

Magnetic proximity sensors

MQ 10 series, sensing range 60 mm

DC 3-wire, plastic housing

Dimensions in mm



Features

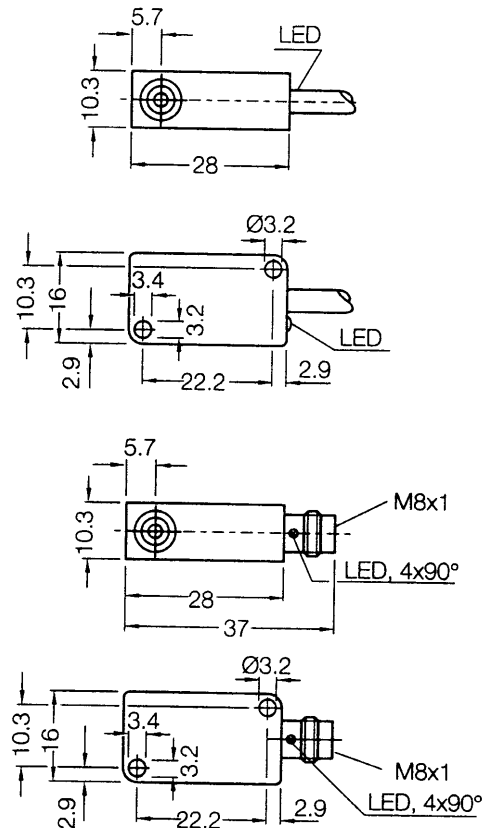


- Can be installed flush and non-flush in metal
- Sensing range up to 60 mm
- PNP or NPN output
- High switching frequency
- Short-circuit protection (pulsed)
- Plastic housing
- Cable or connector
- Enclosure rating IP 67
- LED status indicator

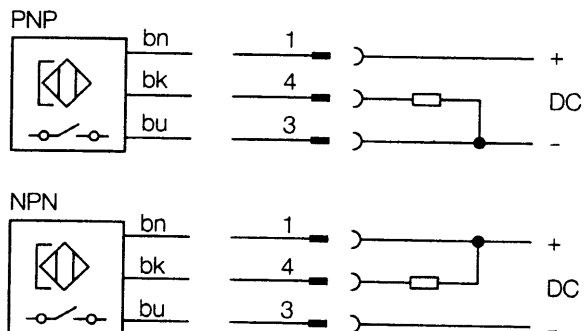
Accessories

Round connectors

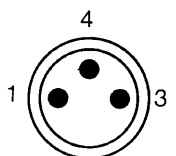
Magnets



Connection diagram



Wire colour	Contact	Assignment
bn	1	+ V DC
bk	4	NO
bu	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 (at I_a max.)	≤ 1.5 V	Reverse polarity protection	yes
Power consumption (without load)	≤ 10 mA	Power-up pulse suppression	yes
Continuous current I_a	≤ 300 mA	Enclosure rating to EN 60529	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