

MQ 10 Advanced

Magnetic Proximity Sensors



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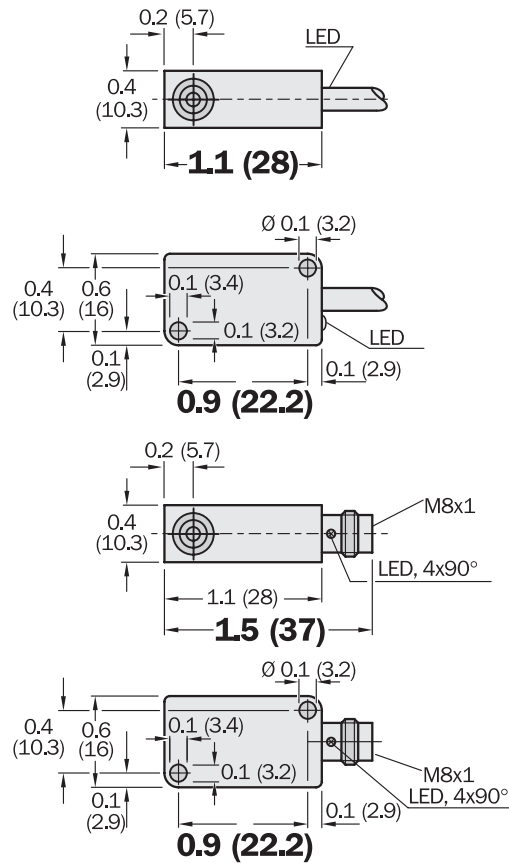


Highlights

- 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

Dimensional Drawing

dimensions in inches (mm)



Accessories	page
Cables and connectors	908
Magnets	978, 979

Electrical and Mechanical Data

Operating voltage U_b	10...30 V DC
Ripple U_{pp}	$\leq 10\%$ of U_b
Voltage drop U_b	≤ 2 V with I_a max.
Power consumption (without load)	≤ 10 mW
Continuous current I_a	≤ 300 mA
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
Wire-break protection	Yes
Short circuit protection (pulsed)	Yes
Reverse polarity protection	Yes
Power-up pulse suppression	Yes
Enclosure rating to DIN 40050	IP 67
Shock and vibration stress	30 g, 11 ms, 10 to 55 Hz, 1 mm
Ambient temperature T_a	-13...167°F (-25...75°C)
Housing material	Plastic
Connection cable	PUR-PVC, 3 x 0.25 mm ²

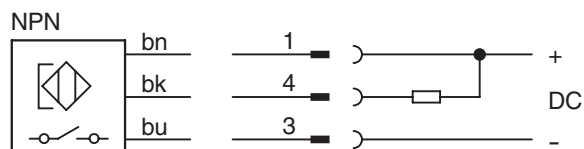
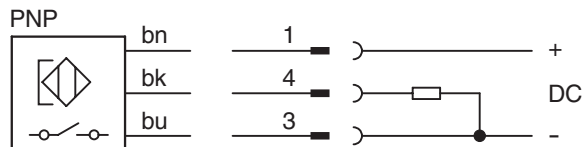
Selection Table

Sensing range S_n in (mm)	Magnetic alignment	Switching output	Output function	Switching frequency f in Hz	Connection type	Type	Part no.
2.4 (60)	Axial	PNP		5000	Cable 2 m	MQ10-60APS-KU0	7 900 278
2.4 (60)	Axial	NPN		5000	Cable 2 m	MQ10-60ANS-KU0	7 900 279
2.4 (60)	Axial	PNP		5000	Connector M8 x 1 mm	MQ10-60APS-KT0	7 900 280
2.4 (60)	Axial	NPN		5000	Connector M8 x 1 mm	MQ10-60ANS-KT0	7 900 281

Sensing Ranges

Magnet type	Sensing Range s_n Any installation type (flush or non-flush) in a non-magnetizable material	Sensing Range s_n Flush installation in a magnetizable material (e.g. iron)
M 1.0	0.9 in (23 mm)	0.5 in (12 mm)
M 2.0	0.9 in (24 mm)	0.4 in (10 mm)
M 3.0	1.4 in (36 mm)	0.6 in (15 mm)
M 4.0	2.4 in (60 mm)	0.8 in (20 mm)
M 5.0/5.1	2.7 in (68 mm)	1.0 in (25 mm)

Connection Diagram



Wire color	Contact	Assignment
bn	1	+ V DC
bk	4	NO
bu	3	- V DC

