



QM42 Series 150 Adjustable Field Sensors

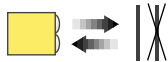
Sensing Cutoff Point is Adjustable from 50 to 150 mm (2 to 6 in)



Features

- Adjustable field technology allows direct detection of objects within a defined sensing field, while completely ignoring reflective objects located beyond the sensing field cutoff point
- Reliable *electronic* adjustment* of sensing field cutoff point from 50 to 150 mm; no mechanical adjustments to worry about
- Compact, rugged, low cost self-contained sensors in metal die cast housings
- Epoxy-encapsulated circuitry; leakproof IP67 (NEMA 6) construction for reliable sensing in harsh environments
- Outstanding electrical noise immunity
- Dual LED system indicates sensor performance
- Choice of integral cable or quick disconnect connector

* Patent Pending



Visible Red, 680 nm

QM42 150mm Adjustable Field Mode


Models	Range	Cutoff Point	Cable	Supply Voltage	Output Type	Cutoff Point Deviation
QM42VN6AFV150 QM42VN6AFV150Q	5 mm (0.2 in) to Cutoff point	50 to 150 mm (2 to 6 in)	2 m (6.5 ft)	10-30V dc	NPN	
QM42VP6AFV150 QM42VP6AFV150Q			4-pin Euro QD			
		4-pin Euro QD				

Interpretation of Performance Curves

The percentage of deviation indicates a change in the cutoff point for either 18% gray or 6% black targets, relative to the cutoff point set for a 90% reflective white test card.

As an example, the cutoff point decreases 10% for a 6% reflectance black target when the cutoff point is adjusted for 150 millimeters (6 inches) using a 90% reflectance white test card. In other words, the cutoff point for the black target is 135 millimeters (5.3 inches) for this setting.

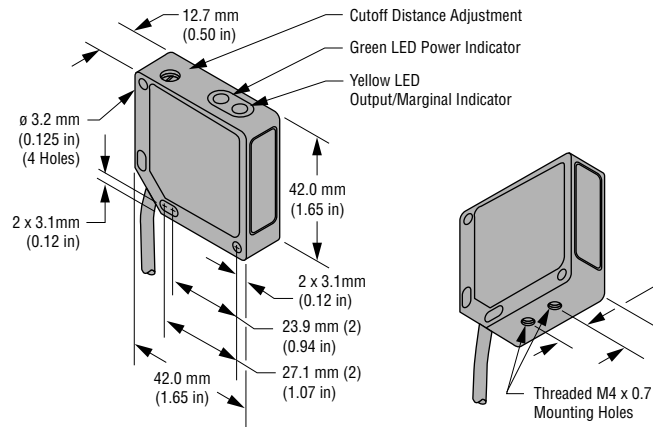
QM42 Series 150 mm Adjustable Field Sensors

Product Specifications	
Sensing Beam	Visible Red, 680 nm
Supply Voltage and Current	10 to 30V dc (10% maximum ripple) at less than 50 milliamps
Supply Protection Circuitry	Protected against reverse polarity and transient voltages
Output Configuration	SPDT (complementary) solid-state dc switch; Choose NPN (current sinking) or PNP (current sourcing) models. <i>Light operate:</i> N.O. output conducts when the sensor sees its own (or the emitter's) modulated light <i>Dark operate:</i> N.C. output conducts when the sensor sees dark
Output Rating	100 mA maximum (each output) Off-state leakage current: <5 microamps at 30V dc; On-state saturation voltage: <1V at 10 mA dc; <1.5V at 100 mA dc
Output Protection Circuitry	Protected against false pulse on power-up and continuous overload or short-circuit of outputs Overload trip point ≥ 150 mA, typical, at 20°C
Output Response Time	1 millisecond on and off
Repeatability of Response	250 microseconds
Sensing Hysteresis	Less than 7% of set cutoff distance
Adjustments	All models except emitters: 12-turn slotted brass cutoff distance adjustment potentiometer (clutched at both ends of travel)
Indicators	Two LEDs: Green and Yellow GREEN glowing steadily = power to sensor is "on" GREEN flashing = output is overloaded YELLOW glowing steadily = light is sensed; normally open output "on" YELLOW flashing = marginal excess gain (1-1.5x) in light condition
Construction	Housings are die-cast zinc alloy with black acrylic polyurethane paint finish; lenses are acrylic
Environmental Rating	IP67; NEMA 6
Connections	2 m (6-1/2 ft) or 9 m (30-ft) attached cable, or 4-pin euro-style quick-disconnect fitting; Cables for QD models are purchased separately
Operating Temperature	-20° to +55°C (-7° to 130°F); Maximum relative humidity 90% at 50°C (non-condensing)
Certifications	

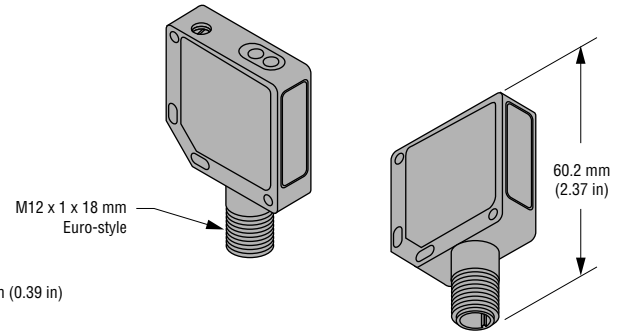
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Dimensions

Cabled models



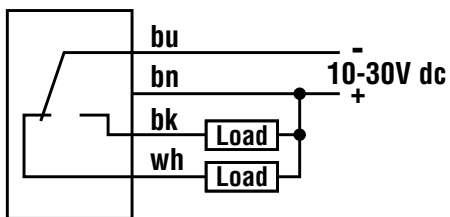
Quick-disconnect models



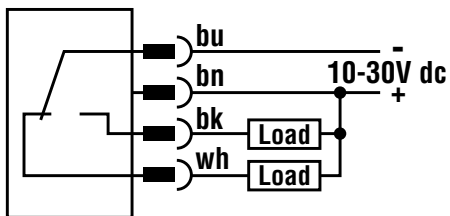
Hookup Diagrams

Sensors with NPN (Sinking) Outputs

Cabled Models

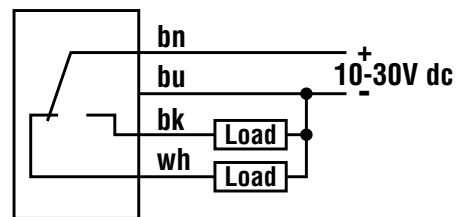


Quick Disconnect Models



Sensors with PNP (Sourcing) Outputs

Cabled Models



Quick Disconnect Models

