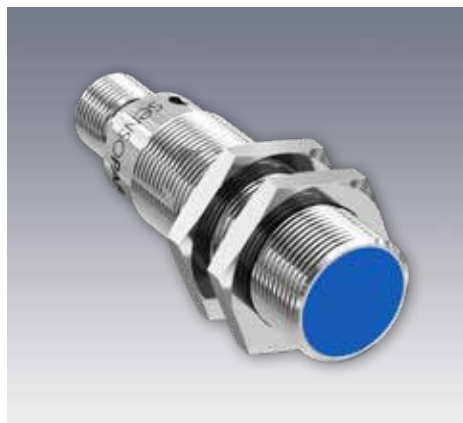


IMT 18

Inductive sensor M18 / increased switching distance / analogue output



PRODUCT-HIGHLIGHTS

- Long sensing range
- Outstanding accuracy and temperature stability
- Resolution in μm range
- Analogue output 0 ... 10 V or 4 ... 20 mA

Sensor data

Operating range	0 ... 10 mm ¹ / 0 ... 20 mm ²
Resolution static	$\leq 0.25 \mu\text{m}^1$ / $\leq 0.62 \mu\text{m}^2$
Resolution dynamic	$\leq 1.24 \mu\text{m}^1$ / $\leq 1.9 \mu\text{m}^2$
Repeatability	$\pm 0.2 \text{ mm}$
Temperature drift	$\leq 5 \%$ (0 ... +70 °C) $\leq 10 \%$ (-25 ... 0 °C)
Correction factor steel FE 360	1
Correction factor V2A	0.72 ¹ / 0.74 ²
Correction factor CuZn	0.44 ¹ / 0.48 ²
Correction factor Al	0.34 ¹ / 0.38 ²
Correction factor Cu	0.31 ¹ / 0.34 ²

Electrical data

Operating voltage, +U _B	15 ... 30 V DC
Residual ripple	$\leq 20 \%$ U _B
No-load current, I ₀	$\leq 10 \text{ mA}^1$ / $\leq 15 \text{ mA}^2$
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection (Q)
Load current at voltage output	$\leq 15 \text{ mA}$
Power-on delay	$\leq 20 \text{ ms}$
Max. load at current output	400 Ω (U _B = 15 V) / 1 k Ω (U _B = 30 V)
Bandwidth	0.5 kHz ¹ / 0.25 kHz ²

Mechanical data

Dimensions	M18 × 63.5 mm
Mounting	Quasi-flush / non-flush (see selection table)
Enclosure rating	IP 67 ³
Material housing	Brass, chrome-plated
Material active surface	PBTP
Type of connection	Metal plug, M12x1, 4-pin
Ambient temperature: operation	-25 ... +70 °C
Ambient temperature: storage	-25 ... +70 °C
Weight	56 g
Vibration and impact resistance	EN IEC 60947-5-2
Tightening torque	25 Nm
Standard target FE 360	30 mm × 30 mm × 1 mm ¹ / 60 mm × 60 mm × 1 mm ²

¹ Quasi-flush devices ² Non-flush devices ³ With connected IP 67 plug

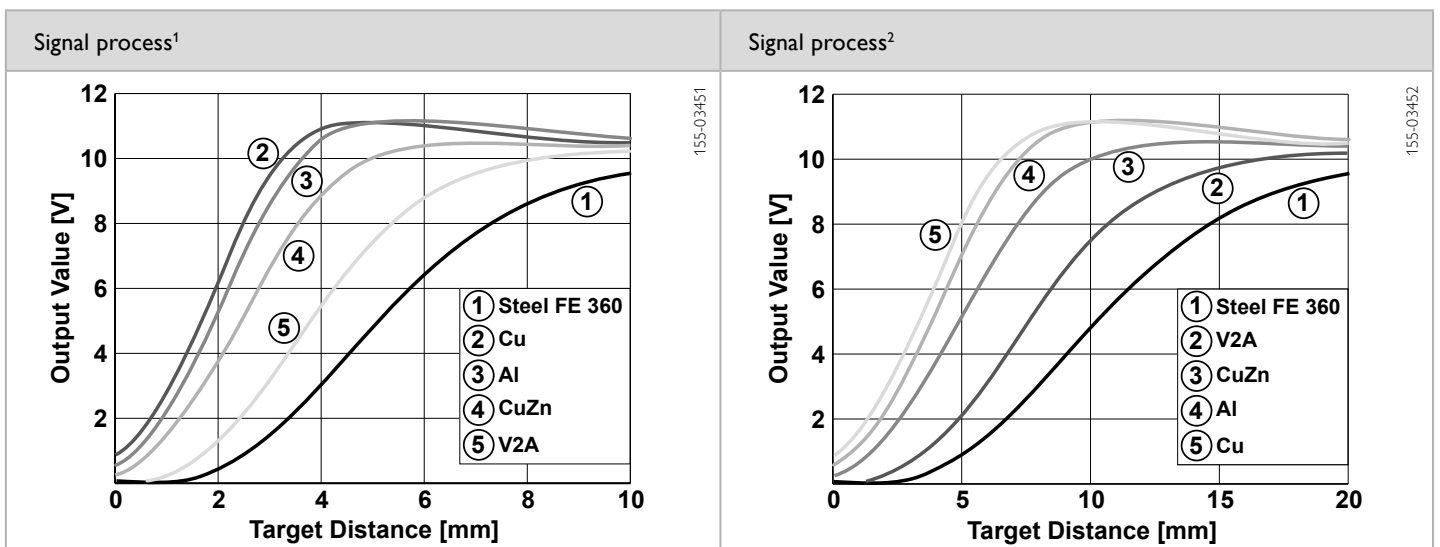
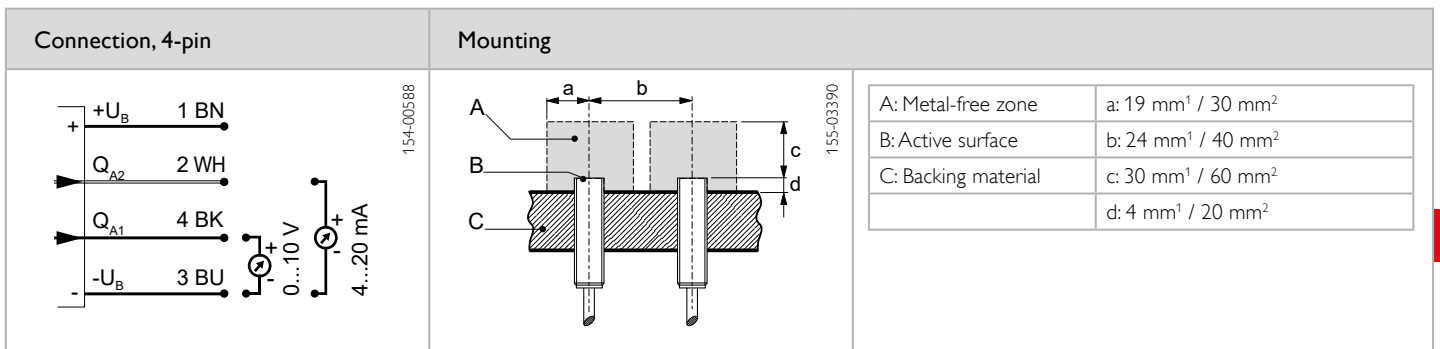
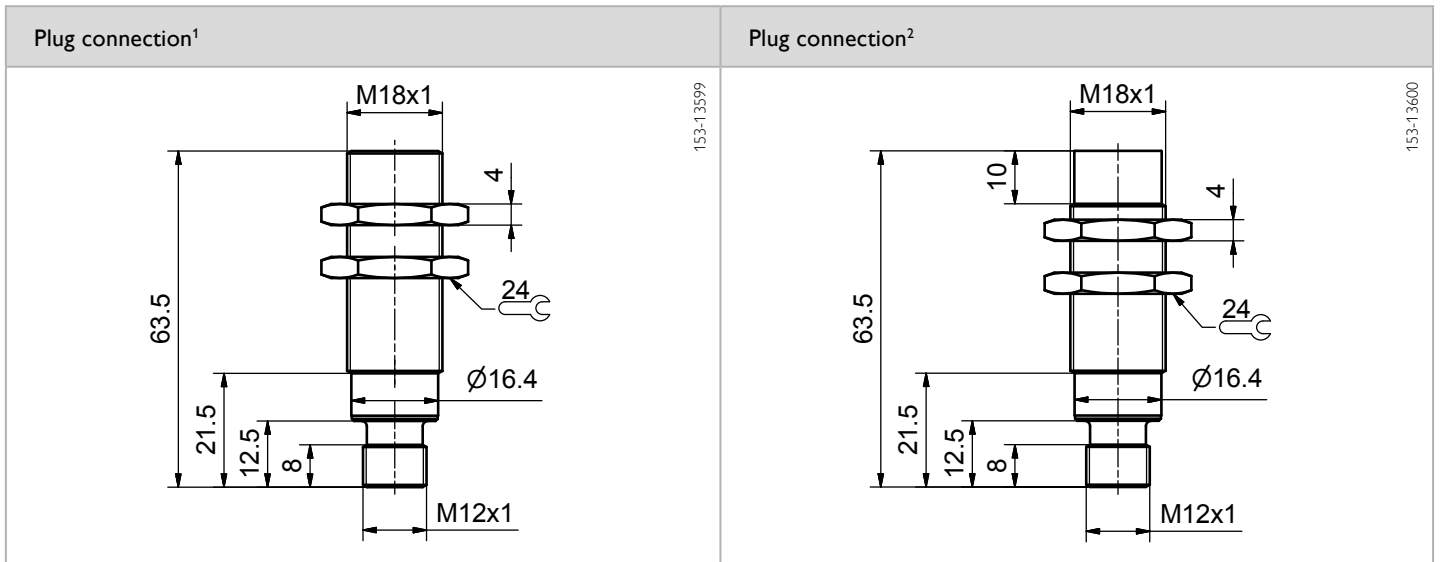


All data measured according to standard EN IEC 60947-5-2 with U_B = 20 ... 30 V DC, T_A = 23 °C ± 5 °C

The switching distance of the sensor must be multiplied by the correction factor of the material. The switching distance on aluminium is thus S_{n,AL} = S_n × CF_{AL}.

For flush mounting the distance is multiplied by the additional correction factor of the backing material, S_{n,Al} = S_n × CF_{AL} × CF_{mounting material}.

Operating range	Mounting	Analogue output	Type of connection	Part number	Article number
0 ... 10 mm	Quasi-flush	0 ... 10V / 4 ... 20 mA	Metal plug, M12x1, 4-pin	IMT 18-A-QB3-PS-L4M	996-01035
0 ... 20 mm	Non-flush	0 ... 10V / 4 ... 20 mA	Metal plug, M12x1, 4-pin	IMT 18-A-NB3-PS-L4M	996-01036



The switching distance of the sensor must be multiplied by the correction factor of the material. The switching distance on aluminium is thus $S_{n,AL} = S_n \times CF_{AL}$.
 For flush mounting the distance is multiplied by the additional correction factor of the backing material, $S_{n,AL} = S_n \times CF_{AL} \times CF_{mounting\ material}$.