



QMT42 Series 400 mm Adjustable Field Sensors

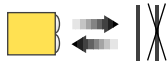
Sensing Cutoff Point is Adjustable from 125 to 400 mm (5 to 16 in)



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 125 to 400 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



QMT42 Adjustable Field Mode


Models	Range	Cutoff Point	Cable	Supply Voltage	Output Type	Cutoff Point Deviation
QMT42VN6AFV400 QMT42VN6AFV400Q	25 mm (1 in) to Cutoff point	125 to 400 mm (5 to 16 in)	2 m (6.5 ft)	10-30V dc	NPN	
QMT42VP6AFV400 QMT42VP6AFV400Q			4-pin Euro QD			
	2 m (6.5 ft)					
			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 400 millimeters (16 inches) using a 90% reflectance white test card. In other words, the cutoff point for the black target is 360 millimeters (14 inches) for this setting.

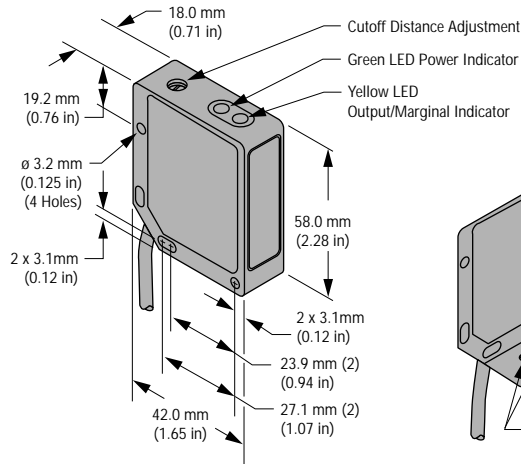
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Product Specifications	
Sensing Beam	Visible Red, 680 nm
Supply Voltage and Current	10 to 30V dc (10% maximum ripple) at less than 50 milliamps
Supply Protection Circuitry	Protected against reverse polarity and transient voltages
Output Configuration	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 NOTE: 100 millisecond delay on power-up; outputs are non-conducting during this time
Repeatability of Response	250 microseconds
Sensing Hysteresis	Less than 7% of set cutoff distance
Adjustments	All models have a 15-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 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	

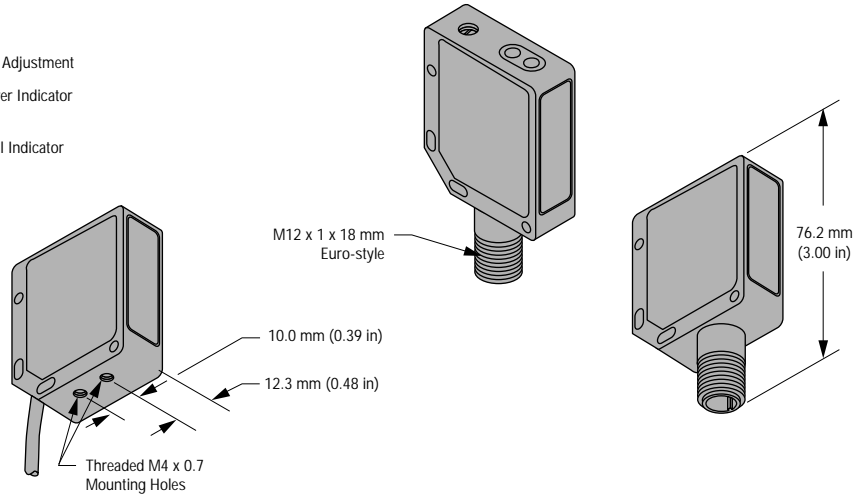
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Dimensions

Cabled models



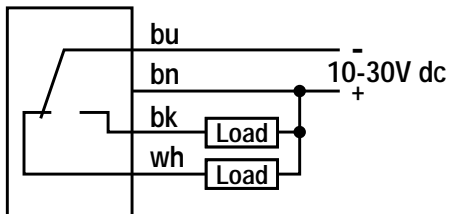
Quick-disconnect models



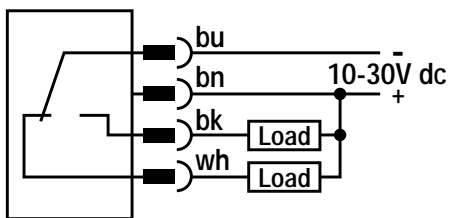
Hookup Diagrams

Sensors with NPN (Sinking) Outputs

Cabled Models

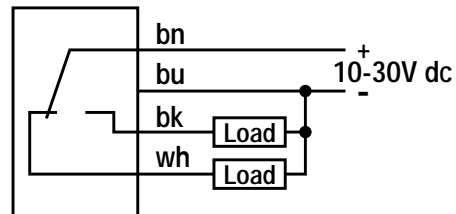


Quick Disconnect Models



Sensors with PNP (Sourcing) Outputs

Cabled Models



Quick Disconnect Models

