IMT 5

Inductive sensor M5 / increased switching distance



PRODUCT-HIGHLIGHTS

- Increased switching distance
- Excellent repeatability
- IO-Link 1.1

Sensor data	
Rated operating distance S_n	2.5 mm
Ensured operating distance S_a	≤ 2.03 mm
Hysteresis	3 % S_r ≤ Hyst ≤ 15 % S_r[1]
Repeatability	≤ 0.03 mm
Temperature drift	≤ 10 % S_r
Correction factor steel FE 360	1
Correction factor V2A 1 / 2 mm	0.67
Correction factor CuZn	0.42
Correction factor Al	0.33
Correction factor Cu	0.3

Functions	
Indicator LED yellow	Switching output indicator
Adjustment possibilities	N.O. / N.C. Wide variety of adjustment possibilities via IO-Link
Default settings	N.O.

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC
Residual ripple	≤ 20 % U_B
No-load current, I_0	≤ 10 mA
Output current, Ie	≤ 200 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Residual current	≤ 0.1 mA
Voltage drop, U_D	≤ 2.0 V DC
Switching output, Q	PNP
Output function	N.O./N.C.[2]
Power-on delay	≤ 30 ms
Switching frequency f (ti/tp 1:1)	≤ 0.8 kHz

Mechanical data	
Dimensions	M5 x 38 mm
Mounting	Quasi-flush
Enclosure rating	IP 67[3]
Material housing	Nickel silver
Material active surface	PPE
Type of connection	Metal plug, M8x1, 3-pin
Ambient temperature: operation	-25 … +70 °C
Ambient temperature: storage	-25 … +70 °C
Weight	5 g
Vibration and impact resistance	EN IEC 60947-5-2
Tightening torque	1.5 Nm
Standard target FE 360	7.5 mm x 7.5 mm x 1 mm

IO-Link	
Communication mode	COM 2
Min. cycletime	10.4 ms
SIO mode	Compatible
Length process data	7 Bit
Specification	1.1
ISDU	Not compatible

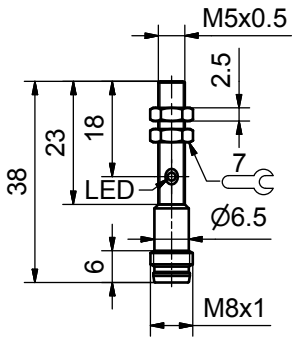
[1] S_r (Effective switching distance) = ± 10 % of S_n [2] Adjustable / parameterisable via IO-Link [3] With connected IP 67 plug

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

Switching distance	Switching output	Type of connection	Part number	Article number
2.5 mm	PNP	Metal plug, M8x1, 3-pin, IO-Link	IMT 5-S-QB3-PSL-M3M	996-01015

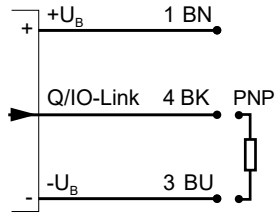
Plug connection

153-13595



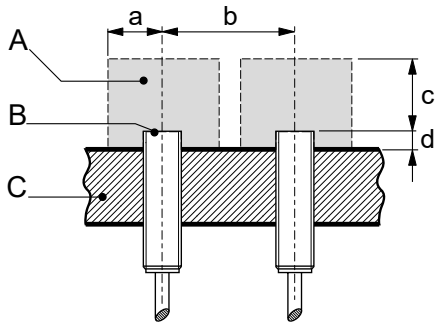
Connection, 3-pin, IO-Link

154-00583



Mounting

155-03390



A: Metal-free zone	a: 4.5 mm
B: Active surface	b: 10 mm
C: Backing material	c: 7.5 mm
	d: 2 mm