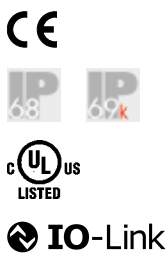


IMT 18

Inductive sensor M18 / all-metal housing / factor 1



PRODUCT-HIGHLIGHTS

- One-piece full stainless-steel housing
- Long operating range
- Factor 1 sensor on steel and aluminium
- Extremely robust
- Pressure-tight / watertight IP 68 / IP 69K
- IO-Link 1.1

Sensor data		Functions		
Rated operating distance S_n	10 mm ¹ / 20 mm ²	Indicator LED yellow	Switching output indicator	
Ensured operating distance S_b	$\leq 8.1 \text{ mm}^1 / \leq 16.2 \text{ mm}^2$	Adjustment possibilities	N.O. / N.C.	
Hysteresis	$3 \% S_r \leq \text{Hyst} \leq 15 \% S_r^3$	Default settings	Wide variety of adjustment possibilities via IO-Link	
Repeatability	$\leq 0.3 \text{ mm}^1 / \leq 0.6 \text{ mm}^2$		N.O.	
Temperature drift	$\leq 10 \% S_r$			
Electrical data		Mechanical data		
Operating voltage, $+U_b$	10 ... 30V DC	Dimensions	M18 x 63,5 mm	
Residual ripple	$\leq 20 \% U_b$	Mounting	Flush / non-flush (see selection table)	
No-load current, I_o	$\leq 10 \text{ mA}$	Enclosure rating	IP 68 (60 bar) ^{5/6} / IP 69K ⁶	
Output current, I_e	$\leq 200 \text{ mA}$	Material housing / active surface	Stainless steel, V2A / 1.4305 / AISI 303	
Protective circuits	Reverse-polarity protection, U_b / short-circuit protection (Q)	Type of connection	Stainless steel plug, V2A, M12x1, 4-pin	
Residual current	$\leq 0.1 \text{ mA}$	Ambient temperature: operation	-25 ... +85 °C ⁷	
Voltage drop, U_D	$\leq 2.0 \text{ V DC}$ at 200 mA	Ambient temperature: storage	-25 ... +85 °C	
Switching output, Q	PNP	Weight	53 g	
Output function	N.O./N.C. ⁴	Vibration and impact resistance	EN IEC 60947-5-2	
Power-on delay	$\leq 15 \text{ ms}$	Tightening torque	50 Nm	
Switching frequency f (ti/tp 1:1)	$\leq 0.2 \text{ kHz}$	Standard target FE 360	30 mm x 30 mm x 1 mm ¹ / 60 mm x 60 mm x 1 mm ²	
IO-Link		Correction factors	Target	Installation material
Communication mode	COM 2	Stahl FE 360	1 ^{1/2}	0.75 ¹ / - ²
Min. cycletime	10.4 ms	V2A 1 / 2 mm	0.5/0.9 ¹ / 0.2/0.7 ²	0.8 ¹ / - ²
SIO mode	Compatible	CuZn	1.2 ¹ / 1.35 ²	0.75 ¹ / - ²
Length process data	7 Bit	Al	1 ^{1/2}	0.9 ¹ / - ²
Specification	1.1	Cu	0.8 ¹ / 0.9 ²	-
ISDU	Not compatible			

¹ Flush devices ² Non-flush devices ³ S_r (Effective switching distance) = $\pm 10 \%$ of S_n ⁴ Adjustable / parameterisable via IO-Link ⁵ In zone "P" ⁶ With connected IP 68 / IP 69K plug
⁷ UL: -25 ... +70 °C



All data measured according to standard EN IEC 60947-5-2 with $U_b = 20 \dots 30 \text{ V DC}$, $T_A = 23 \text{ °C} \pm 5 \text{ °C}$
 The switching distance of the sensor must be multiplied by the correction factor of the material. The switching distance on aluminium is thus $S_{n,AL} = S_n \times CF_{AL}$.
 For flush mounting the distance is multiplied by the additional correction factor of the backing material, $S_n,Al = S_n \times CF_{AL} \times CF_{mounting\ material}$.

Switching distance	Mounting	Switching output	Type of connection	Part number	Article number
10 mm	Flush	PNP	Stainless steel plug, V2A, M12x1, 4-pin, IO-Link	IMT 18-FM-S-B2-PSL-L4M	996-01029
20 mm	Non-flush	PNP	Stainless steel plug, V2A, M12x1, 4-pin, IO-Link	IMT 18-FM-S-NB2-PSL-L4M	996-01030

