

# ISD INDUCTIVE SENSOR

Zones 1, 2, 21, 22

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

## ATEX INSTRUMENTATION

## ZONES 1, 2 (gas) & 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 and robots. These inductive sensors are dirt-sensitive and can be used in almost all industrial areas. The sensors detect metals (e.g., St37). Therefore no magnets or other encodings are needed on the opposite side of the sensors. Due to the sensor construction, a bridging is possible.

- Suitable for operation in Ex zones 1, 2, 21, 22 (gas and dust Ex)
- Performance level Plc, SIL 1, safety category 4
- PNP/NPN, analogue 0-10 V / 4-20 mA, fail-safe
- Switching distances from 2...40 mm



EU-Type Examination Certificate

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

### ITEM REFERENCES

Designation:	Material:	Dimensions:	Item No.:
ISD-10-B-GD-S162	Brass		9D0202
ISD-10-B-GD-S293	Stainless steel 316ss		9D0203

### TECHNICAL SPECIFICATIONS

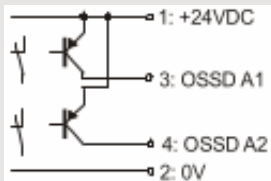
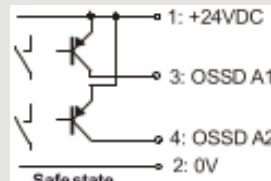
Marking:	II 2G Ex db IIC T5 Gb II 2D Ex tb IIIC T100°C Db IP67
Certificate:	EU-Type Examination Certificate
Housing:	M30 / Sensing area: Synthetic, PEEK mod.
Operating temperature:	-10°C to +50°C
Storage temperature range:	-45°C to +70°C
EMC, shock and vibration resistance:	According to EN 60947-5-2
Ingress protection:	IP67 according to EN 60529
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) <sup>2</sup> 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

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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:	ISD-10-B-GD-S162: 4+PE x 0,5mm², TPU jacket, shielded, leads numbering marked, diameter: 6.3mm, length: 6m ISD-10-B-GD-S293: 4 x 0,22mm², shielded, FEP/silicone rubber, leads color-marked, dia. 4,4mm, length: 6m	
Cable, minimum bending radius:	70mm	
Accessories:	2x nuts M30. (Optional 1x clamp)	
Function and LED indication:	Object detected, LED green   No object detected, LED red	
Output with dynamic test function Object detected, Outputs switched ON:	2 x PNP-Outputs, Transistors conducted	2 x PNP-Outputs, Transistors open
		

9



INSTRUMENTATION