

Magnetic proximity sensors

MQ 10 series, sensing range 60 mm

DC 3-wire, plastic housing

Dimensions in mm



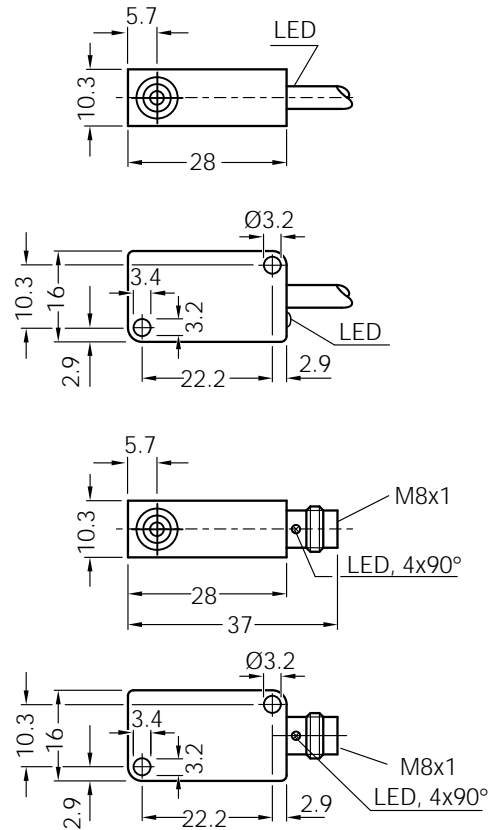
Features



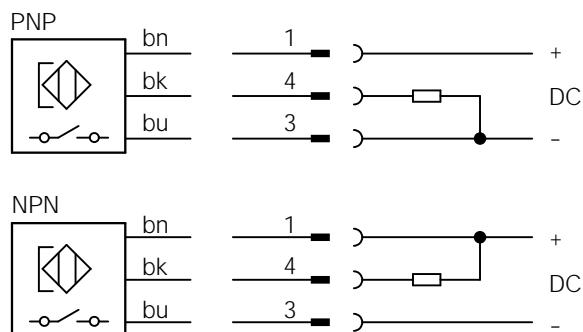
- ▶ Can be installed flush and non-flush in metal
- ▶ Sensing range up to 60 mm
- ▶ PNP or NPN output
- ▶ High switching frequency
- ▶ Short-circuit protection (pulsed)
- ▶ Plastic housing
- ▶ Cable or connector
- ▶ Enclosure rating IP 67
- ▶ LED status indicator

Accessories

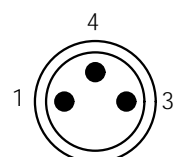
Round connectors
Magnets



Connection diagram



Wire colour	Wire colour	Contact	Assignment
bn	brown	1	+ V DC
bk	black	4	NO
bu	blue	3	- V DC



Electrical and mechanical data

Operating voltage U_b	10 ... 30 V DC	Wire-break protection	yes
Ripple U_{pp}	$\leq 10\%$ of U_b	Short-circuit protection (pulsed)	yes
Voltage drop U_d	≤ 1.5 V at I_a max.	Reverse polarity protection	yes
Power consumption (without load)	≤ 10 mA	Power-up pulse suppression	yes
Continuous current I_a	≤ 300 mA	Enclosure rating to DIN 40050	IP 67
Time delay before availability t_v	≤ 2 ms	Shock and vibration stress	30 g, 11 ms 10 to 55 Hz, 1 mm
Hysteresis H	1% - 10% of s_r	Ambient temperature T_a	- 25 ... + 75 °C
Repeatability R (U_b and T_a constant)	$\leq 1\%$ of s_r	Housing material	Plastic
Temperature drift	$\pm 10\%$ of s_r	Connection cable	PUR-PVC, 3 x 0.25 mm ²
EMC	to EN 60 947-5-2		

Selection table

Sensing range s_n^* mm	Magnetic alignment	Switching output	Output function	Switching frequency f in Hz	Connection	Type	Order number
60	Axial	PNP		5000	Cable 2 m	MQ10-60APS-KU0	7900278
60	Axial	NPN		5000	Cable 2 m	MQ10-60ANS-KU0	7900279
60	Axial	PNP		5000	Connector M8 x 1 mm	MQ10-60APS-KT0	7900280
60	Axial	NPN		5000	Connector M8 x 1 mm	MQ10-60ANS-KT0	7900281

* Sensing range s_n based on installation in non-magnetizable material using magnet M 4.0

Sensing ranges (Typical values)

Magnet type	Sensing range s_n Any installation version (flush or non-flush) in non-magnetizable material	Sensing range s_n Flush installation in magnetizable material (e.g. iron)
M 1.0	23 mm	12 mm
M 2.0	24 mm	10 mm
M 3.0	36 mm	15 mm
M 4.0	60 mm	20 mm
M 5.0 / 5.1	68 mm	25 mm

Magnetic proximity sensors

MQ 10 series, sensing range 60 mm

NAMUR, plastic housing

Dimensions in mm



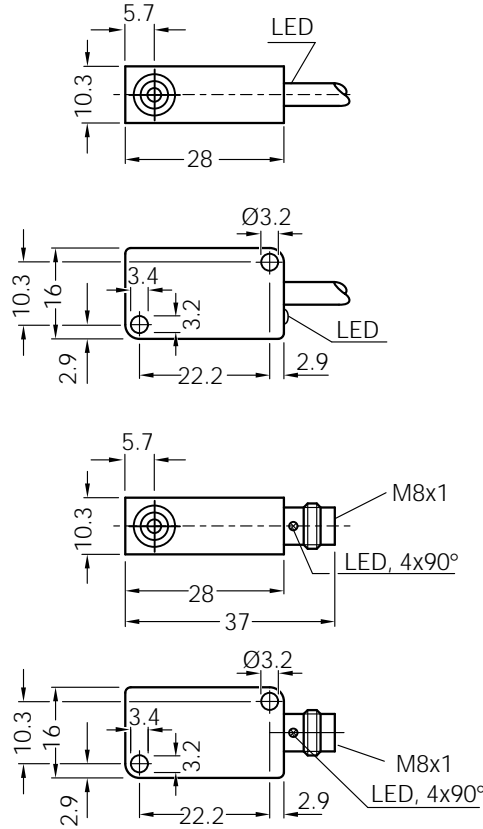
Features



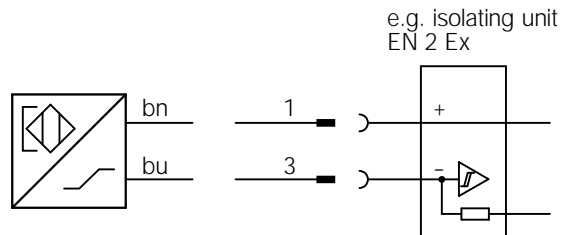
- ▶ Can be installed flush and non-flush in metal
- ▶ Sensing ranges up to 60 mm
- ▶ NAMUR to DIN 19 234
- ▶ High switching frequency
- ▶ Plastic housing
- ▶ Cable or connector
- ▶ Enclosure rating IP 67
- ▶ LED status indicator

Accessories

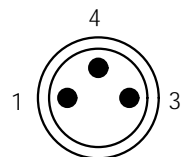
Round connectors
Magnets



Connection diagram





Wire colour	Contact	Assignment
bn brown	1	+ V DC
bu blue	3	- V DC
	4	free



Electrical and mechanical data

Operating voltage U_b	5 ... 25 V DC	Short-circuit protected	yes
Rated voltage U_n	8.2 V DC	Reverse polarity protected	yes
Ripple U_{pp}	$\leq 5\%$ of U_b	Enclosure rating to DIN 40050	IP 67
Power consumption, attenuated	≥ 2.5 mA	Shock and vibration stress	30 g, 11 ms 10 to 55 Hz, 1 mm
Power consumption, unattenuated	≤ 1.0 mA	Ambient temperature T_a	- 25 ... + 75 °C
Internal capacitance	≤ 45 nF	Housing material	Plastic
Internal inductance	≤ 30 μ H	Connection cable	PVC, 2 x 0.34 mm ² , blue
Cable resistance	≤ 50 Ω		
Time delay before availability t_v	≤ 2 ms		
Hysteresis H	1% - 10% of s_r		
Repeatability R (U_b and T_a constant)	$\leq 1\%$ of s_r		
Temperature drift	$\pm 10\%$ of s_r		
EMC	to EN 60 947-5-2		

Selection table

Sensing range s_n^* mm	Magnetic alignment	Version	Output function	Switching frequency f in Hz	Connection	Type	Order number
60	Axial	NAMUR		5000	Cable 2 m	MQ10-60A-N-KW0	7900290
60	Axial	NAMUR		5000	Connector M8 x 1 mm	MQ10-60A-N-KT0	7900291

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