

# ISD INDUCTIVE SENSOR

Zones 1, 2, 20, 21, 22

Full catalogue available on our website: [www.inpratex.com](http://www.inpratex.com)

## ATEX INSTRUMENTATION

## ZONES 1, 2 (gas) & 20, 21, 22 (dust)

The ATEX/IECEx certified inductive sensors of the IS Series in M30 are designed for the protection and / or monitoring of doors, machine flaps, robots. These inductive sensors are dirt-sensitive and can be used in almost all industrial areas. The sensors detect metals (e.g., St37). Thus, no magnets or other encodings are needed on the opposite side of the sensors. Due to the sensor construction, a bridging is possible.

Depending on the sensor type, switching distances of 2mm to 40mm (square version 80mm x 80mm) are possible. The downstream safety modules are freely selectable. Additional Ex-devices such as disconnect devices or Zener barriers are not required! The sensors have a CE marking, as well as the GS symbol (category 4 of personal protection) of the MMBG.



- Applicable for ex-areas 1, 2, 21, 22
- Safety integrity level (SIL) 3 according to IEC 61508
- Performance level (pl) e according to EN ISO 13489

Note: The end of the cable must be connected outside the hazardous locations.



EU-Type Examination Certificate

### ITEM REFERENCES

Designation:	Dimensions:	Wiring:	Item No.:														
ISD-10-B-GD		<table border="1"> <tr> <td>Wire number</td> <td>ISD-10-B-GD</td> </tr> <tr> <td>1</td> <td>+24VDC</td> </tr> <tr> <td>2</td> <td>0V</td> </tr> <tr> <td>3</td> <td>OSSD A1</td> </tr> <tr> <td>4</td> <td>OSSD A2</td> </tr> <tr> <td>yellow-green</td> <td>PE/PA</td> </tr> <tr> <td>white</td> <td>Cable shield</td> </tr> </table>	Wire number	ISD-10-B-GD	1	+24VDC	2	0V	3	OSSD A1	4	OSSD A2	yellow-green	PE/PA	white	Cable shield	9D0201
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### ACCESSORIES



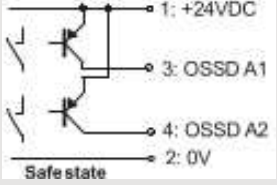
	- 2x nuts M30. (Optional 1x clamp)
Only ISN-10-B-GD, included	- 1x Safety lock device, mount at the cable connection, for locking the connection. - 1x Warning plate "Do not open/close when supply voltage connected", self-sealing, for gluing on the cable connector.
Only ISS/ISN-10-B(-GD), options	- 1x Protection cap for the sensor socket. - Single ended cordset, types RKTS 5-298/xx or RKWTH 5-298/xx, Lumberg, NOT INCLUDED. - Other cable lengths on request - ISD-10-B-GD-S223: Housing stainless steel 316ss. - IS*-10-B-GD-S299: Housing stainless steel 1.4404 (316L)

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## TECHNICAL SPECIFICATIONS

Marking:	 II 2G Ex db IIC T5 Gb  II 1/2D Ex ta/tb IIIC T100°C Da/Db IP67
Certificate:	EU-Type Examination Certificate
Housing:	M30, brass, nickel plated / Sensing area: Synthetic, PEEK mod.
Operating temperature:	-10°C to +50°C
Storage temperature range:	-45°C to +70°C
EMC, shock and vibration resistance:	According to EN 60947-5-2
Ingress protection:	IP67
Type:	SRP/CS - SREC, fail-safe inductive sensor PDDB, I1A30AP1
Performance Level (PL), EN 13849-1:	PL e
Safety category, EN 13849-1:	4
Safety integrity level, EN 62061:	SILCL 3
Safety-related reliability PFHd [1/h]:	2.47 x 10 <sup>-8</sup>
MTTFd [Years]:	100
DC/CCF/Cat.:	99% / 92 / 4
Installation method:	Embaddable (flush) mountable
Rated operating distance sn:	10mm, (on steel 37, (sn x 3)2 x 1mm), at non flush mounting, at EN 60947-2-5
Enable zone:	>=3mm ... <=8mm, (on steel 37, (30mm x 30mm x 1mm)
Hysteresis:	0.5-1.5mm
Safe switching off distance s(ar):	30mm
Repeatability:	<100um
Utilization category:	DC 13
Supply voltage Ue:	24VDC +-10% (Power supply type PELV according to EN 60204, item 6.4.2)
Absolute maximum supply voltage Um:	30VDC
Rated insulation voltage:	75VDC/50VAC
Current consumption:	35mA
Maximum power dissipation:	0.98W
Response time to safety request:	20ms
Power up delay time:	200ms
OSSD:	2 x PNP (A1 and A2)
Output voltage at 24 V:	Compatible with EN 61131-2 inputs type 1, 2, 3
Voltage drop:	< 2V, (70mA)
Current rating:	70mA
Short-circuit protection:	Yes
Display:	LED green (OSSD=ON), LED red (OSSD=OFF)
Connection cable:	4+PE x 0,5mm <sup>2</sup> , TPU jacket, shielded, leads numbering marked, diameter: 6.3mm, length: 6m
Socket:	NONE
Function and LED indication:	Object detected, LED green No object detected, LED red
Output with dynamic test function Object detected, Outputs switched ON	<p>2 x PNP-Outputs, Transistors open</p>  <p>1: +24VDC 3: OSSD A1 4: OSSD A2 2: 0V Safe state</p>

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INSTRUMENTATION