



# MZ2Q-CSSPSKR0

MZ2Q-C

SENSORS FOR C-SLOT CYLINDERS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
MZ2Q-CSSPSKRO	1042239

Other models and accessories → [www.sick.com/MZ2Q-C](http://www.sick.com/MZ2Q-C)



### Detailed technical data

#### Features

<b>Cylinder type</b>	C-slot
<b>Preferred manufacturer slot</b>	SMC Bimba Schunk
<b>Detection zone</b>	0 mm ... 50 mm
<b>Cylinder types with adapter</b>	SMC rail ECDQ2 SMC rail CDQ2
<b>Housing length</b>	19.5 mm
<b>Switching output</b>	PNP
<b>Switching output detail</b>	2 x PNP
<b>Output function</b>	NO
<b>Electrical wiring</b>	DC 4-wire
<b>Enclosure rating</b>	IP67 <sup>1)</sup>
<b>Adjustment</b>	
Teach-in control panel	Teaching in switching points 1 and 2

<sup>1)</sup> According to EN 60529.

#### Mechanics/electronics

<b>Detection zone</b>	0 mm ... 50 mm
<b>Supply voltage</b>	12 V DC ... 30 V DC
<b>Power consumption</b>	Typ. 20 mA, without load
<b>Voltage drop</b>	≤ 2.2 V
<b>Continuous current I<sub>a</sub></b>	≤ 100 mA
<b>Protection class</b>	III
<b>Hysteresis, typ.</b>	1 mT

<sup>1)</sup> Supply voltage U<sub>B</sub> and constant ambient temperature T<sub>a</sub>.

<b>Reproducibility</b>	≤ 0.1 mT <sup>1)</sup>
<b>Reverse polarity protection</b>	Yes
<b>Short-circuit protection</b>	Yes
<b>Status indicator LED</b>	Yes
<b>Teach-in</b>	Yes
<b>Power-up pulse protection</b>	Yes
<b>Ambient operating temperature</b>	-20 °C ... +75 °C
<b>Shock and vibration resistance</b>	30 g, 11 ms / 10 ... 55 Hz, 1 mm
<b>EMC</b>	According to EN 60947-5-2
<b>Connection type</b>	Cable with connector M8, 4-pin, 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	With fixed installation > 5 x cable diameter For flexible use > 10 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	0.08 mm <sup>2</sup>
Cable diameter	Ø 2.3 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> Supply voltage  $U_B$  and constant ambient temperature  $T_a$ .

### Safety-related parameters

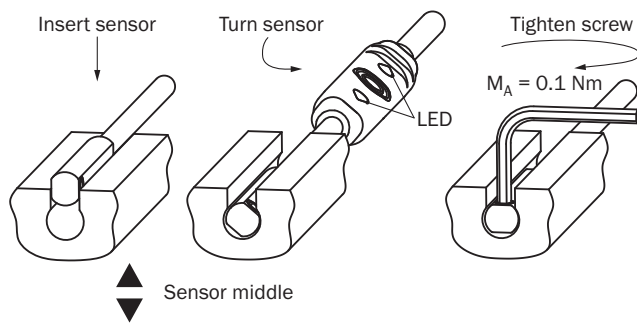
<b>MTTF<sub>D</sub></b>	799 years
<b>DC<sub>avg</sub></b>	0%
<b>T<sub>M</sub> (mission time)</b>	20 years

### 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

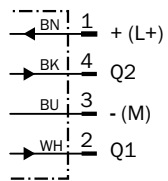
<b>ECLASS 10.0</b>	27270104
<b>ECLASS 11.0</b>	27270104
<b>ECLASS 12.0</b>	27274301
<b>ETIM 5.0</b>	EC002544
<b>ETIM 6.0</b>	EC002544
<b>ETIM 7.0</b>	EC002544
<b>ETIM 8.0</b>	EC002544
<b>UNSPSC 16.0901</b>	39122230

### Installation note



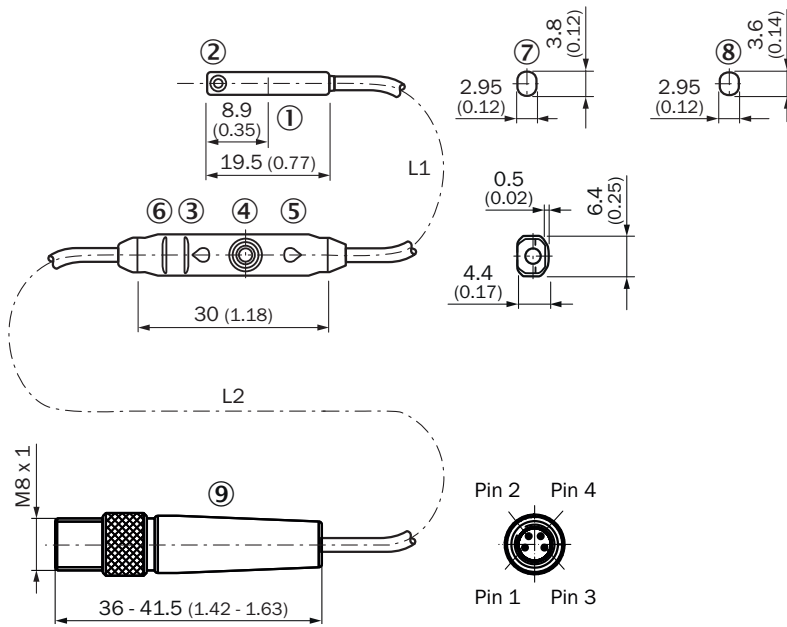
### Connection diagram

Cd-032



**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 Display LED
- ⑥ Ribbing for cable ties
- ⑦ For SMC/ Bimba cylinder (MZ2Q-CSxxxx)
- ⑧ For festo cylinder (MZ2Q-CFxxxx)
- ⑨ Connection





Part no.	Type	L1	L2	Number of cores
1146367	MZ2Q-CSLPSKRO	100 mm	300 mm	4
1146368	MZ2Q-CFLPSKRO	100 mm	300 mm	4
1096578	MZ2Q-CSSNSKR0S21	100 mm	500 mm	4
1044557	MZ2Q-CSSPSKR0S01	100 mm	500 mm	4
1095814	MZ2Q-CSSPSKR0S20	100 mm	500 mm	4
1118101	MZ2Q-CSSPSKR0S22	100 mm	500 mm	4
1042239	MZ2Q-CSSPSKRO	100 mm	500 mm	4
1042243	MZ2Q-CFSPSKRO	100 mm	500 mm	4
1147171	MZ2Q-CSSPSKR0S25	300 mm	500 mm	4

Recommended accessories

Other models and accessories → [www.sick.com/MZ2Q-C](http://www.sick.com/MZ2Q-C)

	Brief description	Type	Part no.	
Terminal and alignment brackets				
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 12 mm, ambient temperature min 0 °C max 50 °C</li> <li>• <b>Material:</b> Plastic, Aluminum</li> <li>• <b>Details:</b> Plastic, Aluminum</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> C-slot</li> </ul>	BEF-KHZ-RC-12	2077673	
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 16 mm, ambient temperature min 0 °C max 50 °C</li> <li>• <b>Material:</b> Plastic, Aluminum</li> <li>• <b>Details:</b> Plastic, Aluminum</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> C-slot</li> </ul>	BEF-KHZ-RC-16	2077672	
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 20 mm, ambient temperature min 0 °C max 50 °C</li> <li>• <b>Material:</b> Plastic, Aluminum</li> <li>• <b>Details:</b> Plastic, Aluminum</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> C-slot</li> </ul>	BEF-KHZ-RC-20	2077671	
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 25 mm, ambient temperature min 0 °C max 50 °C</li> <li>• <b>Material:</b> Plastic, Aluminum</li> <li>• <b>Details:</b> Plastic, Aluminum</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> C-slot</li> </ul>	BEF-KHZ-RC-25	2077670	
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 32 mm, ambient temperature min 0 °C max 50 °C</li> <li>• <b>Material:</b> Plastic, Aluminum</li> <li>• <b>Details:</b> Plastic, Aluminum</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> C-slot</li> </ul>	BEF-KHZ-RC-32	2077669	
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 40 mm, ambient temperature min 0 °C max 50 °C</li> <li>• <b>Material:</b> Plastic, Aluminum</li> <li>• <b>Details:</b> Plastic, Aluminum</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> C-slot</li> </ul>	BEF-KHZ-RC-40	2077668	
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 50 mm, ambient temperature min 0 °C max 50 °C</li> <li>• <b>Material:</b> Plastic, Aluminum</li> <li>• <b>Details:</b> Plastic, Aluminum</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> C-slot</li> </ul>	BEF-KHZ-RC-50	2077667	
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 63 mm, ambient temperature min 0 °C max 50 °C</li> <li>• <b>Material:</b> Plastic, Aluminum</li> <li>• <b>Details:</b> Plastic, Aluminum</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> C-slot</li> </ul>	BEF-KHZ-RC-63	2077666	
		<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 1 mm ... 130 mm, ambient temperature min -30 °C max 80 °C</li> <li>• <b>Material:</b> Stainless steel, Aluminum</li> <li>• <b>Details:</b> Stainless steel, Aluminum</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> C-slot</li> </ul>	BEF-KHZ-RC1-130	2077686

	Brief description	Type	Part no.
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 1 mm ... 25 mm, ambient temperature min -30 °C max 80 °C</li> <li>• <b>Material:</b> Stainless steel, Aluminum</li> <li>• <b>Details:</b> Stainless steel, Aluminum</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> C-slot</li> </ul>	BEF-KHZ-RC1-25	2077685
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>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>	DOS-0804-G	6009974
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, angled, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Solder connection</li> <li>• <b>Permitted cross-section:</b> ≤ 0.25 mm<sup>2</sup></li> </ul>	DOS-0804-W	6009975
	<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
	<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> 2 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YF8U14-020VA3XLEAX	2095888
	<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, Uncontaminated zones</li> </ul>	YF8U14-050VA3XLEAX	2095889
	<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> 10 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YF8U14-100VA3XLEAX	2095890
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, angled, 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> 2 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YG8U14-020VA3XLEAX	2095962
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, angled, 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, Uncontaminated zones</li> </ul>	YG8U14-050VA3XLEAX	2095963
	<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> 0.6 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YF8U14-C60VA3XLEAX	2145852

	Brief description	Type	Part no.
	<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> 1 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YF8U14-010VA3XLEAX	2145853
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, angled, 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> 0.6 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YG8U14-C60VA3XLEAX	2145854
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, angled, 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> 3 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YG8U14-030VA3XLEAX	2145857
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, angled, 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> 1 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YG8U14-010VA3XLEAX	2145855



## SICK AT A GLANCE

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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.”

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