

# TM18 Series

## Heavy-Duty, Compact Sensors



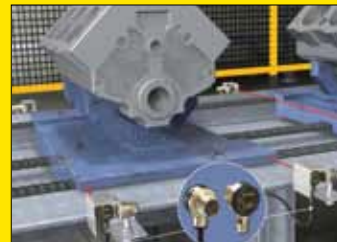
### Robust, all-metal, one-piece design— Perfect for tight spaces

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

[www.bannerengineering.com](http://www.bannerengineering.com)

**1.888.373.6767**

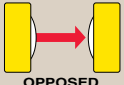

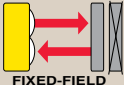

**BANNER®**

more sensors, more solutions

[bannerengineering.com](http://bannerengineering.com)



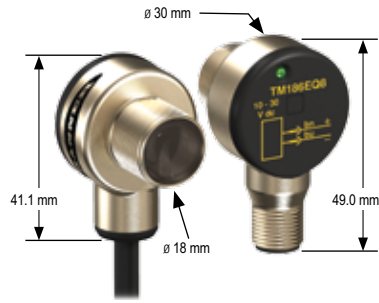
# TM18 Series Sensors, 10–30V dc

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	Visible Red 660 nm
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"> <li>• Protective, swivel bracket with tilt and pan movement for precision adjustment</li> <li>• Easy sensor mounting to extruded rail T-slots</li> </ul>	 SMB18FAM10	<ul style="list-style-type: none"> <li>• Swivel bracket with tilt and pan movement for precision adjustment</li> <li>• Easy sensor mounting to extruded rail T-slots</li> </ul>	 SMBAMS18RA	<ul style="list-style-type: none"> <li>• Right-angle SMBAMS series bracket with articulation slots for 90+° rotation</li> <li>• 12-ga. cold-rolled steel</li> </ul>
 SMB18A	<ul style="list-style-type: none"> <li>• Right-angle bracket with slotted curve for versatile orientation</li> <li>• 12-ga. stainless steel</li> </ul>	 SMBAMS18P	<ul style="list-style-type: none"> <li>• Flat SMBAMS series bracket with articulation slots for 90+° rotation</li> <li>• 12-ga. cold-rolled steel</li> </ul>	 SMBT18Y	<ul style="list-style-type: none"> <li>• Die-cast bracket for 18 mm holes</li> <li>• For use with Euro-style QD connectors and cabled versions</li> </ul>