

M12 Sensors

12 mm Barrel Sensors, an Ideal Replacement for Range-Limited Proximity Sensors

The best value
in photoelectrics
just got better.

Fixed-field models offer a superior alternative to proximity sensors.

- ▶ Available in 25, 50 and 75 mm models for higher performance and greater range
- ▶ Detects objects directly in front of another surface, ignoring objects and backgrounds beyond the fixed range
- ▶ Features high excess gain for reliable detection of objects with low reflectivity
- ▶ Can be recessed mounted to prevent damage by contact with work pieces
- ▶ Offers Banner quality and priced lower than competitive 12 mm photoelectrics

Rugged housing is built for outstanding durability.

- ▶ Compact, embeddable 12 mm metal threaded barrel for installing where other sensors can't
- ▶ Visible red beam for easy alignment
- ▶ Two bright yellow LED output indicators and one green LED power indicator for simple status monitoring
- ▶ 10 to 30V dc operation
- ▶ IP67/NEMA 6 housing and fully encapsulated electronics for the toughest manufacturing and inspection applications including: automotive part, metal stamping, packaging, bottling and industrial automation

Wide array of models and sensing modes are available.

- ▶ Fixed-field (25, 50 and 75 mm)
- ▶ Opposed (5 m)
- ▶ Diffuse (400 mm)
- ▶ Polarized retroreflective (1.5 m)
- ▶ Non-polarized retroreflective (2.5 m)

www.bannerengineering.com/m12

1.888.373.6767

BANNER®

more sensors, more solutions

High-performance, low-cost compact sensors from the number one name in photoelectrics.

A complete family of M12 sensors. Banner's M12 sensors offer the performance of larger photoelectrics in a rugged 12 mm package, including three precision fixed-field models with high excess gain for superior background suppression and high performance in low reflectivity applications.






More models. More features. More capabilities. For less than you expect.

- ▶ Rugged, compact 12 mm threaded metal barrel
- ▶ Two LED status indicators for easy operating status monitoring from any direction
- ▶ Visible red sensing beam for easy alignment
- ▶ IP67/NEMA 6 rated housing for the most demanding environments
- ▶ Opposed, polarized and non-polarized retroreflective, diffuse and fixed-field models
- ▶ Three fixed-field models: 25, 50 and 75 mm
- ▶ Compact M12 design with the excellent performance expected of larger photoelectric sensors
- ▶ Lowest cost of all major brand 12 mm photoelectrics
- ▶ Recessed mounting capabilities on fixed-field models
- ▶ Single-turn gain potentiometer on opposed, retroreflective and diffuse models
- ▶ Complementary solid-state outputs; PNP (sourcing) or NPN (sinking), depending on model
- ▶ 2 m or 9 m attached cable, or Euro-style quick disconnect

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M12 Models, 10 to 30V dc



Sensing Mode	Models*	Sensing Beam	Range †	Output	Data Sheet
Opposed  (Effective Beam: 10 mm)	M12E	660 nm Visible Red	5 m	N/A	129721
	M12PR			PNP	
	M12NR			NPN	
Polarized Retroreflective 	M12PLP		1.5 m	PNP	
	M12NLP		NPN		
Retroreflective 	M12PLV		2.5 m	PNP	
	M12NLV		NPN		
Diffuse 	M12PD		400 mm	PNP	
	M12ND		NPN		
Fixed-Field 	M12PFF25		25 mm cutoff	PNP	
	M12NFF25		NPN		
	M12PFF50		50 mm cutoff	PNP	
	M12NFF50	NPN			
	M12PFF75	75 mm cutoff	PNP		
	M12NFF75	NPN			

Reflector



Model	Description	Reflectivity Factor
BRT-84	Round acrylic target	1.4

Bracket



Model	Description
SMBQS12PD	<ul style="list-style-type: none"> Right angle, barrel mount Stainless steel

* Only standard 2 m cable models are listed. For 9 m cable, add suffix **W/30** to the model number (example, **M12E W/30**).

QD Models: A model with a QD requires a mating cable.

For a 4-pin integral Euro-style QD, add suffix **Q8** (example, **M12EQ8**).

For a 150 mm Euro-style PVC pigtail QD, add suffix **Q5** (example, **M12EQ5**).

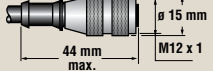
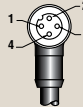
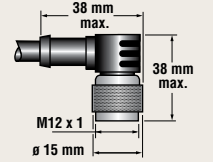
For a 150 mm Euro-style PUR pigtail QD, add suffix **QPMA** (example, **M12EQPMA**).

† Retroreflective range is specified using one model BRT-84 retroreflector. Actual sensing range may be more or less than specified, depending upon efficiency and reflective area of the retroreflector(s) used.

Diffuse and Fixed-Field performance based on use of 90% reflectance white test card.

Quick-Disconnect (QD) Cables



Style	Models	Length	Dimensions	Female Pinout
4-pin Euro-style straight	MQDC-406	2 m		
	MQDC-415	5 m		
	MQDC-430	9 m		
4-pin Euro-style right angle	MQDC-406RA	2 m		1 = Brown 2 = White 3 = Blue 4 = Black
	MQDC-415RA	5 m		
	MQDC-430RA	9 m		

Dimensions



Banner Engineering Corp.



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