



## Adjustment instructions for IAS...

Electronic equipment for installation in a machine or plant.

To be installed and put into initial operation only by qualified personnel!

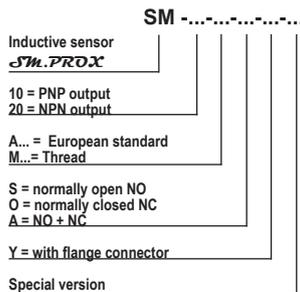
The data of the nominal sensing distance are based on the measuring method according to DIN VDE 0660, Part 208. The respective nominal sensing distance is indicated with a tolerance of  $\pm 10\%$ . The standard measurement plate is square with a thickness of 1 mm and is made of carbon steel FE 360 (defined in ISO 630: 1980) with a smoothed surface and earthed. The side lengths are equal to the diameter of the active area of the IAS or equal to  $3 \times S_n$ , depending on which value is greater. With a different material or a smaller surface of the actuating element, the sensing distance is smaller. Wiring of the inductive sensors should be routed separately or screened from heavy conductor lines, as in extreme cases inductive peak voltages can destroy the sensors despite the integrated protective circuit. Screened cable or twisted lines are recommended, especially for longer cable runs > 5 m. Direct control of electric light bulbs is to be avoided, because during the switch-on moment cold current is many times the rated current and can destroy the output stage of the sensor.

In order to prevent damage to the threaded sleeves when mounting, the material and version-dependent maximum torque should be taken into consideration. The values listed in the table are based on the use of the nuts supplied with the sensors.

Material	Thread						
	M5 x0.5	M8 x1	M12 x1	M18 x1.5	M22 x1.5	M30 x1.5	M32 x1.5
PA6.6	-	-	1 Nm	1.7 Nm	6 Nm	8 Nm	13 Nm
Brass			16 Nm	28 Nm	32 Nm	82 Nm	150 Nm
INOX	1.5 Nm	4.5 Nm	25 Nm	60 Nm	84 Nm	200 Nm	230 Nm

The possible sensing distance on a particular metal can be worked out by means of the typical reduction factors: Sensing distance =  $S_n \times$  reduction factor.

Metal type								
Fe360	St37	CrNi	V2A	V4A	Ms	Al	Cu	Au
Reduction factor approx								
1	1	0.85	0.75A	0.7	0.45	0.4	0.3	0.24



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## Instructions

Electronic equipment for installation in a machine or plant. To be installed and put into initial operation only by qualified personnel!

Please refer to the type description/series for classification of the connecting diagram.

For technical data please refer to our main catalogue.

Changes to the units or improper use will lead to loss of guarantee.

For flush mounting in metal and other materials. These sensors can also be mounted close together (see Fig. 1 and 3).

For non-flush mounting in metal. However, these types can also be mounted flush in nonmetals. When mounting two or more sensors side by side a space / free zone must be provided (see Fig. 2 and 4).

Connection diagram with M12 connector (Y1, Y3, Y5) for sensors M12, M18 and M30:

- 1 = brown = + Vcc
- 2 = free or NC for "A" version
- 3 = blue = - GND
- 4 = black = PNP-NPN-NO, or NC for "O" version



Connection diagram with M8 connector (Y7) for sensors M5, 6.5 and M8:

- 1 = brown = +
- 2 = black = PNP-NPN output
- 3 = blue = -

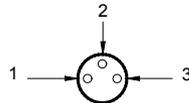


Fig. 1

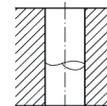
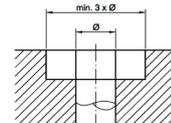


Fig. 2 Free zone



For opposing active areas "a"  $\geq 2.2 \times S_n$

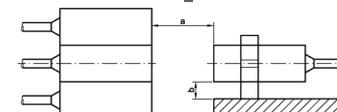


Fig. 3

For non-flush mountable sensors distance "b" has to be  $\geq 1.5 \times S_n$

## Connection diagrams cable output:

