

IQ40-20BDSKK0S

IQG

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
IQ40-20BDSKK0S	1088282

Other models and accessories → www.sick.com/IQG



Detailed technical data

Features

Housing	Rectangular
Housing	Standard design
Dimensions (W x H x D)	40 mm x 40 mm x 118 mm
Sensing range S_n	20 mm
Safe sensing range S_a	16.2 mm
Installation type	Flush
Switching frequency	150 Hz
Connection type	Cable gland
Output function	NO
Electrical wiring	DC 2-wire
Enclosure rating	IP67, IP68, IP69K
Special applications	Difficult application conditions

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	$\leq 10 V_{pp}^{1)}$
Voltage drop	$\leq 4 V^{2)}$ $\leq 4.5 V^{3)}$
Time delay before availability	< 100 ms
Hysteresis	5 % ... 15 % ⁴⁾
Reproducibility	$\leq 2 \%^{5)}$

¹⁾ Of U_b .

²⁾ At $I_a = 30 \text{ mA}$.

³⁾ At $I_a \text{ max.}$

⁴⁾ Of S_r .

⁵⁾ Supply voltage U_b and constant ambient temperature T_a .

⁶⁾ Reference voltage: 50 V DC.

Temperature drift (of S_r)	± 10 %
Continuous current I_a	≤ 100 mA
Cable gland clamping area	M20 1.5
Wire size	≤ 2.5 mm ²
Short-circuit protection	✓
Power-up pulse protection	✓
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	-25 °C ... +85 °C
Ambient temperature, storage	-40 °C ... +85 °C
Housing material	Plastic, PA 66
Sensing face material	Plastic, PA 66
Tightening torque, max.	1.8 Nm
Protection class	II ⁶⁾
UL File No.	E348498

1) Of U_B.

2) At I_a = 30 mA.

3) At I_a max.

4) Of S_r.

5) Supply voltage U_B and constant ambient temperature T_a.

6) Reference voltage: 50 V DC.

Safety-related parameters

MTTF_D	1,125 years
DC_{avg}	0 %
T_M (mission time)	20 years

Reduction factors

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	Approx. 0.7
Aluminum (Al)	Approx. 0.3
Copper (Cu)	Approx. 0.3
Brass (Br)	Approx. 0.4

Installation note

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

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓

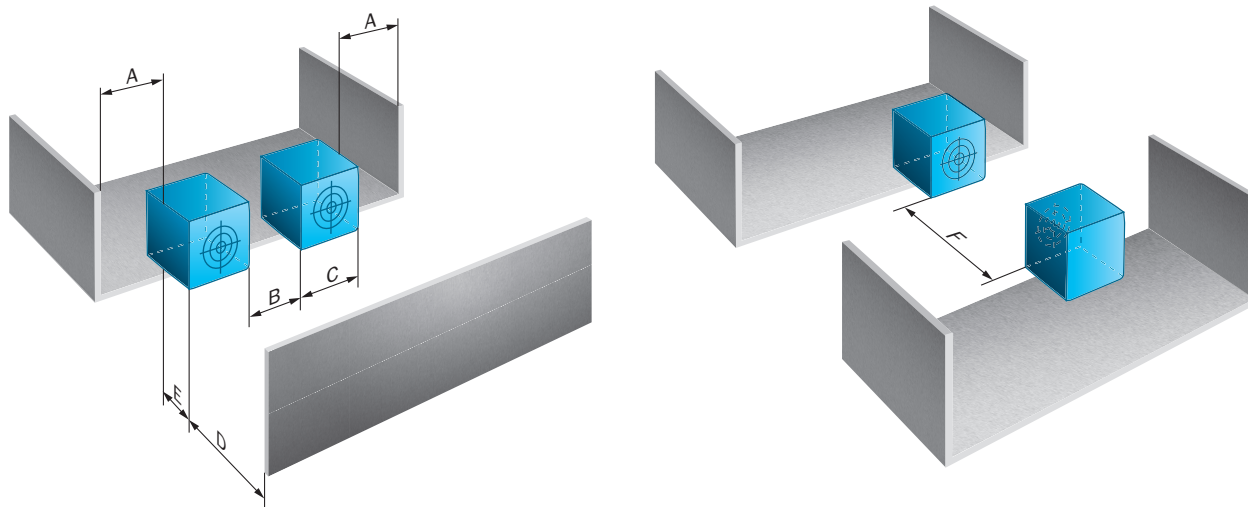
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

Classifications

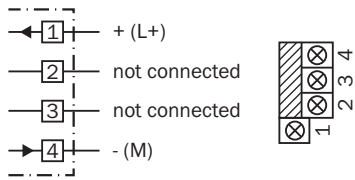
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ECLASS 6.0	27270101
ECLASS 6.2	27270101
ECLASS 7.0	27270101
ECLASS 8.0	27270101
ECLASS 8.1	27270101
ECLASS 9.0	27270101
ECLASS 10.0	27270101
ECLASS 11.0	27270101
ECLASS 12.0	27274001
ETIM 5.0	EC002714
ETIM 6.0	EC002714
ETIM 7.0	EC002714
ETIM 8.0	EC002714
UNSPSC 16.0901	39122230

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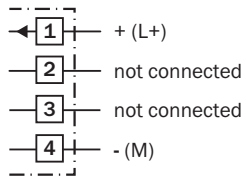
Installation note



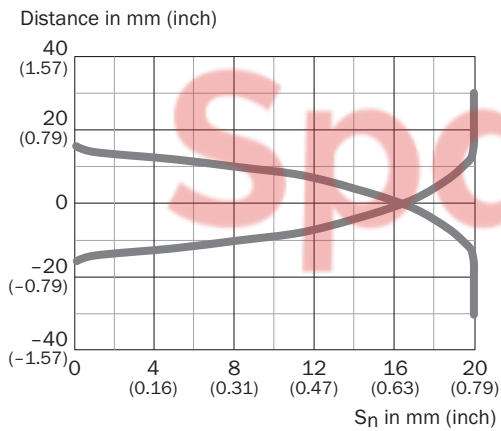
Connection diagram Cd-441



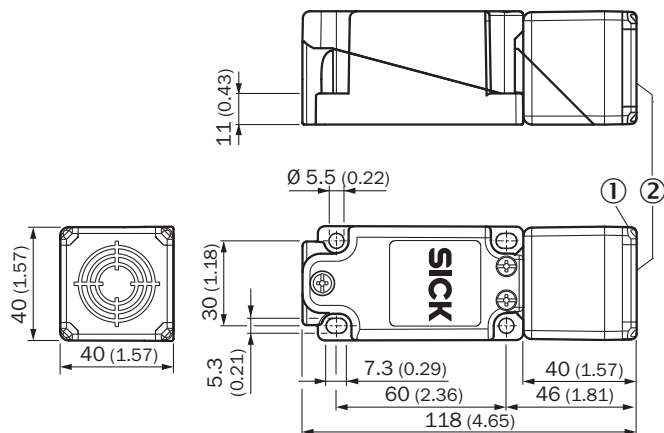
Connection diagram Cd-437



Response diagram



Dimensional drawing IQ40-xxxDxxKxS



- Dimensions in mm (inch)
 ① LED output state, yellow
 ② Sensing face

Recommended accessories

Other models and accessories → www.sick.com/IQG

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² 	DOS-1204-G	6007302
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, straight, A-coded • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² 	STE-1204-G	6009932
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Untaminated zones 	YF2A14-050VB3XLEAX	2096235
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Untaminated zones 	YG2A14-050VB3XLEAX	2095897
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Untaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A14-050UB3XLEAX	2095608

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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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