

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

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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

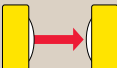

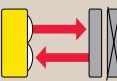
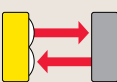
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1.888.373.6767



more sensors, more solutions

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 | 25 mm | PNP, LO |
| | 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 | PNP, LO |
| | 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.

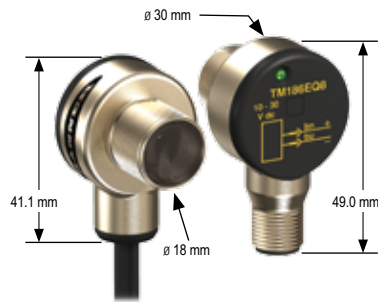
* 4-pin Euro M12 integral QD models: add suffix **Q8** (for example, **TM186EQ8**)

* 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 |