

TM18 Series

Heavy-Duty, Compact Sensors



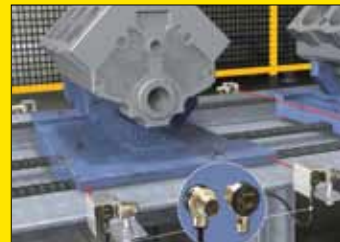
Robust, all-metal, one-piece design— Perfect for tight spaces

Banner's all new TM18 has been redesigned to solve more applications, offering superior detection regardless of environmental conditions. The enhanced nickel-plated, die-cast zinc design of the TM18 EZ-BEAM® is the perfect solution for wash-down applications and industrial environments where a compact and heavy-duty design is vital to prevent damage to the sensor. With a right angle shape, and an 18 mm threaded barrel mount, the TM18 readily fits into tight spaces.

- ▶ EZ-BEAM technology is a reliable, proven solution that requires no adjustments
- ▶ Heavy-duty metal housing prevents damage to sensor
- ▶ Rated to IP69K for resistance in high pressure wash-down applications and harsh environments
- ▶ Fixed field and diffuse sensors have enhanced immunity to fluorescent lighting
- ▶ Opposed and polarized retroreflective modes for maximum sensing reliability
- ▶ Extremely bright LED emitter makes alignment to receiver easy
- ▶ Four-wire NPN/PNP output models or three-wire I/O block compatible outputs available
- ▶ Several mounting accessories available
- ▶ UL and CE approvals
- ▶ -40 to +70 °C operation

A better sensor for the machine builder...

Compact design solves the most
challenging applications



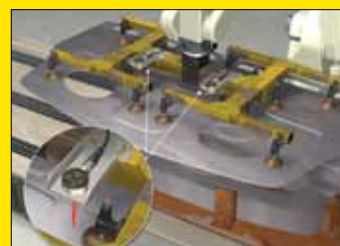
Powertrain

Robust housing prevents sensor damage during machine assembly, transport, maintenance and operation



Stamping

Reliable detection of objects in heavy-duty, industrial environments



Robotic Assembly

Compact housing fits in tight places to prevent sensor damage and avoid personnel catch points

**40-plus years of sensor design experience,
quality control, sales support and cost-
effective solutions:**

- ▶ Banner quality products with global availability
- ▶ Rapid customization with most products shipping in 3 days or less
- ▶ Industry's largest force of application engineers to solve your toughest challenges
- ▶ More than 3,000 factory and local field representatives to serve you

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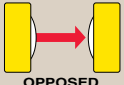

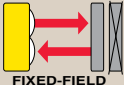

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more sensors, more solutions

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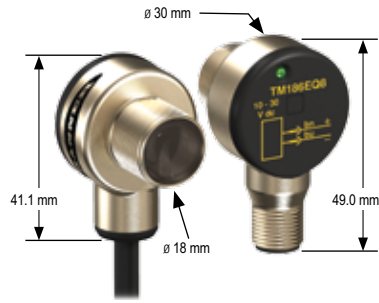
TM18 Series Sensors, 10–30V dc

Sensing Mode	Models*	LED	Range	Output
 OPPOSED	TM186E	Visible Red 625 nm	20 m	None
	TM18AP6R	None		PNP, LO
	TM18RP6R			PNP, DO
	TM18VP6R			PNP, LO/DO
	TM18AN6R			NPN, LO
	TM18RN6R			NPN, DO
	TM18VN6R			NPN, LO/DO
 POLAR RETRO	TM18AP6LP	Visible Red 680 nm	5.5 m **	PNP, LO
	TM18RP6LP			PNP, DO
	TM18VP6LP			PNP, LO/DO
	TM18AN6LP			NPN, LO
	TM18RN6LP			NPN, DO
	TM18VN6LP			NPN, LO/DO
	 FIXED-FIELD			TM18AP6FF25
TM18VP6FF25		PNP, LO/DO		
TM18AN6FF25		NPN, LO		
TM18VN6FF25		NPN, LO/DO		
TM18AP6FF50		50 mm	PNP, LO	
TM18VP6FF50			PNP, LO/DO	
TM18AN6FF50			NPN, LO	
TM18VN6FF50		NPN, LO/DO		
TM18AP6FF100		100 mm	PNP, LO	
TM18VP6FF100			PNP, LO/DO	
TM18AN6FF100			NPN, LO	
TM18VN6FF100			NPN, LO/DO	
 DIFFUSE		TM18AP6DV	Visible Red 660 nm	500 mm
	TM18RP6DV	PNP, DO		
	TM18VP6DV	PNP, LO/DO		
	TM18AN6DV	NPN, LO		
	TM18RN6DV	NPN, DO		
	TM18VN6DV	NPN, LO/DO		

- * 6.5 ft. (2 m) PVC cable models listed.
- 4-pin Euro M12 integral QD models: add suffix **Q8** (for example, **TM186EQ8**)
- 30 ft. (9 m) PVC cable models: add suffix **W/30** (for example, **TM186EW/30**)
- 4-pin Euro M12 pigtail QD models: add suffix **Q5** (for example, **TM186EQ5**)


** Range specified with BRT-84 reflector

Dimensions






For technical information

Quick-Disconnect (QD) Cordsets







Style	Models		Length
	Straight	Right-Angle	
 4-Pin M12 Euro-Style	MQDC-406	MQDC-406RA	2 m
	MQDC-415	MQDC-415RA	5 m
	MQDC-430	MQDC-430RA	9 m

Apertures

Description	Units	Models
 Kit includes 3 round apertures of 0.5, 1.0 and 2.5 mm diameter	3	AP18SCN*
 Kit includes 3 rectangular apertures of 0.5, 1.0 and 2.5 mm diameter	3	AP18SRN*
 Kit with glass lens to protect plastic sensor lens from chemical environments	1	APG18S

* Kits include Teflon® FEP® lens, o-ring and thread-on housing

Brackets

Models	Description	Models	Description	Models	Description
 SMB18AFAM10	<ul style="list-style-type: none"> • Protective, swivel bracket with tilt and pan movement for precision adjustment • Easy sensor mounting to extruded rail T-slots 	 SMB18FAM10	<ul style="list-style-type: none"> • Swivel bracket with tilt and pan movement for precision adjustment • Easy sensor mounting to extruded rail T-slots 	 SMBAMS18RA	<ul style="list-style-type: none"> • Right-angle SMBAMS series bracket with articulation slots for 90+° rotation • 12-ga. cold-rolled steel
 SMB18A	<ul style="list-style-type: none"> • Right-angle bracket with slotted curve for versatile orientation • 12-ga. stainless steel 	 SMBAMS18P	<ul style="list-style-type: none"> • Flat SMBAMS series bracket with articulation slots for 90+° rotation • 12-ga. cold-rolled steel 	 SMBT18Y	<ul style="list-style-type: none"> • Die-cast bracket for 18 mm holes • For use with Euro-style QD connectors and cabled versions