



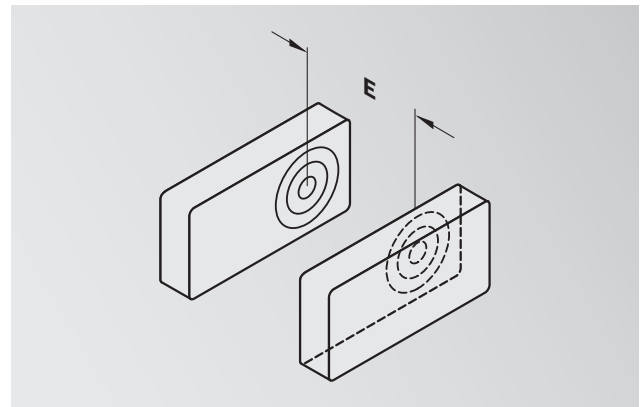
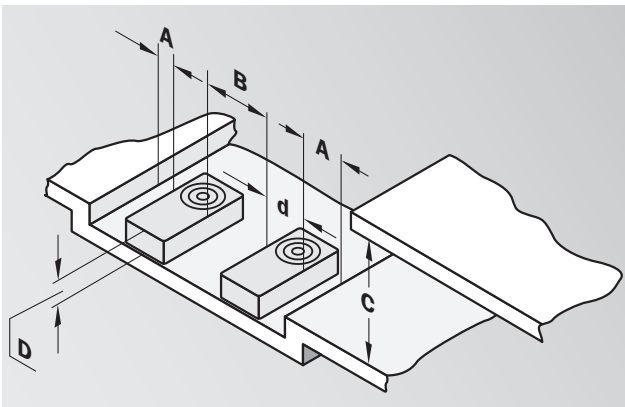
IQ Flat Inductive sensors

Compact and reliable

INSTALLATION NOTES

Flush installation into metal


Flush-mounted sensors can be recessed into metal so that they are level with the active surface. This gives them great protection against mechanical damage.



d = Outer dimensions of sensor

	A	B	C	d	D	E
6042017 IQ04-1B5PSKW2S	0 mm	16 mm	4,5 mm	8 mm	0 mm	24 mm
6042018 IQ04-1B5POKW2S	0 mm	16 mm	4,5 mm	8 mm	0 mm	24 mm
6042019 IQ04-1B5NSKW2S	0 mm	16 mm	4,5 mm	8 mm	0 mm	24 mm
6042020 IQ04-1B5NOKW2S	0 mm	16 mm	4,5 mm	8 mm	0 mm	24 mm
6042022 IQ06-03BPSKU2S	1,5 mm	20 mm	9 mm	10 mm	0 mm	30 mm
6042023 IQ06-03BPOKU2S	1,5 mm	20 mm	9 mm	10 mm	0 mm	30 mm
6042024 IQ06-03BNSKU2S	1,5 mm	20 mm	9 mm	10 mm	0 mm	30 mm
6042025 IQ06-03BNOKU2S	1,5 mm	20 mm	9 mm	10 mm	0 mm	30 mm
6042043 IQ20-07BPSDP0S	0 mm	20 mm	21 mm	20 mm	0 mm	60 mm
6042044 IQ20-07BNSDP0S	0 mm	20 mm	21 mm	20 mm	0 mm	60 mm
6042045 IQ20-07BPPDQ0S	0 mm	20 mm	21 mm	20 mm	0 mm	60 mm
6042046 IQ25-05BPSDU2S	0 mm	25 mm	15 mm	25 mm	0 mm	75 mm
6042047 IQ25-05BPPDU2S	0 mm	25 mm	15 mm	25 mm	0 mm	75 mm

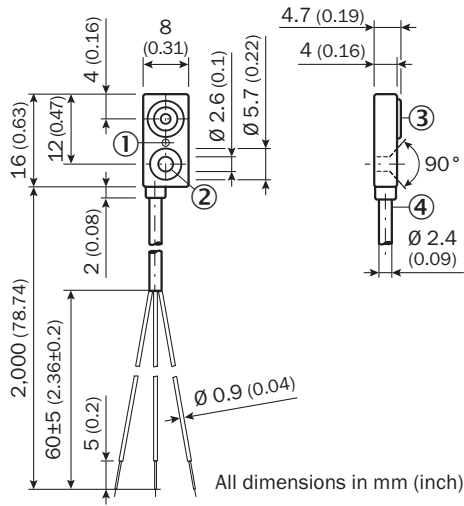
IQ04 inductive sensor

 **Sensing range**
1.5 mm

Inductive sensor

- Extremely flat
- Small and compact
- Can be fixed using a single screw

Dimensional drawing

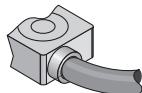


- ① LED function indicator, red
- ② Fixing hole
- ③ Active surface
- ④ Connection

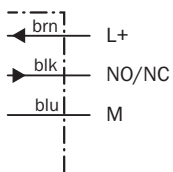


Connection type

- IQ04-1B5PSKW2S
- IQ04-1B5POKW2S
- IQ04-1B5NSKW2S
- IQ04-1B5NOKW2S



3 x 0.09 mm²



Technical specifications		IQ04-	1B5PS KW2S	1B5PO KW2S	1B5NS KW2S	1B5NO KW2S					
Sensing range S_n	1.5 mm										
Electrical configuration	DC3-wire										
Supply voltage V_S	DC 10 ... 30 V										
Ripple U_{pp}	Max. 10 % ¹⁾										
Voltage drop U_d	< 1.5 V ²⁾										
Power consumption	10 mA ³⁾										
Continuous current I_a	100 mA										
Hysteresis H, of s_r	Max. 15 %										
Repeatability R	1 % (U_b and T_a constant) ⁴⁾										
EMC	According to EN 60947-5-2										
Switching output	PNP										
	NPN										
Output function	Normally open										
	Normally closed										
Installation	Flush										
Connection type	Cable, PVC, 3-pin, 2 m										
Enclosure rating	IP 67 ⁵⁾										
Switching frequency	600 Hz										
Dimensions	8 x 16 x 4 mm ⁶⁾										
Short-circuit protection	✓										
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm										
Tightening torque	Max. 0.06 Nm										
Temperature drift of s_r	± 10 %										
Time delay before availability t_v	≤ 10 ms										
Approvals											
UL approval	cULus Listed										
Ambient temperature	-25 °C ... +70 °C										
Housing material	PA6-GF30										
Material of the active surface	PA6-GF30										

¹⁾ Of V_S

²⁾ At I_a max.

³⁾ Without load

⁴⁾ Of s_r

⁵⁾ According to EN 60529

⁶⁾ Width x height x depth

Reduction factor R_M


The following are reference values, which may vary from type to type:

Steel (FE360)	1
Stainless steel (V2A)	Approx. 0.7
Aluminum (Al)	Approx. 0.4
Copper (Cu)	Approx. 0.3
Brass (Ms)	Approx. 0.4

Ordering information

Model name	Part no.
IQ04-1B5PSKW2S	6042017
IQ04-1B5POKW2S	6042018
IQ04-1B5NSKW2S	6042019
IQ04-1B5NOKW2S	6042020

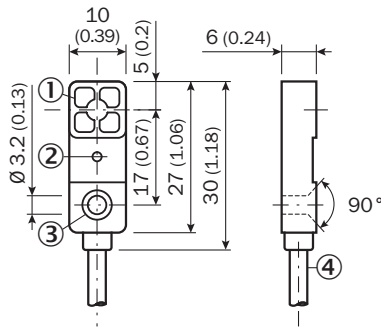
IQ06 inductive sensor

 **Sensing range
3 mm**

Inductive sensor

- Enhanced sensing range
- Extremely flat
- Small and compact
- Can be fixed using a single screw

Dimensional drawing



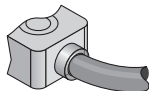
All dimensions in mm (inch)

- ① Active surface
- ② LED function indicator, red
- ③ Fixing hole
- ④ Connection

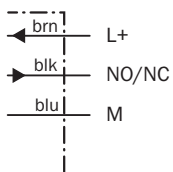


Connection type

- IQ06-03BPSKU2S
- IQ06-03BP0KU2S
- IQ06-03BNSKU2S
- IQ06-03BN0KU2S



3 x 0.14 mm²



Technical specifications		IQ06-	03BPS KU2S	03BPO KU2S	03BNS KU2S	03BNO KU2S					
Sensing range S_n	3 mm										
Electrical configuration	DC3-wire										
Supply voltage V_S	DC 10 ... 30 V										
Ripple U_{pp}	Max. 10 % ¹⁾										
Voltage drop U_d	Max. 1.5 V ²⁾										
Power consumption	10 mA ³⁾										
Continuous current I_a	100 mA										
Hysteresis H, of s_r	Max. 15 %										
Repeatability R	$\pm 1\%$ (U_b and T_a constant) ⁴⁾										
EMC	According to EN 60947-5-2										
Switching output	PNP										
	NPN										
Output function	Normally open										
	Normally closed										
Installation	Flush										
Connection type	Cable, PUR, 3-pin, 2 m										
Enclosure rating	IP 67 ⁵⁾										
Switching frequency	1,000 Hz										
Dimensions	10 x 30 x 6 mm ⁶⁾										
Short-circuit protection	✓										
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm										
Temperature drift of s_r	$\pm 10\%$										
Time delay before availability t_v	≤ 10 ms										
Tightening torque	Max. 0.06 Nm										
Approvals											
UL approval	cULus Listed										
Ambient temperature	-25 °C ... +70 °C										
Housing material	PA6-GF30										
Material of the active surface	PA6-GF30										

¹⁾ Of V_S

²⁾ At I_a max.

³⁾ Without load

⁴⁾ Of s_r

⁵⁾ According to EN 60529

⁶⁾ Width x height x depth

Reduction factor R_M


The following are reference values, which may vary from type to type:

Steel (FE360)	1
Stainless steel (V2A)	Approx. 0.7
Aluminum (Al)	Approx. 0.4
Copper (Cn)	Approx. 0.3
Brass (Ms)	Approx. 0.4

Ordering information

Model name	Part no.
IQ06-03BPSKU2S	6042022
IQ06-03BP0KU2S	6042023
IQ06-03BNSKU2S	6042024
IQ06-03BN0KU2S	6042025

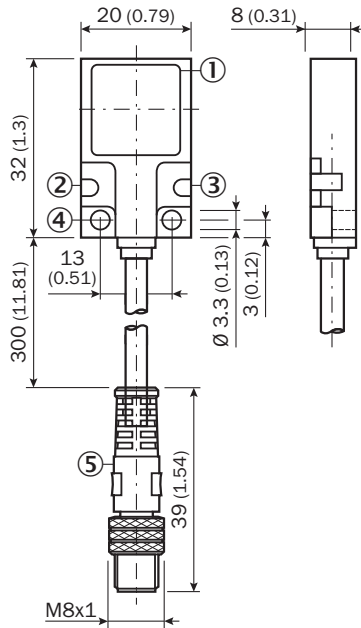
IQ20 inductive sensor

 **Sensing range**
7 mm

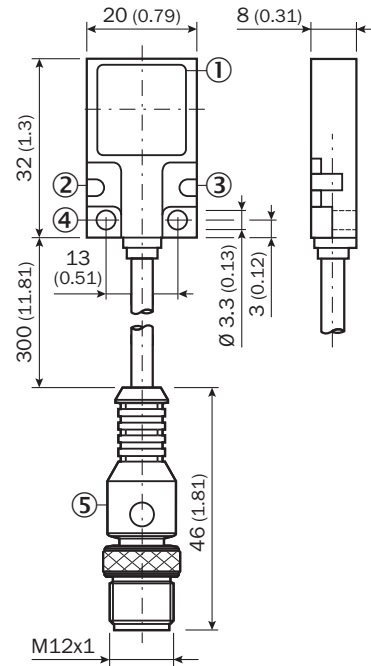
Inductive sensor

- Extremely flat
- Enhanced sensing range
- Metal housing

Dimensional drawing



All dimensions in mm (inch)



All dimensions in mm (inch)

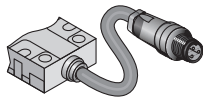
- ① Active surface
- ② LED operational status, green
- ③ LED status indicator, yellow
- ④ Fixing holes
- ⑤ Connection



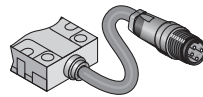
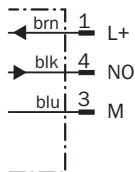
Connection type

IQ20-07BPSDPOS
IQ20-07BNSDPOS

IQ20-07BPPDQOS



M8, 3-pin with 300 mm cable



M12, 4-pin with 300 mm cable



Technical specifications		IQ20-	07BPS DPOS	07BNS DPOS	07BPP DQOS						
Sensing range S_n	7 mm										
Electrical configuration	DC3-wire										
	DC4-wire										
Supply voltage V_S	DC 10 ... 30 V										
Ripple U_{pp}	Max. 10 % ¹⁾										
Voltage drop U_d	Max. 2.5 V ²⁾										
Power consumption	15 mA ³⁾										
Continuous current I_a	200 mA										
Time delay before availability t_v	Max. 20 ms										
Hysteresis H, of s_r	Max. 15 %										
Repeatability R	5 % (U_b and T_a constant) ⁴⁾										
EMC	According to EN 60947-5-2										
Switching output	PNP										
	NPN										
Output function	Normally open										
	Complementary										
Installation	Flush										
Connection type	Cable with plug, M8, 3-pin, PUR, 0.3 m										
	Cable with plug, M12, 4-pin, PUR, 0.3 m										
Enclosure rating	IP 67 ⁵⁾										
Switching frequency	150 Hz										
Dimensions	20 x 32 x 8 mm ⁶⁾										
Short-circuit protection	✓										
Reverse polarity protection	✓										
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm										
Temperature drift of s_r	± 10 %										
Approvals											
UL approval	cULus Listed										
Ambient temperature	-25 °C ... +70 °C										
Housing material	GD Zn										
Material of the active surface	PA12										

¹⁾ Of V_S
²⁾ At I_a max.

³⁾ Without load
⁴⁾ Of s_r

⁵⁾ According to EN 60529
⁶⁾ Width x height x depth

Reduction factor R_M


The following are reference values, which may vary from type to type:

Steel (FE360)	1
Stainless steel (V2A)	Approx. 0.7
Aluminum (Al)	Approx. 0.4
Copper (Cn)	Approx. 0.3
Brass (Ms)	Approx. 0.4

Ordering information

Model name	Part no.
IQ20-07BPSDPOS	6042043
IQ20-07BNSDPOS	6042044
IQ20-07BPPDQOS	6042045

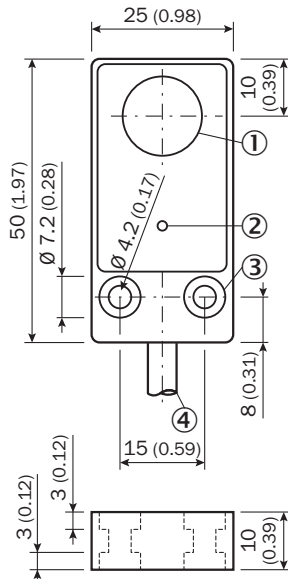
IQ25 inductive sensor

 **Sensing range
5 mm**

Inductive sensor

- Extremely flat
- Metal housing

Dimensional drawing



All dimensions in mm (inch)

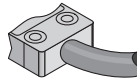
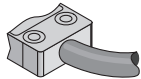
- ① Active surface
- ② LED function indicator, yellow
- ③ Fixing holes
- ④ Connection



Connection type

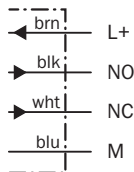
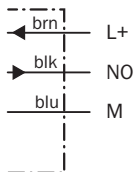
IQ25-05BPSDU2S

IQ25-05BPPDU2S



3 x 0.34 mm²

4 x 0.34 mm²



Technical specifications		IQ25-	05BPS DU2S	05BPP DU2S								
Sensing range S_n	5 mm											
Electrical configuration	DC3-wire											
	DC4-wire											
Supply voltage V_S	DC 10 ... 30 V											
Ripple U_{pp}	Max. 15 % ¹⁾											
Voltage drop U_d	Max. 2.5 V ²⁾											
Power consumption	25 mA ³⁾											
	32 mA ³⁾											
Continuous current I_a	200 mA											
Time delay before availability t_v	50 ms											
Hysteresis H, of s_r	Max. 15 %											
Repeatability R	5 % (U_b and T_a constant) ⁴⁾											
EMC	According to EN 60947-5-2											
Switching output	PNP											
Output function	Normally open											
	Complementary											
Installation	Flush											
Connection type	Cable, PUR, 2 m											
Enclosure rating	IP 67 ⁵⁾											
Switching frequency	500 Hz											
Dimensions	25 x 50 x 10 mm ⁶⁾											
Short-circuit protection	✓											
Reverse polarity protection	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Temperaturdrift	± 10 %											
Approvals												
UL approval	cULus Listed											
Ambient temperature	-25 °C ... +70 °C											
Housing material	Gd Al Si 12											
Material of the active surface	PBT											

¹⁾ Of V_S
²⁾ At I_a max.

³⁾ Without load
⁴⁾ Of s_r

⁵⁾ According to EN 60529
⁶⁾ Width x height x depth

Reduction factor R_M

The following are reference values, which may vary from type to type:

Steel (FE360)	1
Stainless steel (V2A)	Approx. 0.7
Aluminum (Al)	Approx. 0.4
Copper (Cn)	Approx. 0.3
Brass (Ms)	Approx. 0.4

Ordering information

Model name	Part no.
IQ25-05BPSDU2S	6042046
IQ25-05BPPDU2S	6042047

Australia

Phone +61 3 9497 4100
1800 33 48 02 - tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail sac@sick.com.br

Ceská Republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +852-2763 6966
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail kundenservice@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-999-0590
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 3358 1341
E-Mail support@sick.jp

Nederlands

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail austefjord@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

Republic of Korea

Phone +82-2 786 6321/4
E-Mail info@sickkorea.net

Republika Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7 495 775 05 34
E-Mail info@sick-automation.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail admin@sicksgp.com.sg

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886 2 2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 216 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 4 8865 878
E-Mail info@sick.ae

USA/Canada/México

Phone +1(952) 941-6780
1 800-325-7425 - tollfree
E-Mail info@sickusa.com

More representatives and agencies
in all major industrial nations at
www.sick.com