

# Inductive sensors

## The metal detectors

### Cubic housings from from Page 612

- Variety of housing sizes for numerous applications
- Plastic or metal housing options
- Switching distances from 1.5 mm to 35 mm
- Numerous connection possibilities
- Flush, quasi-flush and non-flush mounting possibilities



Because of their functional principle, inductive sensors are only suitable for detecting metal objects. But they do this extremely reliably and are also very robust and resistant (e.g. regarding environmental factors), which makes them interesting for numerous industrial applications. They are mainly used wherever the detection of uniform movements is involved – for example as proximity switches for determining the position of transported machine parts such as saddles or hydraulic cylinders, for measuring rotary speeds on vehicle crankshafts, or as pulse generators for motor ignition.

Inductive sensors are extremely precise due to their high repeatability levels. Their simple design and uncomplicated commissioning ensure minimal downtimes. Whether in robotics, in assembly and handling, in factory automation or mechanical engineering: inductive sensors from SensoPart are reliable, require no maintenance, and offer versatile use thanks to the numerous housings and sizes available.

### TYPICAL SENSOPART

- Reliable detection of metallic objects
- Product variants for standard or three-fold switching distances
- Robust cylindrical or cuboid metal housing options
- Simple installation thanks to integrated metric threads
- Different designs for flush, quasi-flush and non-flush mounting
- Switching or analogue output options available
- NAMUR-compliant design on request

## Cylindrical housings

from Page 620

- Variety of housing sizes for numerous applications
- High switching frequency of up to 5 kHz
- Robust stainless steel designs
- With switching or analogue output options
- Highly pressure-resistant sensors for up to 800 bar
- Flush, quasi-flush and non-flush mounting possibilities
- Full-metal "see-through" sensors (metal face)
- Three-fold switching distance
- K-factor 1, switching distance independent of type of metal



### Inductive sensors with standard switching distance

Housing size	Part no.	Type code	Installation	Switching distance	Switching output	Connection type	Page
ø 3 mm	996-09390	IS 33-52	Flush	0.6 mm	PNP / NO	Cable, 3-wire	620
	996-09391	IS 33-51	Flush	0.6 mm	NPN / NO	Cable, 3-wire	620
	996-09444	ISN 44-20	Flush	0.8 mm	NAMUR	Cable, 2 m, 2-wire	621
ø 6.5 mm	996-09488	ISZ 46-02	Flush	1.5 mm	PNP / NO	Cable, 2 m, 3-wire	625
	996-09487	ISZ 46-01	Flush	1.5 mm	NPN / NO	Cable, 2 m, 3-wire	625
	996-50590	IS 46-12	Flush	1.5 mm	PNP / NO	Plug, M8x1, 3-wire	626
	996-50613	IS 46-11 T	Flush	1.5 mm	NPN / NO	Plug, M8x1, 3-wire	626
	996-09401	IS 46-02	Flush	1.5 mm	PNP / NO	Cable, 2 m, 3-wire	626
	996-50586	IS 56-12	Quasi-flush	3 mm	PNP / NO	Plug, M8x1, 3-pin	628
	996-50632	IS 56-11 T	Quasi-flush	3 mm	NPN / NO	Plug, M8x1, 3-pin	628
	996-09963	IS 56-42	Quasi-flush	3 mm	PNP / NO	Plug, M12x1, 4-pin	628
	996-50390	IS 56-41	Quasi-flush	3 mm	NPN / NO	Plug, M12x1, 4-pin	628
	996-09409	IS 56-02	Quasi-flush	3 mm	PNP / NO	Cable, 2 m, 3-wire	628
M4	996-09408	IS 56-01	Quasi-flush	3 mm	NPN / NO	Cable, 2 m, 3-wire	628
	996-09397	IS 34-52	Flush	0.6 mm	PNP / NO	Cable, 2 m, 3-wire	622
	996-09395	IS 34-51	Flush	0.6 mm	NPN / NO	Cable, 2 m, 3-wire	622
M5	996-51486	IT 4 BD-PSK3	Flush	1 mm	PNP / NO	Cable, 3-wire	623
	697-01004	IMT 5-0B8-NS-K3	Flush	0.8 mm	NPN / NO	Cable 2 m	624
	697-01005	IMT 5-0B8-PS-K3	Flush	0.8 mm	PNP / NO	Cable 2 m	624
	697-01006	IMT 5-0B8-NS-M3	Flush	0.8 mm	NPN / NO	M8 3-pin	624
M8	697-01007	IMT 5-0B8-PS-M3	Flush	0.8 mm	PNP / NO	M8 3-pin	624
	697-01008	IMT 8-1B5-NS-K3	Flush	1.5 mm	NPN / NO	Cable 2 m	630
	697-01009	IMT 8-1B5-PS-K3	Flush	1.5 mm	PNP / NO	Cable 2 m	630
	697-01010	IMT 8-1B5-NS-L4	Flush	1.5 mm	NPN / NO	M12 3-pin	630
	697-01011	IMT 8-1B5-PS-L4	Flush	1.5 mm	PNP / NO	M12 3-pin	630
	697-01012	IMT 8-2N-NS-K3	Non-flush	2 mm	NPN / NO	Cable 2 m	632
697-01013	IMT 8-2N-PS-K3	Non-flush	2 mm	PNP / NO	Cable 2 m	632	
697-01014	IMT 8-2N-NS-L4	Non-flush	2 mm	NPN / NO	M12 3-pin	632	

# Selection Table Inductive Sensors

Inductive sensors with standard switching distance							
Housing size	Part no.	Type code	Installation	Switching distance	Swichting output	Connection type	Page
M8	996-50624	IS 48-12T	Flush	1.5 mm	PNP / NO	Plug, M8x1, 3-pin	629
	996-50623	IS 48-11T	Flush	1.5 mm	NPN / NO	Plug, M8x1, 3-pin	629
	996-09405	IS 48-02	Flush	1.5 mm	PNP / NO	Cable, 2 m, 3-wire	629
	996-09404	IS 48-01	Flush	1.5 mm	NPN / NO	Cable, 2 m, 3-wire	629
	996-50587	IS 58-12T	Flush	3 mm	PNP / NO	Plug, M8x1, 3-pin	634
	996-50640	IS 58-11T	Flush	3 mm	NPN / NO	Plug, M8x1, 3-pin	634
	996-09965	IS 58-42	Flush	3 mm	PNP / NO	Plug, M8x1, 4-pin	634
	996-09964	IS 58-41	Flush	3 mm	NPN / NO	Plug, M8x1, 4-pin	634
	996-09413	IS 58-02	Flush	3 mm	PNP / NO	Cable, 2 m, 3-wire	634
	996-09412	IS 58-01	Flush	3 mm	NPN / NO	Cable, 2 m, 3-wire	634
	697-01015	IMT 8-2N-PS-L4	Non-flush	2 mm	PNP / NO	M12 3-pin	632
	M12	697-01016	IMT 12-2B-NS-K3	Flush	2 mm	NPN / NO	Cable 2 m
697-01017		IMT 12-2B-PS-K3	Flush	2 mm	PNP / NO	Cable 2 m	636
697-01018		IMT 12-2B-NS-L4	Flush	2 mm	NPN / NO	M12 3-pin	636
697-01019		IMT 12-2B-PS-L4	Flush	2 mm	PNP / NO	M12 3-pin	636
697-01020		IMT 12-4N-NS-K3	Non-flush	4 mm	NPN / NO	Cable 2 m	638
697-01021		IMT 12-4N-PS-K3	Non-flush	4 mm	PNP / NO	Cable 2 m	638
697-01022		IMT 12-4N-NS-L4	Non-flush	4 mm	NPN / NO	M12 3-pin	638
697-01023		IMT 12-4N-PS-L4	Non-flush	4 mm	PNP / NO	M12 3-pin	638
996-51479		IS 512-02 AI	Quasi-flush	6 mm	Analogue output 0 ... 10V / 4 ... 20 mA	Cable, 4-wire	657
M14		996-51193	IS 514-42	Flush	3 mm	PNP / NO	Plug, M12x1, 4-pin
M18	697-01024	IMT 18-5B-NS-K3	Flush	5 mm	NPN / NO	Cable 2 m	644
	697-01025	IMT 18-5B-PS-K3	Flush	5 mm	PNP / NO	Cable 2 m	644
	697-01026	IMT 18-5B-NS-L4	Flush	5 mm	NPN / NO	M12 3-pin	644
	697-01027	IMT 18-5B-PS-L4	Flush	5 mm	PNP / NO	M12 3-pin	644
	697-01028	IMT 18-8N-NS-K3	Non-flush	8 mm	NPN / NO	Cable 2 m	646
	697-01029	IMT 18-8N-PS-K3	Non-flush	8 mm	PNP / NO	Cable 2 m	646
	697-01030	IMT 18-8N-NS-L4	Non-flush	8 mm	NPN / NO	M12 3-pin	646
	697-01031	IMT 18-8N-PS-L4	Non-flush	8 mm	PNP / NO	M12 3-pin	646
M18	996-09435	IS 518-02 A	Quasi-flush	10 mm	Analogue output 0 ... 10V / 4 ... 20 mA	Cable, 4-wire	658
M30	697-01032	IMT 30-10B-NS-K3	Flush	10 mm	NPN / NO	Cable 2 m	651
	697-01033	IMT 30-10B-PS-K3	Flush	10 mm	PNP / NO	Cable 2 m	651
	697-01034	IMT 30-10B-NS-L4	Flush	10 mm	NPN / NO	M12 3-pin	651
	697-01035	IMT 30-10B-PS-L4	Flush	10 mm	PNP / NO	M12 3-pin	651
	697-01036	IMT 30-15N-NS-K3	Non-flush	15 mm	NPN / NO	Cable 2 m	652
	697-01037	IMT 30-15N-PS-K3	Non-flush	15 mm	PNP / NO	Cable 2 m	652
	697-01038	IMT 30-15N-NS-L4	Non-flush	15 mm	NPN / NO	M12 3-pin	652
	697-01039	IMT 30-15N-PS-L4	Non-flush	15 mm	PNP / NO	M12 3-pin	652

Inductive sensors with increased switching distance							
Housing size	Part no.	Type code	Installation	Switching distance	Swichting output	Connection type	Page
ø 6.5 mm	697-01040	IDT 6-2B-PS-K3	Flush	2 mm	PNP / NO	Cable 2 m	627
	697-01041	IDT 6-2B-NS-K3	Flush	2 mm	NPN / NO	Cable 2 m	627
	697-01042	IDT 6-2B-PS-M3	Flush	2 mm	PNP / NO	M8 3-pin	627
	697-01043	IDT 6-2B-NS-M3	Flush	2 mm	NPN / NO	M8 3-pin	627
M8	697-01044	IMT 8-2B-PS-K3	Flush	2 mm	PNP / NO	Cable 2 m	632
	996-51456	IS 58-14-S	Non-flush	6 mm	PNP / NO	Plug, M8x1, 3-pin	635
	996-51470	IS 58-13-S	Non-flush	6 mm	NPN / NO	Plug, M8x1, 3-pin	635
	996-51460	IS 58-44-S	Non-flush	6 mm	PNP / NO	Plug, M8x1, 4-pin	635
	996-51463	IS 58-43-S	Non-flush	6 mm	NPN / NO	Plug, M8x1, 4-pin	635
	996-51461	IS 58-04-S	Non-flush	6 mm	PNP / NO	Cable, 3-wire	635
	996-51465	IS 58-03-S	Non-flush	6 mm	NPN / NO	Cabel, 3-wire	635
	697-01045	IMT 8-2B-NS-K3	Flush	2 mm	NPN / NO	Cable 2 m	632
	697-01046	IMT 8-2B-PS-M3	Flush	2 mm	PNP / NO	M8 3-pin	632
	697-01047	IMT 8-2B-NS-M3	Flush	2 mm	NPN / NO	M8 3-pin	632
M12	996-51480	IT 12 BM-PSL4	Flush	6 mm	PNP / NO	Plug, M12x1, 4-pin	640
	996-51481	IT 12 NBM-PSL4	Non-flush	10 mm	PNP / NO	Plug, M12x1, 4-pin	640
	996-09969	IS 512-42	Quasi-flush	6 mm	PNP / NO	Plug, M12x1, 4-pin	641
	996-09968	IS 512-41	Quasi-flush	6 mm	NPN / NO	Plug, M12x1, 4-pin	641
	996-09421	IS 512-02	Quasi-flush	6 mm	PNP / NO	Cable, 2 m, 3-wire	641

**Inductive sensors with increased switching distance**

Housing size	Part no.	Type code	Installation	Switching distance	Switching output	Connection type	Page	
M12	996-09420	IS 512-01	Quasi-flush	6 mm	NPN / NO	Cable, 2 m, 3-wire	641	
	996-51449	IS 512-44-S	Non-flush	10 mm	PNP / NO	Plug, M12x1, 4-pin	642	
	996-09970	IS 512-43	Non-flush	10 mm	NPN / NO	Plug, M12x1, 4-pin	642	
	996-51458	IS 512-04-S	Non-flush	10 mm	PNP / NO	Cable, 2 m, 3-wire	642	
	996-51472	IS 512-03-S	Non-flush	10 mm	NPN / NO	Cable, 2 m, 3-wire	642	
	697-01048	IMT 12-4B-PS-K3	Flush	4 mm	PNP / NO	Cable 2 m	638	
	697-01049	IMT 12-4B-NS-K3	Flush	4 mm	NPN / NO	Cable 2 m	638	
	697-01050	IMT 12-4B-PS-L4	Flush	4 mm	PNP / NO	M12 3-pin	638	
	697-01051	IMT 12-4B-NS-L4	Flush	4 mm	NPN / NO	M12 3-pin	638	
	M18	697-01052	IMT 18-8B-PS-K3	Flush	8 mm	PNP / NO	Cable 2 m	646
697-01053		IMT 18-8B-NS-K3	Flush	8 mm	NPN / NO	Cable 2 m	646	
697-01054		IMT 18-8B-PS-L4	Flush	8 mm	PNP / NO	M12 3-pin	646	
697-01055		IMT 18-8B-NS-L4	Flush	8 mm	NPN / NO	M12 3-pin	646	
996-09973		IS 518-42	Quasi-flush	12 mm	PNP / NO	Plug, M12x1, 4-pin	648	
996-09972		IS 518-41	Quasi-flush	12 mm	NPN / NO	Plug, M12x1, 4-pin	648	
996-09429		IS 518-02	Quasi-flush	12 mm	PNP / NO	Cable, 2 m, 3-wire	648	
996-09428		IS 518-01	Quasi-flush	12 mm	NPN / NO	Cable, 2 m, 3-wire	648	
996-51453		IS 518-44-S	Non-flush	20 mm	PNP / NO	Plug, M12x1, 4-pin	649	
996-50327		IS 518-43-S	Non-flush	20 mm	NPN / NO	Plug, M12x1, 4-pin	649	
996-51450		IS 518-04-S	Non-flush	20 mm	PNP / NO	Cable, 3-wire	649	
996-51482		IT 18 BM-PSL4	Flush	10 mm	PNP / NO	Plug, M12x1, 4-pin	650	
996-51483		IT 18 NBM-PSL4	Non-flush	20 mm	PNP / NO	Plug, M12x1, 4-pin	650	
M30		697-01056	IMT 30-15B-PS-K3	Flush	15 mm	PNP / NO	Cable 2 m	652
		697-01057	IMT 30-15B-NS-K3	Flush	15 mm	NPN / NO	Cable 2 m	652
	697-01058	IMT 30-15B-PS-L4	Flush	15 mm	PNP / NO	M12 3-pin	652	
	697-01059	IMT 30-15B-NS-L4	Flush	15 mm	NPN / NO	M12 3-pin	652	
	996-09905	IS 530-42	Quasi-flush	22 mm	PNP / NO	Plug, M12x1, 4-pin	654	
	996-50673	IS 530-41	Quasi-flush	22 mm	NPN / NO	Plug, M12x1, 4-pin	654	
	996-09437	IS 530-02	Quasi-flush	22 mm	PNP / NO	Cable, 2 m, 3-wire	654	
	996-09436	IS 530-01	Quasi-flush	22 mm	NPN / NO	Cable, 2 m, 3-wire	654	
	996-51454	IS 530-44-S	Quasi-flush	22 mm	PNP / NO	Plug, M12x1, 4-pin	655	
	996-51452	IS 530-04-S	Quasi-flush	22 mm	PNP / NO	Cable, 2 m, 3-wire	655	
	996-09438	IS 530-03	Quasi-flush	22 mm	NPN / NO	Cable, 2 m, 3-wire	655	
	996-51484	IT 30 BM-PSL4	Flush	20 mm	PNP / NO	Plug, M12x1, 4-pin	656	
	996-51485	IT 30 NBM-PSL4	Non-flush	40 mm	PNP / NO	Plug, M12x1, 4-pin	656	

**Cubic inductive sensors**

Housing size	Part no.	Type code	Installation	Switching distance	Switching output	Connection type	Page
40 x 26 x 12 mm	697-01060	IT 12-4B-NS-K3	Flush	4 mm	NPN / NO	Cable 2 m	616
	697-01061	IT 12-4B-PS-K3	Flush	4 mm	PNP / NO	Cable 2 m	616
	697-01062	IT 12-4B-NS-M3	Flush	4 mm	NPN / NO	M8 3-pin	616
	697-01063	IT 12-4B-PS-M3	Flush	4 mm	PNP / NO	M8 3-pin	616
	697-01064	IT 12-8N-NS-K3	Non-flush	8 mm	NPN / NO	Cable 2 m	616
	697-01065	IT 12-8N-PS-K3	Non-flush	8 mm	PNP / NO	Cable 2 m	616
	697-01066	IT 12-8N-NS-M3	Non-flush	8 mm	NPN / NO	M8 3-pin	616
	697-01067	IT 12-8N-PS-M3	Non-flush	8 mm	PNP / NO	M8 3-pin	616
	16 x 8 x 5 mm	697-01068	IT 8-1B5K-PS-K3	Flush	1.5 mm	PNP / NO	Strand, 0.5 m, 3-wire
697-01069		IT 8-1B5K-NS-K3	Flush	1.5 mm	NPN / NO	Strand, 0.5 m, 3-wire	612
27 x 10 x 7 mm	697-01070	IT10-4N-PS-K3	Non-flush	4 mm	PNP / NO	Cable 2 m	613
	697-01071	IT10-4N-NS-K3	Non-flush	4 mm	NPN / NO	Cable 2 m	613
25 x 5 x 5 mm	996-50585	IS 455-02	Flush	0.8 mm	PNP / NO	Cable, 2 m, 3-wire	614
	996-50607	IS 455-01	Flush	0.8 mm	NPN / NO	Cable, 2 m, 3-wire	614
50 x 8 x 8 mm	996-51280	IS 588-02-X	Quasi-flush	3 mm	PNP / NO	Plug, M8x1, 3-pin	615
40 x 8 x 8 mm	996-50589	IS 588-02	Quasi-flush	3 mm	PNP / NO	Cable, 2 m, 3-wire	615
	996-50650	IS 588-01	Quasi-flush	3 mm	NPN / NO	Cable, 2 m, 3-wire	615
40 x 40 x 55 mm	810-50001	IT 40 BD-PAL 4	Flush	20 mm	PNP,antivalent (N.O/N.C.)	Plug, M12x1, 4-pin	618
	810-50006	IT 40 NB-PAL4	Non-flush	35 mm	PNP,antivalent (N.O/N.C.)	Plug, M12x1, 4-pin	618
	810-50007	IT 40 NB-NAL4	Non-flush	35 mm	PNP,antivalent (N.O/N.C.)	Plug, M12x1, 4-pin	618