



# MPS-025CLTQDS01

MPS-C

POSITION SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
MPS-025CLTQDS01	1111002

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



### Detailed technical data

#### Features

<b>Cylinder type</b>	C-slot
<b>Cylinder types with adapter</b>	Round body cylinder Profile cylinders and tie-rod cylinders SMC rail CDQ2 SMC rail ECDQ2
<b>Measuring range</b>	25 mm <sup>1)</sup>
<b>Housing length</b>	41 mm
<b>Switching output</b>	Push-pull: PNP/NPN
<b>Output function</b>	Analog, IO-Link, Switching output
<b>Electrical wiring</b>	DC 4-wire
<b>Analog output (voltage)</b>	0 V ... 10 V <sup>2)</sup>
<b>Analog output (current)</b>	4 mA ... 20 mA
<b>Enclosure rating</b>	IP67 <sup>3)</sup>
<b>Adjustment</b>	
Teach-in control panel	Teaching in analog outputs Selecting the current/voltage output Inverting the analog output Teaching in digital switching outputs
IO-Link	Teaching in 4 switching points Pin 2 configuration (0 V–10 V, 4 mA–20 mA) Measuring range (mm) teach-in (analog output) Disabling teach-in pushbutton Teach-in modes per output via IO-Link (cylinder switch mode, two point mode, window mode, and single point mode)

<sup>1)</sup> ± 1 mm.

<sup>2)</sup> Preset.

<sup>3)</sup> According to EN 60529.

## Mechanics/electronics

<b>Supply voltage</b>	12 V DC ... 30 V DC
<b>Power consumption</b>	42 mA, without load
<b>Voltage drop</b>	≤ 2 V
<b>Continuous current I<sub>a</sub></b>	≤ 100 mA <sup>1)</sup>
<b>Max. load resistance</b>	≤ 500 Ω Power Output, at 24 V
<b>Min. load resistance</b>	≥ 2 kΩ <sup>2)</sup>
<b>Protection class</b>	III
<b>Time delay before availability</b>	0.15 s
<b>Required magnetic field sensitivity, typ.</b>	3 mT ... 12 mT
<b>Resolution, typ.</b>	≥ 50 μm
<b>Linearity error, typ.</b>	0.3 mm <sup>3)</sup>
<b>Repeat accuracy, typ.</b>	0.1 mm <sup>4)</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>Digital switching output</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>5)</sup>
<b>Connection type</b>	Cable with connector M12, 4-pin, with knurled nuts, 0.6 m
<b>Connection type Detail</b>	
Deep-freeze property	Do not bend below 0 °C
Conductor cross section	0.08 mm <sup>2</sup>
Cable diameter	Ø 2.6 mm
Bending radius	With fixed installation > 5 x cable diameter For flexible use > 10 x cable diameter
Cable outlet	Axial
<b>Material</b>	
Housing	Plastic
Cable	PUR
<b>UL File No.</b>	NRKH.E181493 & NRKH7.E181493

<sup>1)</sup> ≤ 100 mA (PUSH); ≥ -100 mA (PULL).

<sup>2)</sup> Voltage output.

<sup>3)</sup> At 25 °C, linearity error (maximum deviation) depending on response curve and minimal deviation function.

<sup>4)</sup> At 25 °C, repeatability magnet movement in one direction.

<sup>5)</sup> The analog measured value can deviate under transient conditions.

## Communication interface

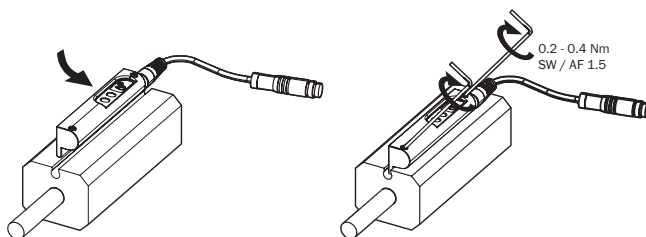
<b>Communication interface</b>	IO-Link V1.1
<b>Communication Interface detail</b>	COM3

<b>Cycle time</b>	1 ms
<b>Process data length</b>	16 Bit
<b>Process data structure</b>	Bit 0 = switching signal Q <sub>L1</sub> Bit 1 = switching signal Q <sub>L2</sub> Bit 2 = switching signal Q <sub>L3</sub> Bit 3 = switching signal Q <sub>L4</sub> Bit 4 ... 15 = position (in 50 µm)

### Classifications

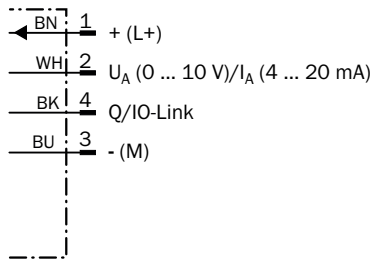
<b>ECLASS 5.0</b>	27270104
<b>ECLASS 5.1.4</b>	27270104
<b>ECLASS 6.0</b>	27270104
<b>ECLASS 6.2</b>	27270104
<b>ECLASS 7.0</b>	27270104
<b>ECLASS 8.0</b>	27270104
<b>ECLASS 8.1</b>	27270104
<b>ECLASS 9.0</b>	27270104
<b>ECLASS 10.0</b>	27270104
<b>ECLASS 11.0</b>	27270104
<b>ECLASS 12.0</b>	27274301
<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



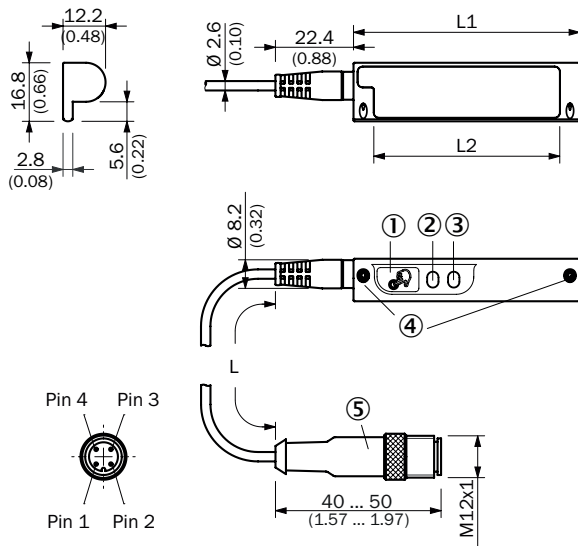
## Connection diagram

Cd-357



## Dimensional drawing (Dimensions in mm (inch))

Cable with M12 male connector









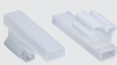


	Total length (L1) mm	Measuring range (L2) mm
MPS-xxx	40.6	25
MPS-xxx	64.9	50
MPS-xxx	114.9	100
MPS-xxx	214.7	200

- ① Teach-in button
- ② Status LEDs
- ③ Operating LEDs
- ④ Fixing screw SW 1.5
- ⑤ Connection

Part no.	Type	L	Number of cores
1127298	MPS-100CLTQ0	300 mm	4
1111086	MPS-200CLTQ0	300 mm	4
1111002	MPS-025CLTQDS01	600 mm	4

### Recommended accessories

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

	Brief description	Type	Part no.
<b>Connection modules</b>			
	IO-Link V1.1 Class A port, USB2.0 port, optional external power supply 24V / 1A	IOLA2US-01101 (SiLink2 Master)	1061790
	EtherCAT IO-Link Master, IO-Link V1.1, Port Class A, power supply via 7/8" cable 24 V / 8 A, fieldbus connection via M12 cable	IOLG2EC-03208R01 (IO-Link Master)	6053254
	EtherNet/IP IO-Link Master, IO-Link V1.1, Port Class A, power supply via 7/8" cable 24 V / 8 A, fieldbus connection via M12-cable	IOLG2EI-03208R01 (IO-Link Master)	6053255
	PROFINET IO-Link Master, IO-Link V1.1, Port Class A, power supply via 7/8" cable 24 V / 8 A, fieldbus connection via M12 cable	IOLG2PN-03208R01 (IO-Link Master)	6053253
<b>Brackets for cylinder sensors</b>			
	Mounting bracket for integrated profile cylinder/tie-rod cylinder, zinc diecast, mounting hardware included	BEF-KHZ-PC1	2076170
	1 piece, Mounting bracket on round body cylinder with piston diameter of 1 mm ... 130 mm, ambient temperature min -30 °C max 80 °C, stainless steel, Aluminum	BEF-KHZ-RC1-130	2077686
	1 piece, Mounting bracket on round body cylinder with piston diameter of 1 mm ... 25 mm, ambient temperature min -30 °C max 80 °C, stainless steel, Aluminum	BEF-KHZ-RC1-25	2077685
<b>Other mounting accessories</b>			
	10 pieces, Label Holder, 2.5 mm to 3.5 mm, 10 pcs., TPU	LABEL HOLDER	2086019
<b>Plug connectors and cables</b>			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Male connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 0.6 m, 4-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with oils and lubricants, Drag chain operation, Robot</li> </ul>	YF2A14-C60UA3M8U14	2096111
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Male connector, M12, 4-pin, straight, A-coded</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 0.6 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul>	YF2A14-C60VB3M2A14	2096248

## 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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