QMT42 Series Long-Range Diffuse Sensors

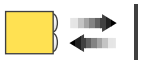
Adjustable Sensing Distance of up to 6 m (20')



Features

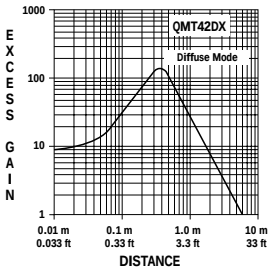
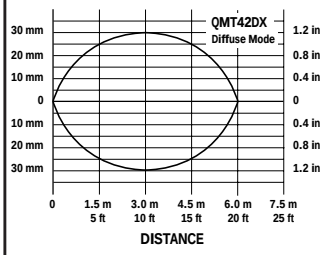
- Powerful, collimated infrared light source and special lensing allows reliable long-range detection of even the darkest objects
- Compact, rugged, low cost self-contained sensors in metal die cast housings
- Leakproof IP67 (NEMA 6) construction for reliable sensing in harsh environments
- Outstanding electrical noise immunity
- Dual LED system indicates sensor performance
- Choice of integral cable or quick disconnect connector





Infrared, 880 nm

QMT42 Long-Range Diffuse Mode

Models	Range	Cable	Supply Voltage	Output Type	Excess Gain	Beam Pattern
					Performance based on 90% reflectance white test card	
QMT42VN6DX **QMT42VN6DXQ**	10 mm (0.4") to 6 m (20')	2 m (6.5') 4-pin Euro QD	10-30V dc	NPN		
QMT42VP6DX **QMT42VP6DXQ**		2 m (6.5') 4-pin Euro QD		PNP		

WARNING . . . Not To Be Used for Personnel Protection

Never use these products as sensing devices for personnel protection. Doing so could lead to serious injury or death.

These sensors do NOT include the self-checking redundant circuitry necessary to allow their use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition. Consult your current Banner Safety Products catalog for safety products which meet OSHA, ANSI and IEC standards for personnel protection.

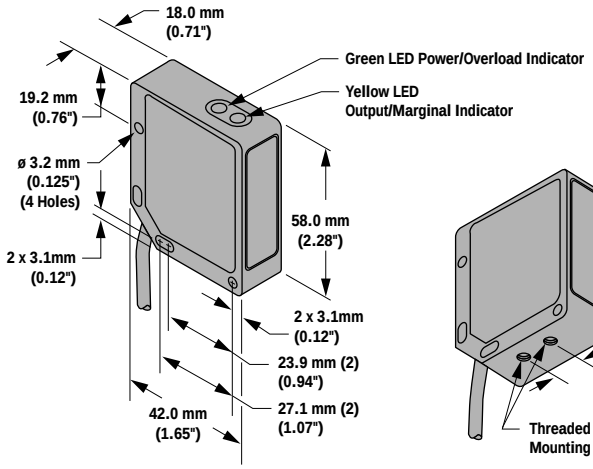
QMT42 Series Long-Range Diffuse Sensors

QMT42DX Specifications

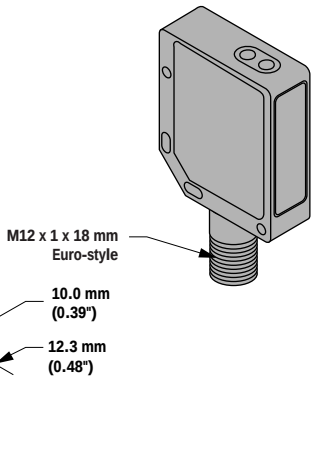
Sensing Beam	Infrared, 880 nm
Supply Voltage and Current	10 to 30V dc (10% maximum ripple) at less than 40 milliamps
Supply Protection Circuitry	Protected against reverse polarity and transient voltages
Output Configuration	SPDT (complementary) solid-state dc switch; Choose NPN (current sinking) or PNP (current sourcing) models. *Light operate:* N.O. output conducts when the sensor sees its own modulated light *Dark operate:* 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 ≥130mA, typical, at 20ºC
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 20% of set sensing distance
Adjustments	4-turn slotted Gain (sensitivity) 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 (6.5') or 9 m (30') attached cable, or 4-pin Euro-style quick-disconnect fitting; Cables for QD models are purchased separately
Operating Temperature	-20º to +55ºC (-4º to +131ºF); Maximum relative humidity 90% at 50ºC (non-condensing)
Certifications	Approvals in process

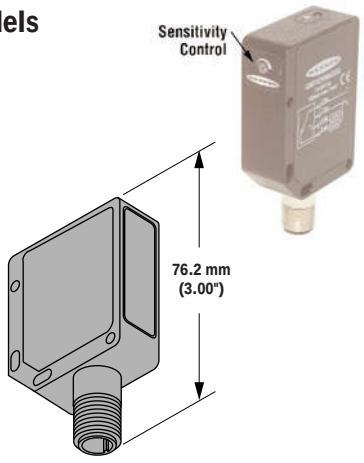
QMT42DX Dimensions

Cabled models



Quick-Disconnect models

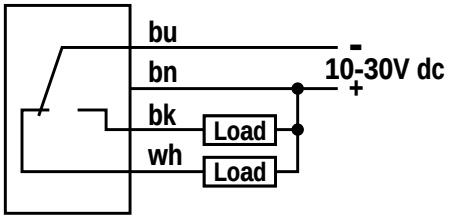




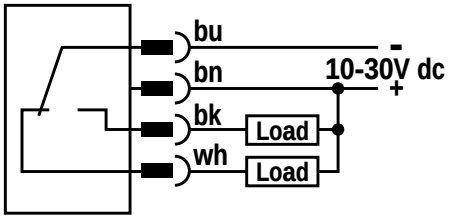
QMT42DX Hookups

Sensors with NPN (Sinking) Outputs

Cabled Models

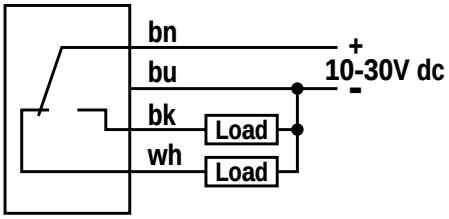


Quick Disconnect Models

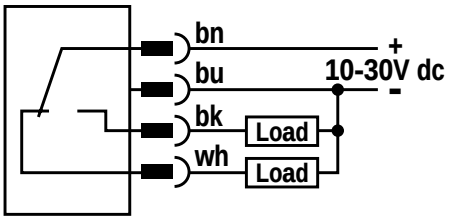


Sensors with PNP (Sourcing) Outputs

Cabled Models

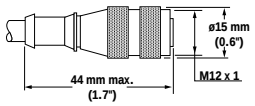
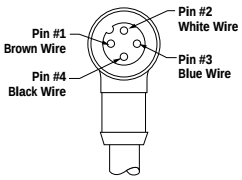
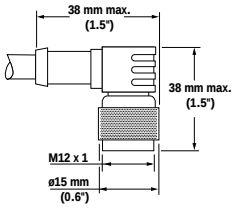


Quick Disconnect Models



Quick-Disconnect (QD) Cables

The following is the selection of cables available for the QMT42 QD models

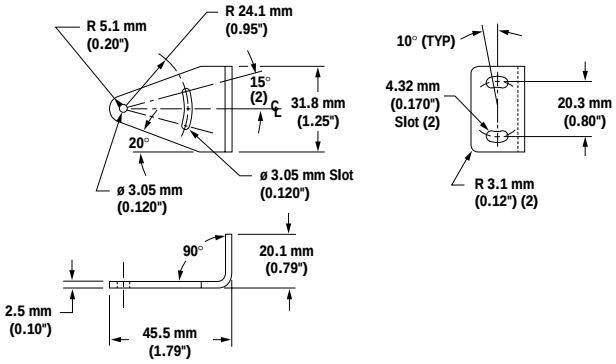
Style	Model	Length	For use with	Dimensions	Pinout
4-pin Euro-Style straight	**MQDC-406** **MQDC-415** **MQDC-430**	2 m (6.5') 5 m (15') 9 m (30')	All QMT42 sensors with quick-disconnect fitting		
4-pin Euro-Style right-angle	**MQDC-406RA** **MQDC-415RA** **MQDC-430RA**	2 m (6.5') 5 m (15') 9 m (30')			

QMT42 Series Long-Range Diffuse Sensors

QMT42 Mounting Brackets

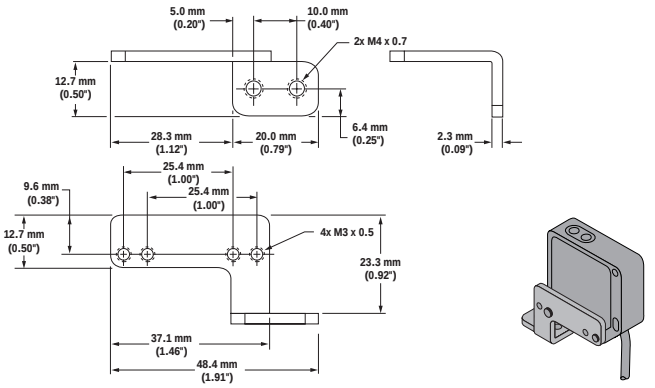
SMB42T

- Right-angle
- Stainless steel



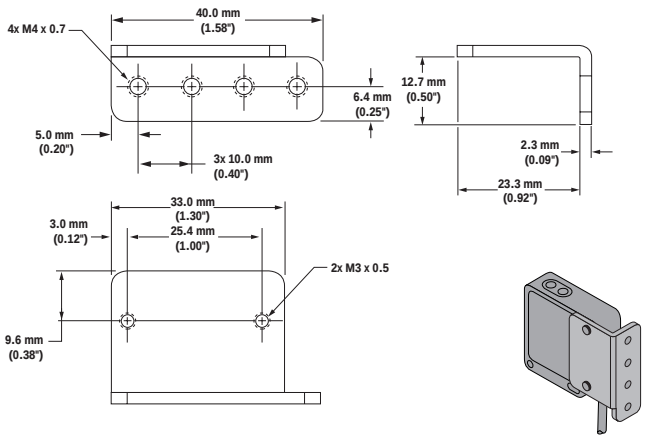
SMB42F

- 13 gauge
- Stainless steel



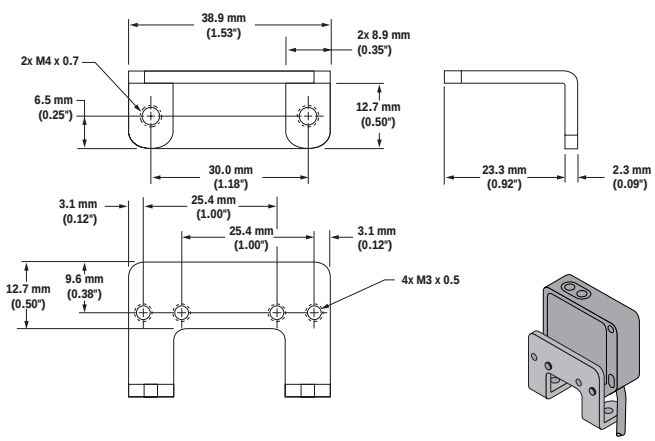
SMB42L

- 13 gauge
- Stainless steel



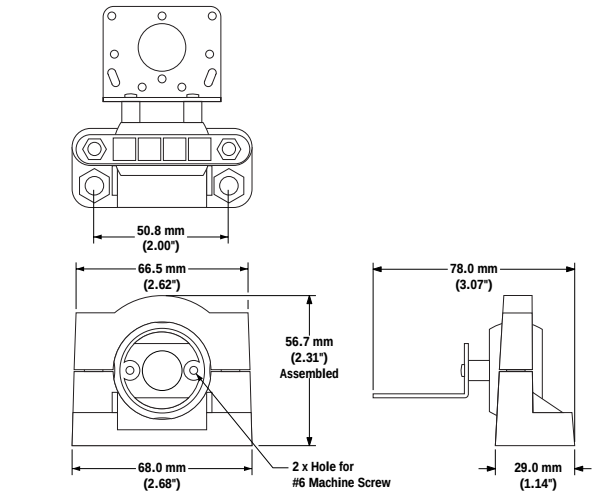
SMB42U

- 13 gauge
- Stainless steel



SMB30SK

- 13 gauge
- Stainless steel and PBT polyester



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