

Photo switches transmit a beam which is reflected back from a detected object (*diffused*) or from a reflector (*retro-reflective*) or can be used with a separate transmitter and receiver (*through beam*), typically used for longer distance sensing.

- Sensitivity: Adjustable (*trimmer*)
- Ambient limits: -25 ... +70°C
- Supply protection: Polarity reversal, impulse overvoltage, short circuit
- LED indication: Yellow (*output status*) / green (*supply present*)

type	supply voltage	diffused	retro-reflective	polarsised retro	through-beam	sensing distance (mm)	NPN	PNP	NO	NC	connector
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**QM series - Miniature cubic sensor** IP67 (EN60529) 13 x 21 x 31.2 mm

- Miniaturize high performance photoelectric sensors
- 2 kHz switching frequency
- Selectable LO/DO output state
- M8 (4pin) plug connection

**Diffuse reflection**

*proximity type detection (no transmitter or reflector required)*

Model	Supply Voltage	Diffused	Retro-reflective	Polarsised retro	Through-beam	Sensing Distance	NPN	PNP	NO	NC	Connector
QMRS/0P-0F*	10 - 30 VDC	•				30...200	•	•	•	•	M8 plug
QMR7/0N-0F	10 - 30 VDC	•				400 mm	•		•	•	M8 plug
QMR7/0P-0F	10 - 30 VDC	•				400 mm		•	•	•	M8 plug
QMR8/0N-0F	10 - 30 VDC	•				1 meter	•		•	•	M8 plug
QMR8/0P-0F	10 - 30 VDC	•				1 meter		•	•	•	M8 plug
QMI9/0P-0F	10 - 30 VDC	•				1.5 meters		•	•	•	M8 plug

\* With adjustable background suppression

**Retro-reflective**

*used together with a reflector*

Model	Supply Voltage	Diffused	Retro-reflective	Polarsised retro	Through-beam	Sensing Distance	NPN	PNP	NO	NC	Connector
QMIC/0N-0F	10 - 30 VDC		•			7 meter	•		•	•	M8 plug
QMIC/0P-0F	10 - 30 VDC		•			7 meter		•	•	•	M8 plug

**Retro-reflective (polarised)**

*used together with a reflector*

Model	Supply Voltage	Diffused	Retro-reflective	Polarsised retro	Through-beam	Sensing Distance	NPN	PNP	NO	NC	Connector
QMRN/0N-0F	10 - 30 VDC			•		5 meter	•		•	•	M8 plug
QMRN/0P-0F	10 - 30 VDC			•		5 meter		•	•	•	M8 plug

**Retro-reflective**

*(transparent objects)*

Model	Supply Voltage	Diffused	Retro-reflective	Polarsised retro	Through-beam	Sensing Distance	NPN	PNP	NO	NC	Connector
QMRL/0N-0F	10-30 VDC		•			0.4...4 met	•		•	•	M8 plug
QMRL/0P-0F	10-30 VDC		•			0.4...4 met		•	•	•	M8 plug

**Through beam**

*(transmitter and receiver kit)*

Model	Supply Voltage	Diffused	Retro-reflective	Polarsised retro	Through-beam	Sensing Distance	NPN	PNP	NO	NC	Connector
QMRHD/0N-0F	10 - 30 VDC				•	20 meter	•		•	•	M8 plug
QMRHD/0P-0F	10 - 30 VDC				•	20 meter		•	•	•	M8 plug

**QF series - For food and beverage applications** 11 x 21 x 31.4 mm

- M8 (4pin) plug connection
- -26...+60°C (*without freeze*)
- IP67 (EN60529) - IP68 (1m - 7 days) - IP69K protection degree
- AISI 316L (DIN 1.4404) stainless steel housing - Active head PPSU
- Approvals: CE cULus, ECOLAB, IEC60947-5-2

**Diffuse reflection**

*proximity type detection (no transmitter or reflector required)*

Model	Supply Voltage	Diffused	Retro-reflective	Polarsised retro	Through-beam	Sensing Distance	NPN	PNP	NO	NC	Connector
QFI4/BP-1F	10 - 30 VDC	•				20...200	•	•	•	•	M8 plug
QFRS/BP-1F*	10 - 30 VDC	•				25...200		•	•	•	M8 plug
QFR8/BP-1F	10 - 30 VDC	•				0.1...1met		•	•	•	M8 plug

\* With adjustable background suppression

**Retro-reflective (polarised)**

*used together with a reflector*

Model	Supply Voltage	Diffused	Retro-reflective	Polarsised retro	Through-beam	Sensing Distance	NPN	PNP	NO	NC	Connector
QFRN/BP-1F	10 - 30 VDC			•		6 meter		•	•	•	M8 plug

Mounting accessories (see page K-8) Cables and M8/12 connectors (see page K-27 / 28)

Note: Reflectors sold separately, see page K-8



QMR7/0P-0F



QMRN/0N-0F



QMRL/0N-0F



QFI4/BP-1F