Data sheet

IQ40-20BNPKK0S

IQG

INDUCTIVE PROXIMITY SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	part no.
IQ40-20BNPKK0S	1071861

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
Switching output	NPN
Switching output detail	NPN
Output function	Complementary
Electrical wiring	DC 4-wire
Enclosure rating	IP67, IP68, IP69K
Special applications	Difficult application conditions

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
Ripple	≤ 10 V_{pp} [1]
Voltage drop	≤ 2 V
Time delay before availability	≤ 50 ms
Hysteresis	3 % ... 15 % [2]
Reproducibility	≤ 2 %
Temperature drift (of S_r)	± 10 %

[1] Of Ub.
[2] Of S_r.
[3] Reference voltage: 50 V DC.

Continuous current I_a	≤ 200 mA
No load current	12.5 mA
Cable gland clamping area	M20 1.5
Wire size	≤ 2.5 mm²
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 [3]
UL File No.	E348498

[1] Of Ub.
[2] Of S_r.
[3] 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. 0.71
Aluminum (Al)	Approx. 0.3
Copper (Cu)	Approx. 0.25
Brass (Br)	Approx. 0.36

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

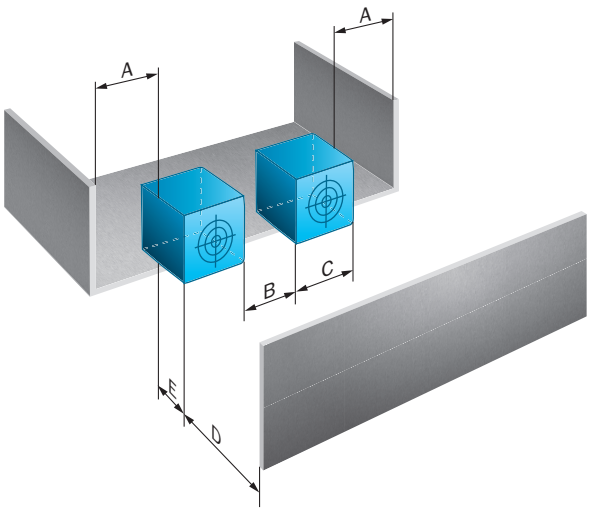
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓

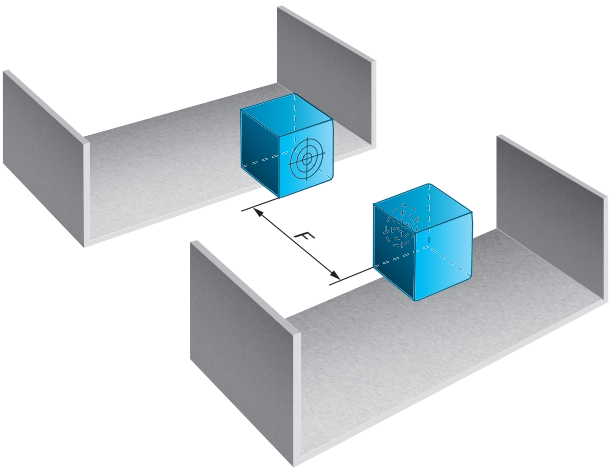
China RoHS	✓
cULus certificate	✓

Classifications

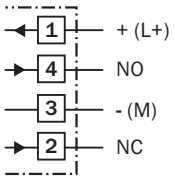
ECLASS 5.0	27270101
ECLASS 5.1.4	27270101
ECLASS 6.0	27270101
ECLASS 6.2	27270101
ECLASS 7.0	27270101
ECLASS 8.0	27270101
ECLASS 8.1	27270101
ECLASS 9.0	27270101
ECLASS 10.0	27270101
ECLASS 11.0	27270101
ECLASS 12.0	27274001
ETIM 5.0	EC002714
ETIM 6.0	EC002714
ETIM 7.0	EC002714
ETIM 8.0	EC002714
UNSPSC 16.0901	39122230

Installation note

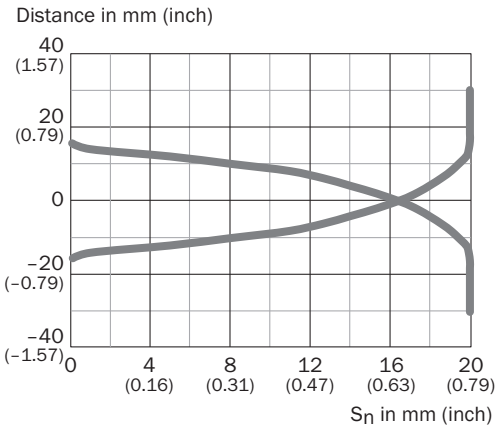




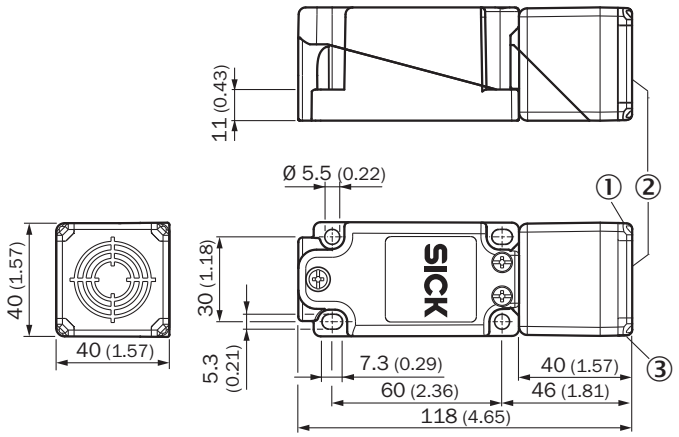
Connection diagram Cd-030



Response diagram



Dimensional drawing IQG Standard, cable gland



Dimensions in mm (inch)
① LED output state, yellow
② Sensing face
③ operational status LED, green

Recommended accessories

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

	Brief description	Type	part no.
connectors and cables			
	• **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
	• **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
	• **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, Uncontaminated zones	YF2A14-050VB3XLEAX	2096235
	• **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, Uncontaminated zones	YG2A14-050VB3XLEAX	2095897
	• **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:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A14-050UB3XLEAX	2095608

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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