



# IQ40-20BPSKC0S

IQG

INDUCTIVE PROXIMITY SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
IQ40-20BPSKC0S	1071858

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



### Detailed technical data

#### Features

<b>Housing</b>	Rectangular
<b>Housing</b>	Standard design
<b>Dimensions (W x H x D)</b>	40 mm x 40 mm x 132 mm
<b>Sensing range <math>S_n</math></b>	20 mm
<b>Safe sensing range <math>S_a</math></b>	16.2 mm
<b>Installation type</b>	Flush
<b>Switching frequency</b>	150 Hz
<b>Connection type</b>	Male connector M12, 4-pin
<b>Switching output</b>	PNP
<b>Output function</b>	NO
<b>Electrical wiring</b>	DC 3-wire
<b>Enclosure rating</b>	IP67, IP68, IP69K
<b>Special applications</b>	Difficult application conditions

#### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC
<b>Ripple</b>	$\leq 10 V_{pp}^{1)}$
<b>Voltage drop</b>	$\leq 2 V$
<b>Time delay before availability</b>	$\leq 50 ms$
<b>Hysteresis</b>	3 % ... 15 % <sup>2)</sup>
<b>Reproducibility</b>	$\leq 2 \%$
<b>Temperature drift (of <math>S_r</math>)</b>	$\pm 10 \%$
<b>Continuous current <math>I_a</math></b>	$\leq 200 mA$

<sup>1)</sup> Of  $U_b$ .

<sup>2)</sup> Of  $S_r$ .

<sup>3)</sup> Reference voltage: 50 V DC.

<b>No load current</b>	12.5 mA
<b>Short-circuit protection</b>	✓
<b>Power-up pulse protection</b>	✓
<b>Shock and vibration resistance</b>	30 g, 11 ms / 10 ... 55 Hz, 1 mm
<b>Ambient operating temperature</b>	-25 °C ... +85 °C
<b>Ambient temperature, storage</b>	-40 °C ... +85 °C
<b>Housing material</b>	Plastic, PA 66
<b>Sensing face material</b>	Plastic, PA 66
<b>Tightening torque, max.</b>	1.8 Nm
<b>Protection class</b>	II <sup>3)</sup>
<b>UL File No.</b>	E348498

<sup>1)</sup> Of Ub.

<sup>2)</sup> Of S<sub>r</sub>.

<sup>3)</sup> Reference voltage: 50 V DC.

### Safety-related parameters

<b>MTTF<sub>D</sub></b>	1,125 years
<b>DC<sub>avg</sub></b>	0 %
<b>T<sub>M</sub> (mission time)</b>	20 years

### Reduction factors

<b>Note</b>	The values are reference values which may vary
<b>Stainless steel (V2A, 304)</b>	Approx. 0.71
<b>Aluminum (Al)</b>	Approx. 0.3
<b>Copper (Cu)</b>	Approx. 0.25
<b>Brass (Br)</b>	Approx. 0.36

### Installation note

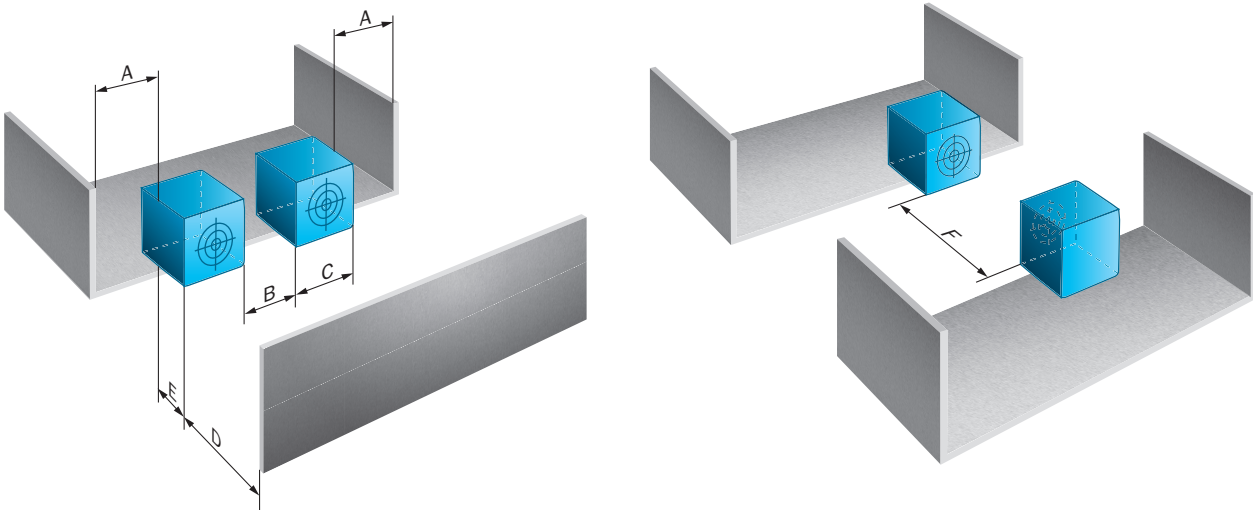
<b>Remark</b>	Associated graphic see "Installation"
<b>A</b>	0 mm
<b>B</b>	40 mm
<b>C</b>	40 mm
<b>D</b>	60 mm
<b>E</b>	0 mm
<b>F</b>	70 mm

### Classifications

<b>ECLASS 5.0</b>	27270101
<b>ECLASS 5.1.4</b>	27270101
<b>ECLASS 6.0</b>	27270101
<b>ECLASS 6.2</b>	27270101
<b>ECLASS 7.0</b>	27270101
<b>ECLASS 8.0</b>	27270101
<b>ECLASS 8.1</b>	27270101

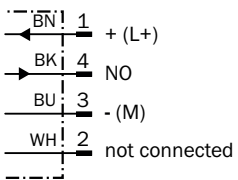
<b>ECLASS 9.0</b>	27270101
<b>ECLASS 10.0</b>	27270101
<b>ECLASS 11.0</b>	27270101
<b>ECLASS 12.0</b>	27274001
<b>ETIM 5.0</b>	EC002714
<b>ETIM 6.0</b>	EC002714
<b>ETIM 7.0</b>	EC002714
<b>ETIM 8.0</b>	EC002714
<b>UNSPSC 16.0901</b>	39122230

Installation note

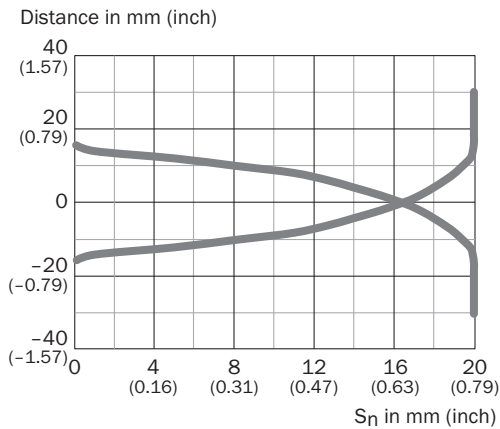


Connection diagram

Cd-011

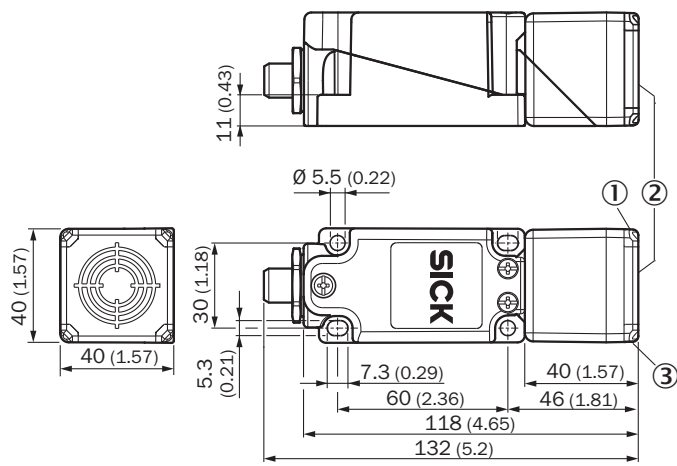


## Response diagram



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


IQG Standard, connector M12






- ① LED output state, yellow
- ② Sensing face
- ③ Operational status LED, green

## Recommended accessories

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

	Brief description	Type	Part no.
Others			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded, Head A: female connector, M12, 4-pin, straight, unshielded, for power supply, for cable diameter 4 mm ... 6 mm Head B: -</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

	Brief description	Type	Part no.
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 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> ≤ 0.75 mm<sup>2</sup></li> </ul>	STE-1204-G	6009932
	<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> 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>	YF2A14-050VB3XLEAX	2096235
	<ul style="list-style-type: none"> <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> 5 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul>	YG2A14-050VB3XLEAX	2095897

## 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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