

# IMA30-15NE1ZCOS

**INDUCTIVE PROXIMITY SENSORS** 



#### Ordering information

Туре	part no.
IMA30-15NE1ZCOS	1107307

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

Illustration may differ



#### Detailed technical data

#### **Features**

Housing	Metric
Thread size	M30 x 1.5
Diameter	Ø 30 mm
Sensing range S <sub>n</sub>	0 mm 15 mm
Installation type	Non-flush
Connection type	Male connector M12, 4-pin
Output function	Analog
Repeatability (T <sub>a</sub> not constant)	0.3 mm <sup>1) 2) 3)</sup>
Repeatability (T <sub>a</sub> constant)	± 0.1 mm
Enclosure rating	IP67 <sup>4)</sup>
Special features	Analog output
Items supplied	Mounting nut, brass, nickel-plated (2x)

<sup>&</sup>lt;sup>1)</sup> As per IEC 60947-5-2.

#### Mechanics/electronics

Supply voltage	15 V DC 30 V DC
Ripple	≤ 20 % <sup>1)</sup>

 $<sup>^{1)}</sup>$  Of  $V_S$ .

<sup>&</sup>lt;sup>2)</sup> Ub = DC 20 V ... 30 V.

 $<sup>^{3)}</sup>$  TA = 23 °C ± 5 °C.

<sup>&</sup>lt;sup>4)</sup> According to EN 60529: 2000-09.

<sup>&</sup>lt;sup>2)</sup> Without load.

 $<sup>^{3)}</sup>$  -3 dB if  $S_n$  = 7.5 mm.

<sup>&</sup>lt;sup>4)</sup> QA1 loaded, QA2 unloaded.

<sup>5)</sup> QA1 loaded, QA2 loaded: see temperature reduction.

Time delay before availability	≤ 30 ms
Temperature drift (of S <sub>r</sub> )	≤ 10 %
No load current	$\leq$ 12 mA $^{2)}$
Max. load resistance on Q <sub>A1</sub>	≥ 2 kΩ
Max. load resistance on Q <sub>A2</sub>	400 Ω Ub = 15 V
Output voltage Q <sub>A1</sub>	s = 0 mm: 0 V -0/+0,6 V (23 °C) s = 7,5 mm: 6,2 V +/-0,6 V (23 °C) s = 15 mm: 10 V +/-0,6 V (23 °C)
Output current Q <sub>A2</sub>	s = 0 mm: 4 mA +/-0.8 mA (23 °C) s = 15 mm: 20 mA +/-0,8 mA (23 °C)
Output voltage	0 V 10 V
Output current	4 mA 20 mA
Bandwidth	500 Hz <sup>3)</sup>
Short-circuit protection	✓
Ambient operating temperature	-25 °C +70 °C <sup>4) 5)</sup>
Housing material	Brass, chromium-plated
Sensing face material	Plastic
Housing length	71 mm
Thread length	41 mm

 $<sup>^{1)}</sup>$  Of  $V_S$ .

#### Safety-related parameters

MTTF <sub>D</sub>	1,149 years
DC <sub>avg</sub>	0 %
T <sub>M</sub> (mission time)	20 years

#### Installation note

Remark	Associated graphic see "Installation"
A	30 mm
В	60 mm
c	30 mm
D	45 mm
E	30 mm
F	120 mm

#### Certificates

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

<sup>&</sup>lt;sup>2)</sup> Without load.

 $<sup>^{3)}</sup>$  -3 dB if  $S_n = 7.5$  mm.

<sup>&</sup>lt;sup>4)</sup> QA1 loaded, QA2 unloaded.

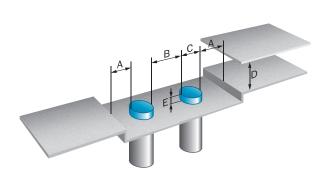
<sup>5)</sup> QA1 loaded, QA2 loaded: see temperature reduction.

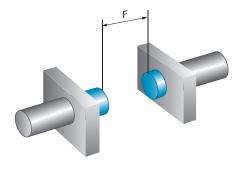
#### INDUCTIVE PROXIMITY SENSORS

#### 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





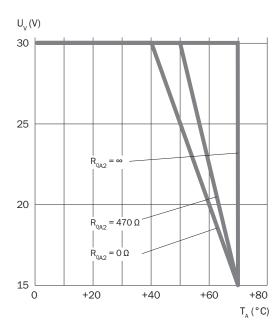
#### Connection type



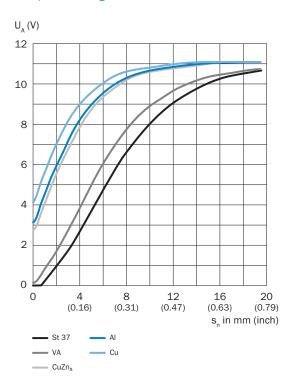
#### Connection diagram Cd-022



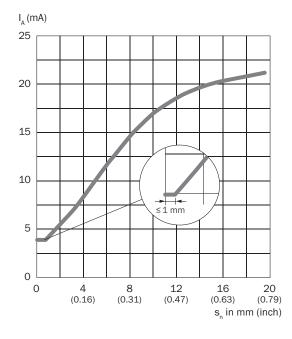
#### Temperature derating Temperature derating



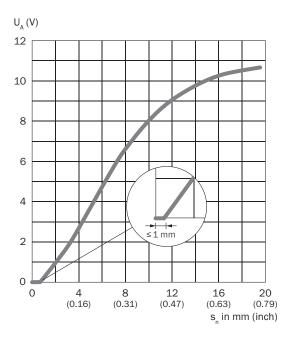
#### Response diagram Reduction factors



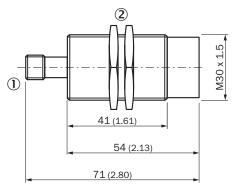
#### Response diagram Output current



#### Response diagram Output voltage



#### Dimensional drawing IMA30, connector, non-flush



Dimensions in mm (inch)

- ① Connection
- ② Fastening nuts (2x); width across 36, metal

#### Recommended accessories

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

	Brief description	Туре	part no.
connectors and cables			
Q.O.	<ul> <li>Connection type head A: Female connector, M12, 4-pin, straight, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 2 m, 4-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Zones with chemicals, Uncontaminated zones</li> </ul>	YF2A14-020VB3XLEAX	2096234
<b>P</b>	<ul> <li>Connection type head A: Female connector, M12, 4-pin, straight, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 5 m, 4-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Zones with chemicals, Uncontaminated zones</li> </ul>	YF2A14-050VB3XLEAX	2096235
1	<ul> <li>Connection type head A: Female connector, M12, 4-pin, angled, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 2 m, 4-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Zones with chemicals, Uncontaminated zones</li> </ul>	YG2A14-020VB3XLEAX	2095895
3	<ul> <li>Connection type head A: Female connector, M12, 4-pin, angled, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 5 m, 4-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Zones with chemicals, Uncontaminated zones</li> </ul>	YG2A14-050VB3XLEAX	2095897
3	<ul> <li>Connection type head A: Female connector, M12, 4-pin, angled, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 0.6 m, 4-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Zones with chemicals, Uncontaminated zones</li> </ul>	YG2A14- C60VB3XLEAX	2145709
3	<ul> <li>Connection type head A: Female connector, M12, 4-pin, angled, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 1 m, 4-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Zones with chemicals, Uncontaminated zones</li> </ul>	YG2A14-010VB3XLEAX	2145710
Q.	<ul> <li>Connection type head A: Female connector, M12, 4-pin, straight, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 0.6 m, 4-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Zones with chemicals, Uncontaminated zones</li> </ul>	YF2A14- C60VB3XLEAX	2145707
Q. CO	<ul> <li>Connection type head A: Female connector, M12, 4-pin, straight, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 1 m, 4-wire, PVC</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Zones with chemicals, Uncontaminated zones</li> </ul>	YF2A14-010VB3XLEAX	2145708
	<ul> <li>Connection type head A: Female connector, M12, 4-pin, straight, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 5 m, 4-wire, PUR, halogen-free</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A14-050UB3XLEAX	2095608
No.	<ul> <li>Connection type head A: Female connector, M12, 4-pin, straight, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 0.6 m, 4-wire, PUR, halogen-free</li> <li>Description: Sensor/actuator cable, unshielded</li> </ul>	YF2A14- C60UB3XLEAX	2145654

	Brief description	Туре	part no.
	Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation		
	<ul> <li>Connection type head A: Female connector, M12, 4-pin, straight, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 1 m, 4-wire, PUR, halogen-free</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A14-010UB3XLEAX	2145655
	<ul> <li>Connection type head A: Female connector, M12, 4-pin, straight, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 3 m, 4-wire, PUR, halogen-free</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF2A14-030UB3XLEAX	2145656
>	<ul> <li>Connection type head A: Female connector, M12, 4-pin, angled, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 0.6 m, 4-wire, PUR, halogen-free</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YG2A14- C60UB3XLEAX	2145657
>	<ul> <li>Connection type head A: Female connector, M12, 4-pin, angled, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 1 m, 4-wire, PUR, halogen-free</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YG2A14-010UB3XLEAX	2145658
Mounting syst	rems		
<b>(</b> 0)	<ul> <li>Description: Mounting bracket for M30 sensors</li> <li>Material: Steel</li> <li>Details: Steel, zinc coated</li> <li>Items supplied: Without mounting hardware</li> </ul>	BEF-WN-M30	5308445
0	<ul> <li>Description: Mounting plate for M30 sensors</li> <li>Material: Steel</li> <li>Details: Steel, zinc coated</li> <li>Items supplied: Without mounting hardware</li> </ul>	BEF-WG-M30	5321871

### 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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Contacts and other locations -www.sick.com

