



# MZ2Q-FTZPS-KQ0

MZ2Q-T

CYLINDER SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	part no.
MZ2Q-FTZPS-KQ0	1041323

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



### Detailed technical data

#### Features

<b>Cylinder type</b>	T-slot
<b>Detection zone</b>	0 mm ... 50 mm
<b>Cylinder types with adapter</b>	Profile cylinder Tie rod cylinder Round body cylinder Dovetail groove cylinder SMC rail CDQ2 SMC rail ECDQ2
<b>Housing length</b>	40 mm
<b>Switching output</b>	2 x PNP
<b>Output function</b>	2 x N/O contact
<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. 25 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 M12, 4-pin, with knurled nut, 0.3 m
<b>Connection type Detail</b>	
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> 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

### Certificates

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>cULus certificate</b>	✓

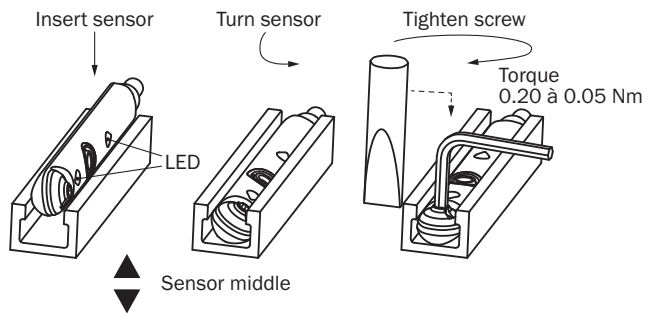
### Classifications

<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

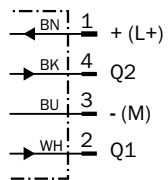
<b>ECLASS 10.0</b>	27270104
<b>ECLASS 11.0</b>	27270104
<b>ECLASS 12.0</b>	27274301
<b>ETIM 5.0</b>	EC002544
<b>ETIM 6.0</b>	EC002544
<b>ETIM 7.0</b>	EC002544
<b>ETIM 8.0</b>	EC002544
<b>UNSPSC 16.0901</b>	39122230

### Installation note

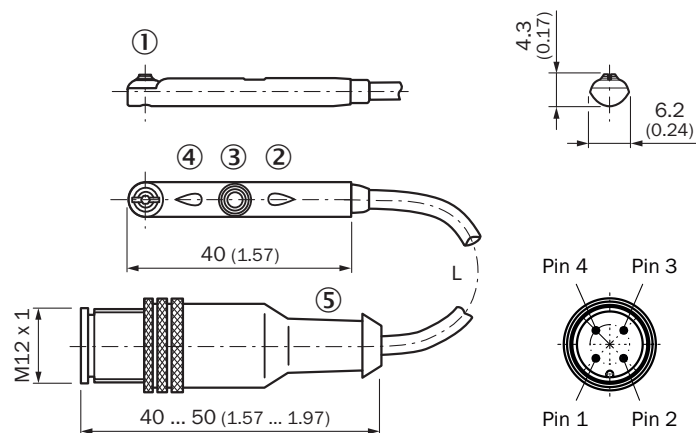
Use the enclosed Teach-in-tool!  
See operating instructions.



### Connection diagram Cd-032



Dimensional drawing Cable with connector M12, with knurled nut



Dimensions in mm (inch)






- ① Fixing screw SW 1.5
- ② Display LED
- ③ Teach-in button
- ④ Display LED
- ⑤ Connection

Part no.	Type	L	Number of cores
1041323	MZ2Q-FTZPS-KQ0	300 mm	4
1042228	MZ2Q-TSLPSKQ0	300 mm	4
1062172	MZ2Q-TFSPSKQD	800 mm	4


### Recommended accessories

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

	Brief description	Type	part no.
<b>Mounting systems</b>			
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for integrated profile cylinder/tie-rod cylinder</li> <li><b>Material:</b> Zinc diecast</li> <li><b>Details:</b> Zinc diecast</li> <li><b>Items supplied:</b> Mounting hardware included</li> </ul>	BEF-KHZ-PT1	2022702
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for cylinder with dovetail slot</li> <li><b>Material:</b> Aluminum</li> <li><b>Details:</b> Aluminum</li> <li><b>Items supplied:</b> Without mounting hardware</li> </ul>	BEF-KHZ-ST1	2022703
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for mounting on SMC rails ECDQ2 (T-slot)</li> <li><b>Material:</b> Aluminum</li> <li><b>Details:</b> Aluminum</li> <li><b>Items supplied:</b> Without mounting hardware</li> </ul>	BEF-KHZ-TT1	2046439
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for mounting on SMC rails CDQ2 (T-slot)</li> <li><b>Material:</b> Aluminum</li> <li><b>Details:</b> Aluminum</li> <li><b>Items supplied:</b> Without mounting hardware</li> </ul>	BEF-KHZ-TT2	2046440
	<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>Dimensions (W x H x L):</b> 22.4 m</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> T-slot</li> </ul>	BEF-KHZ-RT-12	2077681
	<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>Dimensions (W x H x L):</b> 26.6 m</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> T-slot</li> </ul>	BEF-KHZ-RT-16	2077680
	<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>Dimensions (W x H x L):</b> 30.6 m</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> T-slot</li> </ul>	BEF-KHZ-RT-20	2077679
	<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>Dimensions (W x H x L):</b> 35.7 m</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> T-slot</li> </ul>	BEF-KHZ-RT-25	2077678
	<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>Dimensions (W x H x L):</b> 42.9 m</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> T-slot</li> </ul>	BEF-KHZ-RT-32	2077677
	<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>Dimensions (W x H x L):</b> 50.9 m</li> <li><b>Material:</b> Plastic, Aluminum</li> <li><b>Details:</b> Plastic, Aluminum</li> <li><b>Packing unit:</b> 1 piece</li> </ul>	BEF-KHZ-RT-40	2077676

	Brief description	Type	part no.
	<ul style="list-style-type: none"> <li>• <b>Suitable for:</b> T-slot</li> <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>Dimensions (W x H x L):</b> 61.8 mm</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> T-slot</li> </ul>	BEF-KHZ-RT-50	2077675
	<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>Dimensions (W x H x L):</b> 73.9 mm</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> T-slot</li> </ul>	BEF-KHZ-RT-63	2077674
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 8 mm ... 25 mm, ambient temperature min -30 °C max 80 °C</li> <li>• <b>Material:</b> Stainless steel, Zinc cast</li> <li>• <b>Details:</b> Stainless steel, Zinc cast</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> T-slot</li> </ul>	BEF-KHZ-RT1-25	2077682
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 8 mm ... 63 mm, ambient temperature min -30 °C max 80 °C</li> <li>• <b>Material:</b> Stainless steel, Zinc cast</li> <li>• <b>Details:</b> Stainless steel, Zinc cast</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> T-slot</li> </ul>	BEF-KHZ-RT1-63	2077683
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Mounting bracket on round body cylinder with piston diameter of 8 mm ... 130 mm, ambient temperature min -30 °C max 80 °C</li> <li>• <b>Material:</b> Stainless steel, Zinc cast</li> <li>• <b>Details:</b> Stainless steel, Zinc cast</li> <li>• <b>Packing unit:</b> 1 piece</li> <li>• <b>Suitable for:</b> T-slot</li> </ul>	BEF-KHZ-RT1-130	2077684

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> <li><b>Description:</b> Unshielded</li> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> </ul>	DOS-1204-G	6007302
	<ul style="list-style-type: none"> <li><b>Description:</b> Unshielded</li> <li><b>Connection type head A:</b> Female connector, M12, 4-pin, angled, A-coded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> </ul>	DOS-1204-W	6007303
	<ul style="list-style-type: none"> <li><b>Description:</b> Unshielded</li> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, A-coded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> </ul>	STE-1204-G	6009932
	<ul style="list-style-type: none"> <li><b>Description:</b> Unshielded</li> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, angled, A-coded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm<sup>2</sup></li> </ul>	STE-1204-W	6022084
	<ul style="list-style-type: none"> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Connection type head A:</b> Female connector, M12, 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, PUR, halogen-free</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A14-C60UB3XLEAX	2145654
	<ul style="list-style-type: none"> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Connection type head A:</b> Female connector, M12, 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, PUR, halogen-free</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A14-010UB3XLEAX	2145655
	<ul style="list-style-type: none"> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Connection type head A:</b> Female connector, M12, 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> 3 m, 4-wire, PUR, halogen-free</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A14-030UB3XLEAX	2145656
	<ul style="list-style-type: none"> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Connection type head A:</b> Female connector, M12, 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, PUR, halogen-free</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YG2A14-C60UB3XLEAX	2145657
	<ul style="list-style-type: none"> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Connection type head A:</b> Female connector, M12, 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, PUR, halogen-free</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YG2A14-010UB3XLEAX	2145658
	<ul style="list-style-type: none"> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Connection type head A:</b> Female connector, M12, 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, PUR, halogen-free</li> <li><b>Note:</b> Only suitable for PNP sensors</li> <li><b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YI2A14-C60UB3XLEAX	2145696
	<ul style="list-style-type: none"> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Connection type head A:</b> Female connector, M12, 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, PUR, halogen-free</li> <li><b>Note:</b> Only suitable for PNP sensors</li> </ul>	YI2A14-030UB3XLEAX	2145698

	Brief description	Type	part no.
	<ul style="list-style-type: none"> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection type head A:</b> Female connector, M12, 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, PUR, halogen-free</li> <li>• <b>Note:</b> Only suitable for PNP sensors</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	Y12A14-010UB3XLEAX	2145697

## 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)