

T-GAGE® M18T Sensors

Powerful Temperature Sensing Made Easy



Robust, Non-Contact Sensor for Monitoring Temperature Changes

The T-GAGE® M18T is a passive, non-contacting temperature-based device that combines the ease-of-use of a photoelectric with the brain power of a more sophisticated sensor. Using a thermopile device to reliably detect objects that are hotter or colder than the ambient condition, the M18T is used to verify and inspect control processes.

- ▶ Detects temperature difference between object and surroundings
- ▶ Monitors user defined window using analog or discrete outputs
- ▶ Senses temperatures from 0° to 300° C
- ▶ Sensitive to temperature contrasts of 3° C or more
- ▶ Works even if target object is not moving
- ▶ Requires no emitter, controller or external amplifier
- ▶ Features easy-to-use TEACH-mode programming; no potentiometer adjustments
- ▶ Fully encapsulated electronics for harsh sensing environments
- ▶ Available in 3 models for different target sizes and distances

⚠ The T-GAGE M18T sensor is not intended for absolute temperature measurement or for safety-related fire detection use.

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**Compact sensor
for reliable
detection of
changes as small
as 3° C**



**Temperature sensing
for a wide variety of
industries**

- ▶ Hot product detection
- ▶ Flame process verification
- ▶ Hot glue detection and monitoring
- ▶ Heat seal monitoring
- ▶ Cold product detection
- ▶ Roller monitoring
- ▶ Ejection verification
- ▶ Process equipment and fixture monitoring
- ▶ Gearbox monitoring



**Rugged, easy-to-use sensor in
a choice of models**

- ▶ 18 mm stainless steel threaded barrel
- ▶ A choice of "Three Distance to Spot Ratios" for different target sizes and distances
 - General-purpose sensing: 8:1
 - Food packaging: 6:1
 - Narrow-field-of view for smaller targets: 14:1
- ▶ Discrete (bipolar NPN/PNP) and analog (0-10V or 4 to 20 mA) models
- ▶ Static and dynamic TEACH-mode programming
- ▶ Fast 25 millisecond response time
- ▶ Leakproof design—IP67; NEMA 6 rated
- ▶ 2 m or 9 m attached cable, or Euro-style quick-disconnect

Advanced Monitor Software

- ▶ Shows threshold adjustment
- ▶ Provides real-time information display through a PC



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T-GAGE® M18T Models

Model	Cable*	D:S Ratio	Sensing Face	Supply Voltage	Length (L)	Output	Data Sheet			
M18TB8	2 m	8:1	Integrated lens (general purpose)	10-30V dc	81.2 mm	Bipolar (NPN/PNP)	120632			
M18TB8Q	5-pin Euro QD				91.3 mm					
M18TB6E	2 m	6:1	Enclosed plastic face (for food industry use)		81.7 mm					
M18TB6EQ	5-pin Euro QD				91.8 mm					
M18TB14	2 m	14:1	Germanium lens (narrow field of view)		86.5 mm					
M18TB14Q	5-pin Euro QD				96.6 mm					
M18TUP8	2 m	8:1	Integrated lens (general purpose)		12-30V dc			81.2 mm	0-10V dc Analog plus 1 PNP Alarm	123698
M18TUP8Q	5-pin Euro QD							91.3 mm		
M18TUP6E	2 m	6:1	Enclosed plastic face (for food industry use)					81.7 mm		
M18TUP6EQ	5-pin Euro QD							91.8 mm		
M18TUP14	2 m	14:1	Germanium lens (narrow field of view)	86.5 mm						
M18TUP14Q	5-pin Euro QD			96.6 mm						
M18TIP8	2 m	8:1	Integrated lens (general purpose)	12-30V dc		81.2 mm	4-20 mA Analog plus 1 PNP Alarm	123698		
M18TIP8Q	5-pin Euro QD					91.3 mm				
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M18TIP14	2 m	14:1	Germanium lens (narrow field of view)		86.5 mm					
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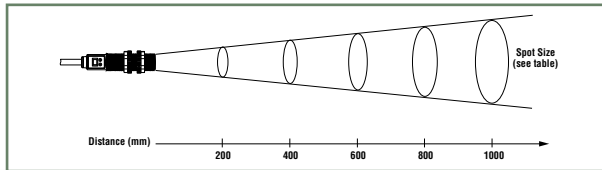
Dimensions



Quick-Disconnect (QD) Cordsets

Style	Model	Length
5-pin Euro-Style straight, with shield	MQDEC2-506	2 m
	MQDEC2-515	5 m
	MQDEC2-530	9 m
5-pin Euro-Style right-angle, with shield	MQDEC2-506RA	2 m
	MQDEC2-515RA	5 m
	MQDEC2-530RA	9 m





* For 9 m cable, add suffix **W30** to the 2 m model number (example, **M18TB8 W30**).
A model with a QD requires an accessory mating cordset.






Sensing Field of View

Sensor D:S Ratio	Distance From Sensor Face Versus Spot Size										Distance (mm)
	100	200	300	400	500	600	700	800	900	1000	
6:1	17	33	50	67	83	100	117	133	150	167	Spot Size (mm)
8:1	13	25	38	50	63	75	88	100	113	125	
14:1	7	14	21	29	36	43	50	57	64	71	

Additional Accessories

Model	Description
 APC-18 Air-Purge Collar	<ul style="list-style-type: none"> Prevents water, dust and other airborne contaminants from collecting on the sensor lens Helps cool sensors affected by ambient heat in sensing environment
 LAT1812 Laser Alignment Tool	<ul style="list-style-type: none"> Includes one SMB1812 bracket and M12 laser emitter Enables easy sensor alignment at long distances Provides a precise laser spot for aiming sensor
 DPB1 Portable Programming Box	<ul style="list-style-type: none"> Visual status indicators Remote TEACH button Serial communication link for PC interface. Optional 115V ac power supply available (SP-DPB1)
 P/N 63210 RJ11 to DB9 Interface Cable	<ul style="list-style-type: none"> DPB1 to PC serial cable

Brackets

Model	Description
 SMB18A	<ul style="list-style-type: none"> Right-angle mounting bracket with a curved slot for versatile orientation 12-gauge stainless steel, 18 mm sensor mounting hole Clearance for M4 (#8) hardware
 SMB18UR	<ul style="list-style-type: none"> 2-piece swivel bracket 300 series stainless steel, 18 mm sensor mounting hole Stainless steel swivel locking hardware included
 SMB18SF	<ul style="list-style-type: none"> 18 mm swivel bracket with M18 x 1 internal thread Black thermoplastic polyester Stainless steel swivel locking hardware included

NOTE: Take advantage of the full capabilities of the T-GAGE by using the following items:

- Advance Monitor Software
- DPB1 Portable Demo Box with SP-DPB1 115V ac power supply/battery eliminator
- DPB1 to PC interface cable

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