

IMA18-08NE1ZCOS

INDUCTIVE PROXIMITY SENSORS



Ordering information

Туре	part no.
IMA18-08NE1ZCOS	1104083

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

Illustration may differ



Detailed technical data

Features

Housing	Metric
Thread size	M18 x 1
Diameter	Ø 18 mm
Sensing range S _n	0 mm 8 mm
Installation type	Non-flush
Connection type	Male connector M12, 4-pin
Output function	Analog
Repeatability (T _a not constant)	0.3 mm ^{1) 2) 3)}
Repeatability (T _a constant)	± 0.1 mm
Enclosure rating	IP67 ⁴⁾
Special features	Analog output
Items supplied	Mounting nut, brass, nickel-plated (2x)

¹⁾ As per IEC 60947-5-2.

Mechanics/electronics

Supply voltage	15 V DC 30 V DC
Ripple	≤ 20 % ¹⁾

 $^{^{1)}}$ Of V_S .

²⁾ Ub = DC 20 V ... 30 V.

 $^{^{3)}}$ TA = 23 °C ± 5 °C.

⁴⁾ According to EN 60529: 2000-09.

²⁾ Without load.

 $^{^{3)}}$ -3 dB if S_n = 4 mm.

 $^{^{4)}}$ QA1 loaded, QA2 unloaded.

 $^{^{5)}}$ QA1 loaded, QA2 loaded: see temperature reduction.

Time delay before availability	≤ 30 ms
Temperature drift (of S _r)	≤ 10 %
No load current	\leq 12 mA $^{2)}$
Max. load resistance on Q _{A1}	≥ 2 kΩ
Max. load resistance on Q _{A2}	400 Ω Ub = 15 V
Output voltage Q _{A1}	s = 0 mm: 0 V -0/+0,6 V (23 °C) s = 4 mm: 5,6 V +/-0,6 V (23 °C) s = 8 mm: 10 V +/-0,6 V (23 °C)
Output current Q _{A2}	s = 0 mm: 4 mA +/-0.8 mA (23 °C) s = 8 mm: 20 mA +/-0,8 mA (23 °C)
Output voltage	0 V 10 V
Output current	4 mA 20 mA
Bandwidth	500 Hz ³⁾
Short-circuit protection	√
Ambient operating temperature	-25 °C +70 °C ^{4) 5)}
Housing material	Brass, chromium-plated
Sensing face material	Plastic
Housing length	69 mm
Thread length	42 mm
Tightening torque, max.	≤ 40 Nm

 $^{^{1)}}$ Of V_{S} .

Safety-related parameters

MTTF _D	1,149 years
DC _{avg}	0 %
T _M (mission time)	20 years

Reduction factors

Note	The values are reference values which may vary
St37 steel (Fe)	1
Stainless steel (V2A, 304)	Approx. 0.8
Aluminum (AI)	Approx. 0.45
Copper (Cu)	Approx. 0.4
Brass (Br)	Approx. 0.4

Installation note

Remark	Associated graphic see "Installation"
Α	18 mm
В	36 mm
c	18 mm
D	24 mm

²⁾ Without load.

 $^{^{3)}}$ -3 dB if $S_n = 4$ mm.

⁴⁾ QA1 loaded, QA2 unloaded.

⁵⁾ QA1 loaded, QA2 loaded: see temperature reduction.

IMA18-08NE1ZCOS | IMA

INDUCTIVE PROXIMITY SENSORS

E	16 mm
F	64 mm

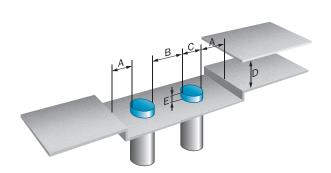
Certificates

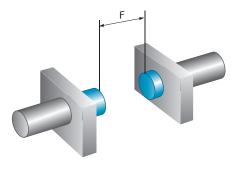
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

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 Non-flush installation

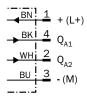




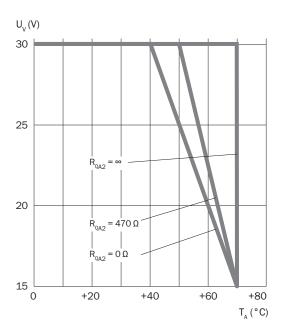
Connection type



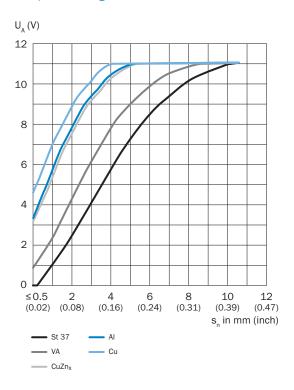
Connection diagram Cd-022



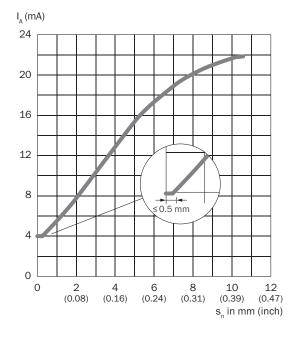
Temperature derating Temperature derating



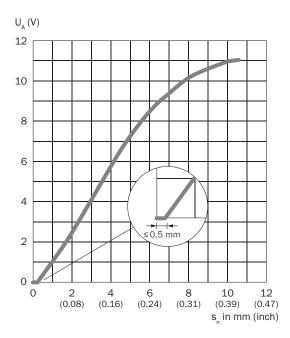
Response diagram Reduction factors



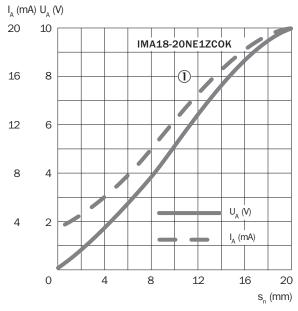
Response diagram Output current



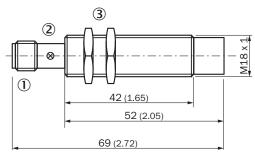
Response diagram Output voltage



Response diagram IMA18



Dimensional drawing IMA18 Standard, connector, non-flush



Dimensions in mm (inch)

- ① Connection
- ② Display LED
- 3 Fastening nuts (2x); width across 24, metal

Recommended accessories

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

	Brief description	Туре	part no.		
connectors ar	connectors and cables				
P	Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A14-020VB3XLEAX	2096234		
0	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: 2 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YG2A14-020VB3XLEAX	2095895		
3	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		
3	 Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YG2A14- C60VB3XLEAX	2145709		
1	 Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YG2A14-010VB3XLEAX	2145710		
P _O	Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A14- C60VB3XLEAX	2145707		
A CONTRACTOR OF THE PROPERTY O	Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A14-010VB3XLEAX	2145708		
No.	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		
	Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded	YF2A14- C60UB3XLEAX	2145654		

	Brief description	Туре	part no.
	Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation		
No.	 Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A14-010UB3XLEAX	2145655
	 Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 3 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YF2A14-030UB3XLEAX	2145656
3	 Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG2A14- C60UB3XLEAX	2145657
7	 Connection type head A: Female connector, M12, 4-pin, angled, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation 	YG2A14-010UB3XLEAX	2145658
Mounting syst	ems		
1	 Description: Clamping block for round sensors M18, with fixed stop Material: Plastic Details: Plastic (PA12), glass-fiber reinforced Items supplied: Mounting hardware included Suitable for: GR18, MH15V, V180-2, V18 	BEF-KHF-M18	2051482
1	 Description: Clamping block for round sensors M18, without fixed stop Material: Plastic Details: Plastic (PA12), glass-fiber reinforced Items supplied: Mounting hardware included Suitable for: GR18, MH15V, V180-2, V18 	BEF-KH-M18	2051481
40	 Description: Mounting bracket for M18 sensors Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware Suitable for: GR18, V180-2, V18, W15, Z1, Z2 	BEF-WN-M18	5308446
6	 Description: Plate N06 for universal clamp bracket, M18 Material: Steel, zinc diecast Details: Zinc plated steel (sheet), Zinc die cast (clamping bracket) Items supplied: Universal clamp (5322626), mounting hardware Usable for: MH15, MH15V, V180-2, V18V, W15, GR18, V18, V18 Laser, V12-2, SimpleSense, SureSense, M18 round sensors 	BEF-KHS-N06	2051612
0	 Description: Mounting bracket with ball-and-socket Material: Plastic Details: Plastic Items supplied: Mounting hardware included Suitable for: GR18, MH15V, V180-2, V18 	BEF-WN-M18-ST02	5312973
40	 Description: Mounting bracket for M18 sensors Material: Stainless steel Details: Stainless steel Items supplied: Without mounting hardware 	BEF-WN-M18N	5320947

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