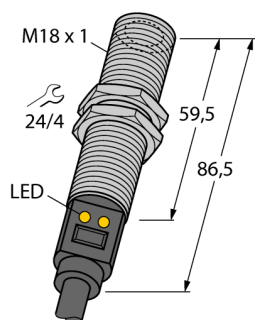


# Temperature sensor

## Passive Infrared Sensor

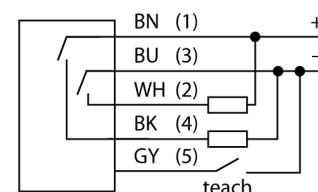
### With Switching Output

### M18TB14 W/30



- Connection via cable, 2 m
- D:S ratio 14:1
- Operating voltage 10...30 VDC
- Switching point adjustable via teach-in
- Temperature measuring range 0...300 °C

#### Wiring Diagram

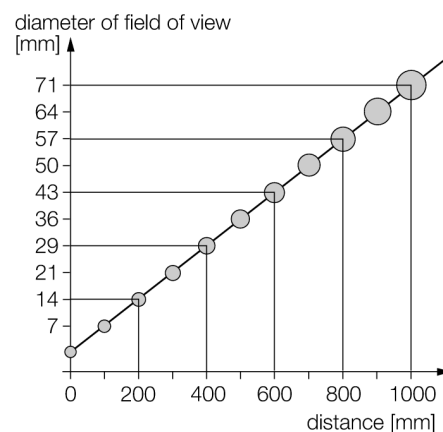


Type	M18TB14 W/30
ID	3073653
<b>General data</b>	
Function	Proximity switch
D:S ratio	14:1
Measuring range	0...300 °C
	-4...158 °F
Factory setting	-20...280 °C
	-4...536 °F
<b>Electrical data</b>	
Operating voltage $U_o$	10...30 VDC
DC rated operating current $I_o$	≤ 100 mA
No-load current $I_o$	≤ 35 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
Readiness delay	≤ 1500 ms
Response time typical	< 25 ms
<b>Mechanical data</b>	
Design	Tube, M18T
Dimensions	Ø 18 x 86.5 mm
Thread length	59.5 mm
Housing material	Metal, Stainless steel, Grey
Lens	semi-metal, Germanium
Electrical connection	Cable, 9 m, PVC
Number of cores	5
Core cross-section	0.5 mm <sup>2</sup>
Process connection	M18 × 1
Ambient temperature	-20...+70 °C
Storage temperature	-25...+75 °C
Protection class	IP67

#### Functional principle

Temperature sensors are used in applications where temperatures for control and optimization 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  $\mu\text{m}$  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



Power-on indication	LED, Green
Switching state	LED, Yellow
Included in delivery	2 M18 × 1 metal hexagon nuts
Tests/approvals	
Approvals	CE