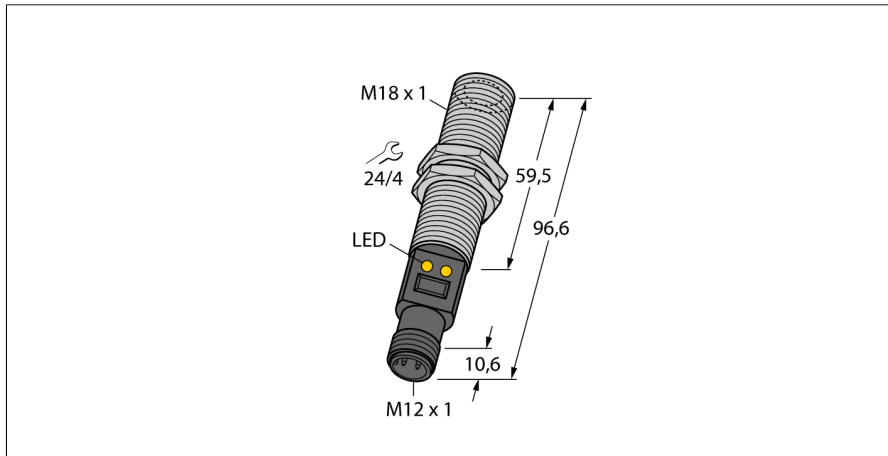# temperature sensors
infrared sensor
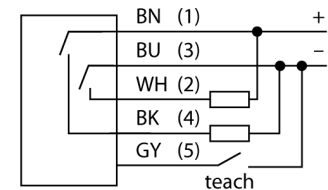# M18TB14Q

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- **connection via M12 x 1 connector**
- **D:S ratio 14:1**
- **Operating voltage 10…30 VDC**
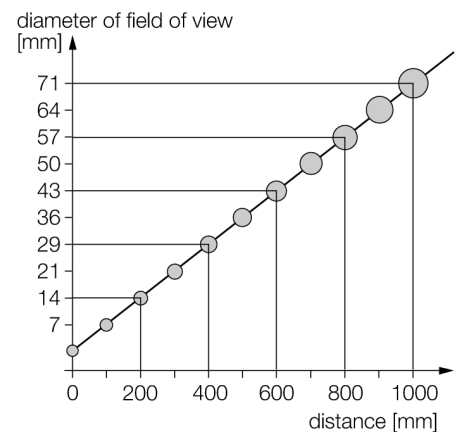- **Switchpoint adjustable via teach-in**
- **Temperature range 0…300°C**

Wiring Diagram

Type code	M18TB14Q
Ident no.	3073652

Operating mode	Infrared sensor
Ambient temperature	-20…+70 °C
Temperature range	≥0…≤300 °C
Switching point accuracy	± 0.5 °C

Operating voltage	10… 30VDC
DC rated operational current	≤ 100 mA
No-load current I_0	≤ 35 mA
Short-circuit protection	yes/ cyclic
Reverse polarity protection	yes
Output function	NO contact, PNP/NPN
Switching frequency	≤ 20 Hz
Readiness delay	≤ 1.5 s

Construction	cylindrical/threaded, M18T
Dimensions	96.6 mm
Housing material	Stainless steel, V2A (1.4301)
Lens	semi-metal, Germanium
Connection	Flange connector, M12 x 1
Protection class	IP67

Power-on indication	LED green
Switching state	LED yellow

Functional principle

Temperature sensors are used in applications where temperatures for control and optimisation of processes must be captured and monitored. The sensor operates only as a receiver. The thermal radiation of an object within a wave length range of 8 to 14 µm is transformed into an electrical signal via a thermopile and then further processed to become an output signal. Here the D:S (distance: spot) ratio is very important because it specifies the diameter of the spot at a defined distance. The sensor is optimally aligned, if the spot is completely covered by the object, whose temperature is to be monitored.
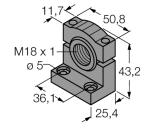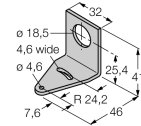
D:S ratio

Industrial
Automation

Accessories

Type code	Ident no.	Description	
SMB18A	3033200	Mounting bracket, rectangular, stainless steel, for sensors with 18mm thread	
SMB18SF	3052519	Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable	
SMB18UR	3052517	Mounting bracket, for wall mounting, stainless steel 300, 2-piece, rotatable, 18 mm bore hole, srew set included	
LAT1812	3074262	Laser alignment aid, visible red, contains M12 laser emitter (laser class 2) and mounting bracket SMB1812, for sensors with 18 mm thread, 10 … 30 VDC supply necessary	

Wiring accessories

Type code	Ident no.	Description	
WKC4.5T-2/TEL	6625028	Connection cable, female M12, angled, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com	
RKC4.5T-2/TEL	6625016	Connection cable, female M12, straight, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com	