25 ° C, repeatability magnet movement in one direction.

<sup>6)</sup> The analog measured value can deviate under transient conditions.

|  |  |
|--|--|
| <b>Required magnetic field sensitivity, typ.</b> | 2 mT ... 20 mT <sup>2)</sup>   |
| <b>Resolution, typ.</b>                          | 0,01 mm <sup>3)</sup>  |
| <b>Linearity error, typ.</b>                     | 0.3 mm <sup>4)</sup>   |
| <b>Repeat accuracy, typ.</b>                     | 0.05 mm <sup>5)</sup>  |
| <b>Sampling rate, typ.</b>                       | 1 ms   |
| <b>Reverse polarity protection</b>               | Yes  |
| <b>Short-circuit protection</b>                  | Yes  |
| <b>Status indicator LED</b>                      | Yes  |
| <b>Teach-in</b>                                  | Yes  |
| <b>Ambient operating temperature</b>             | -20 °C ... +70 °C  |
| <b>Shock and vibration resistance</b>            | 30 g, 11 ms / 10 ... 55 Hz, 1 mm   |
| <b>EMC</b>                                       | According to EN 60947-5-7 <sup>6)</sup>  |
| <b>Connection type</b>                           | Cable with connector M8, with knurled nuts, 0.5 m                                      |
| <b>Connection type Detail</b>                    |  |
| Conductor cross section                          | 0.08 mm <sup>2</sup>   |
| Cable diameter                                   | Ø 2.6 mm   |
| Bending radius                                   | For flexible use > 10 x cable diameter<br>With fixed installation > 5 x cable diameter |
| Cable outlet                                     | Axial  |
| <b>Control elements connection cable</b>         |  |
| Connection type                                  | Cable, 4-wire, 0.1 m   |
| <b>Control elements connection cable detail</b>  |  |
| Conductor size                                   | 0.09 mm <sup>2</sup>   |
| Cable diameter                                   | Ø 2.2 mm   |
| Bending radius                                   | For flexible use > 10 x cable diameter<br>With fixed installation > 5 x cable diameter |
| Cable outlet                                     | Axial  |
| <b>Material</b>                                  |  |
| Housing  | Plastic, PA, strengthened  |
| Cable  | PUR  |
| Control element                                  | Plastic, TPU, reinforced   |

<sup>1)</sup> 12 V DC ... 30 V DC for deactivated out-of-range display.

<sup>2)</sup> The sensor must not be subjected to magnetic fields strengths of > 20 mT!

<sup>3)</sup> For measuring range > 37 mm, the following applies for the resolution: Measuring range / 3,723.

<sup>4)</sup> At 25 °C, linearity error (maximum deviation) depending on response curve and minimal deviation function.

<sup>5)</sup> At 25 °C, repeatability magnet movement in one direction.

<sup>6)</sup> The analog measured value can deviate under transient conditions.

## Safety-related parameters

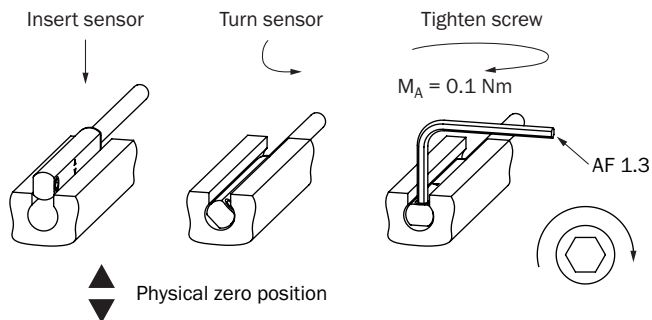
|                                     |           |
|-------------------------------------|-----------|
| <b>MTTF<sub>D</sub></b>             | 358 years |
| <b>DC<sub>avg</sub></b>             | 0 %       |
| <b>T<sub>M</sub> (mission time)</b> | 20 years  |

## Classifications

|                   |          |
|-------------------|----------|
| <b>ECLASS 5.0</b> | 27270104 |
|-------------------|----------|

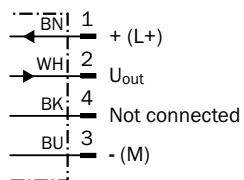
|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.1.4</b>   | 27270104 |
| <b>ECLASS 6.0</b>     | 27270104 |
| <b>ECLASS 6.2</b>     | 27270104 |
| <b>ECLASS 7.0</b>     | 27270104 |
| <b>ECLASS 8.0</b>     | 27270104 |
| <b>ECLASS 8.1</b>     | 27270104 |
| <b>ECLASS 9.0</b>     | 27270104 |
| <b>ECLASS 10.0</b>    | 27270104 |
| <b>ECLASS 11.0</b>    | 27270104 |
| <b>ECLASS 12.0</b>    | 27274301 |
| <b>ETIM 5.0</b>       | EC002544 |
| <b>ETIM 6.0</b>       | EC002544 |
| <b>ETIM 7.0</b>       | EC002544 |
| <b>ETIM 8.0</b>       | EC002544 |
| <b>UNSPSC 16.0901</b> | 39122230 |

### Installation note



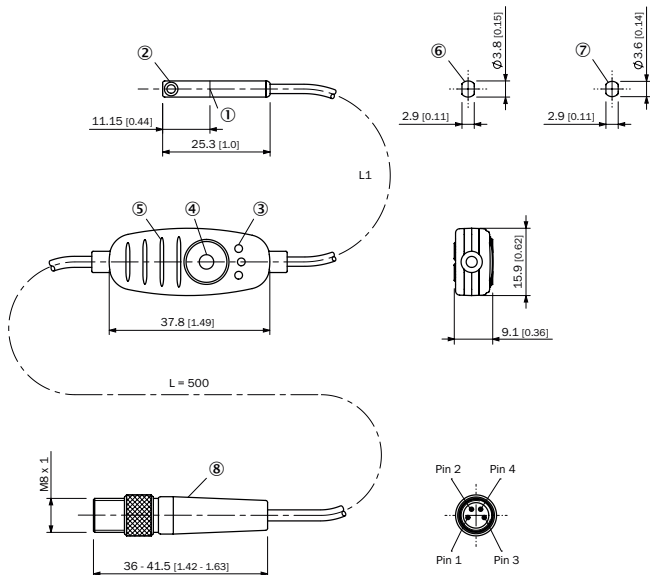
### Connection diagram

Cd-465



Dimensional drawing (Dimensions in mm (inch))

Cable with connector M8, with knurled nuts







- ① Center of sensor element
- ② Fixing screw SW 1.3
- ③ Display LED
- ④ Teach-in button
- ⑤ Ribbing for cable ties
- ⑥ For SMC, Schunk, PHD, Bimba slot (MPS-G50CS...)
- ⑦ For Festo, Zimmer, Gimatic slot (MPS-G50CF...)
- ⑧ Connection

| Part no. | Type               | L1     | Number of cores |
|----------|--------------------|--------|-----------------|
| 1108672  | MPS-G50CFH15D43ZZZ | 100 mm | 4               |
| 1108673  | MPS-G50CSH15D43ZZZ | 100 mm | 4               |
| 1108674  | MPS-G50CSH55D43ZZZ | 500 mm | 4               |
| 1127842  | MPS-G50CFH15D31DZZ | 100 mm | 4               |
| 1127843  | MPS-G50CSH15D31DZZ | 100 mm | 4               |
| 1127844  | MPS-G50CSH55D31DZZ | 500 mm | 4               |
| 1127848  | MPS-G50CFH15D31DZZ | 100 mm | 4               |
| 1127849  | MPS-G50CSH15D31DZZ | 100 mm | 4               |

Recommended accessories

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

|   | Brief description  | Type        | Part no. |
|---|--|-------------|----------|
| Brackets for cylinder sensors   |  |             |          |
|  | Mounting is by means of the enclosed adhesive pad, 2x M3 countersunk screws or 2x cable ties, plastic, including double-sided adhesive pad | BEF-CPMPS-G | 2117133  |

|   | Brief description  | Type               | Part no. |
|---|--|--------------------|----------|
|  | Preferred manufacturer slot Festo, SMC, Pneumax, Airtec, plastic   | BEF-KHZ-TC3        | 2117770  |
| Others  |  |                    |          |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul> | YF8U14-050VA3XLEAX | 2095889  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> 0.14 mm<sup>2</sup> ... 0.5 mm<sup>2</sup></li> </ul>   | STE-0804-G         | 6037323  |

## 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:

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