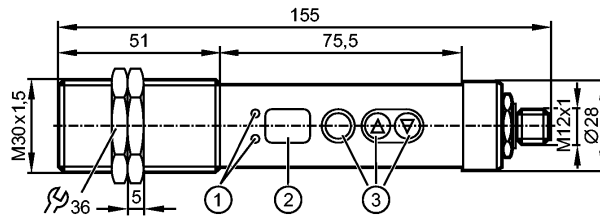


TW7000

TW-023CMDM30-QFPKG/US

Temperature sensors



- 1: LEDs (switching status)
- 2: 7-segment LED display (2 digits)
- 3: Programming buttons



Product characteristics

Infrared temperature sensor
Threaded type M30 x 1.5
M12 connector
wave length range 8...14 μm
2 switching outputs
7-segment LED display (2 digits)
Measuring range: 50...500 °C / 122...932 °F

Application

Application	asphalt, coated metal, liquids, glass, rubber, wood, ceramics, plastics, lacquers, food products, paper, fabric
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Electrical data

Electrical design	DC PNP
Operating voltage [V]	10...34 DC
Current consumption [mA]	30 (24 V)
Protection class	III

Inputs

Test input	
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Outputs

Output	2 switching outputs
Output function	normally open / closed programmable
Current rating [mA]	150
Voltage drop [V]	< 2.5
Short-circuit protection	yes (non-latching)
Overload protection	yes

Measuring / setting range

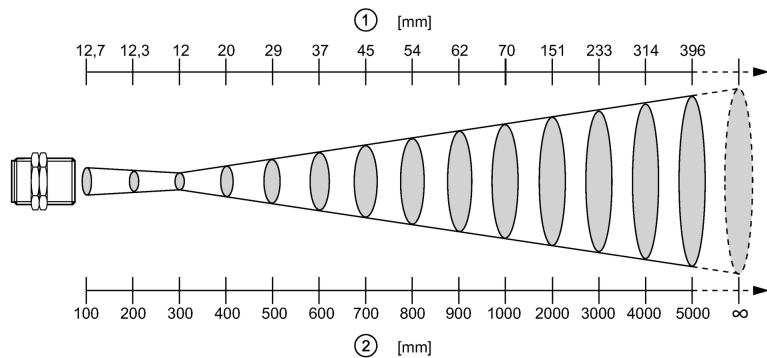
Measuring range	50...500 °C	122...932 °F
Factory setting	SP1 = 25 %; rP1 = 23 % SP2 = 75 %; rP2 = 73 %	
wave length range [μm]	8...14	

TW7000

TW-023CMDM30-QFPKG/US

Temperature sensors

Measuring range / distance [mm]



1: diameter of the measured spot; 2: measuring distance

Setting range		
Set point, SP	50...495.5 °C	122...923.9 °F
Reset point, rP	50...495.5 °C	122...923.9 °F
in steps of	4.5 °C	8.1 °F
Resolution		
Switching output [K]		4.5
Display [K]		4.5

Accuracy / deviations

Accuracy	< ± 1 %; < ± 1 % of MEW (degree of emission = 1 and T = 23 °C)	
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Reaction times

Response time Switching output[ms]	< 100
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Software / programming

Adjustment of the switch point	Programming buttons
Programming options	hysteresis; NO / NC; switch-on / switch-off delay

Environment

Ambient temperature [°C]	0...65
Storage temperature [°C]	-20...80
Max. relative air humidity	< 95 % (non condensing)
Protection	IP 65

Tests / approvals

EMC	DIN EN 61000-4-2 ESD:	4 kV CD / 8 kV AD
	DIN EN 61000-4-3 HF radiated:	10 V/m
	DIN EN 61000-4-4 Burst:	2 kV coupling clamp
	DIN EN 61000-4-5 Surge:	0.5 / 1 kV
	DIN EN 61000-4-6 HF conducted:	10 V
	EN 55011 (Emission):	class B
Shock resistance	DIN EN 60068-2-27	30 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	5 g (10...2000 Hz)
MTTF [Years]		150

Mechanical data

Housing materials	threaded sleeve: stainless steel (303S22); polyester
Lens material	Infrared transparent crystal lens with anti-reflex coating
Weight [kg]	0.335

Displays / operating elements

Display	Switching status 2 x LED yellow Function display 7-segment LED display 2-digit Measured values 7-segment LED display 2-digit
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TW7000

TW-023CMDM30-QFPKG/US

Temperature sensors

Operating elements	3 Pushbuttons
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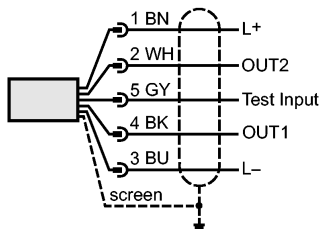
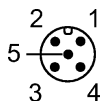
Electrical connection

Connection	M12 connector
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Wiring

Core colors

- BK black
- BN brown
- BU blue
- GY grey
- WH white



Accessories

Accessories (included)	2 lock nuts
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Remarks

Remarks	MW = measured value MEW = final value of the measuring range
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Pack quantity	[piece]	1
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