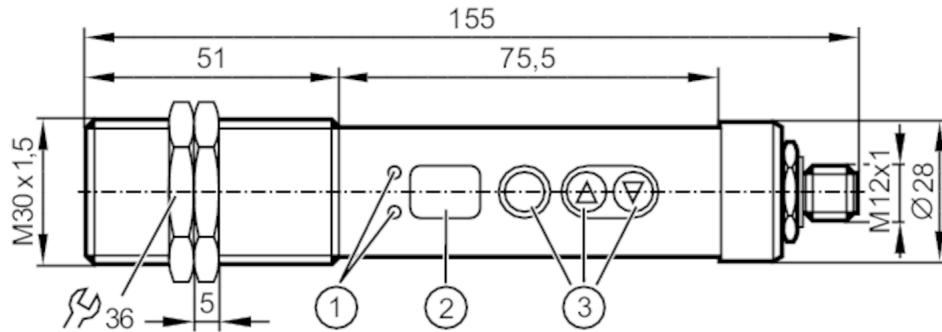


# TW7000



## Infrared temperature sensor

TW-023CMDM30-QFPKG/US



- 1 LEDs Switching status
- 2 7-segment LED display 2-digit
- 3 Programming buttons



### Product characteristics

Number of inputs and outputs	Number of digital outputs: 2	
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

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

### Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2
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### Inputs

Test input	test function active at $U(\text{test}) > 9 \text{ V}$
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### Outputs

Total number of outputs	2
Output signal	switching signal
Electrical design	PNP
Number of digital outputs	2
Output function	normally open / closed; (configurable)
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	150
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes

### Monitoring range

Wave length range [µm]	8...14
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# TW7000



## Infrared temperature sensor

TW-023CMDM30-QFPKG/US

Measuring/setting range		
Measuring range	50...500 °C	122...932 °F
Factory setting	SP1 = 25 %; rP1 = 23 %; SP2 = 75 %; rP2 = 73 %	
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		
Resolution of switching output	[K]	4.5
Resolution of display	[K]	4.5
Accuracy / deviations		
Accuracy	[K]	< ± 1 %; (< ± 1 % of MEW (degree of emission = 1 and T = 23 °C))
Reaction times		
Response time	[ms]	100
Software / programming		
Adjustment of the switch point	Programming buttons	
Parameter setting options	Hysteresis; normally open / closed; switch-on/switch-off delay	
Operating conditions		
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		
Weight	[g]	350
Housing		Threaded type
Dimensions	[mm]	M30 x 1.5 / L = 155
Thread designation		M30 x 1.5
Material		threaded sleeve: stainless steel (1.4305 / 303); polyester
Lens material		Infrared transparent crystal lens with anti-reflex coating
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
Operating elements	3	Pushbuttons

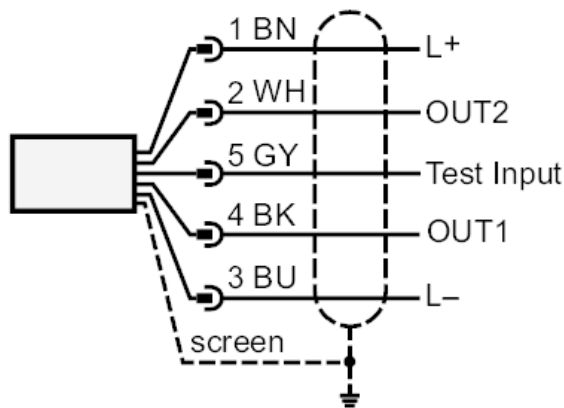
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## Infrared temperature sensor

TW-023CMDM30-QFPKG/US

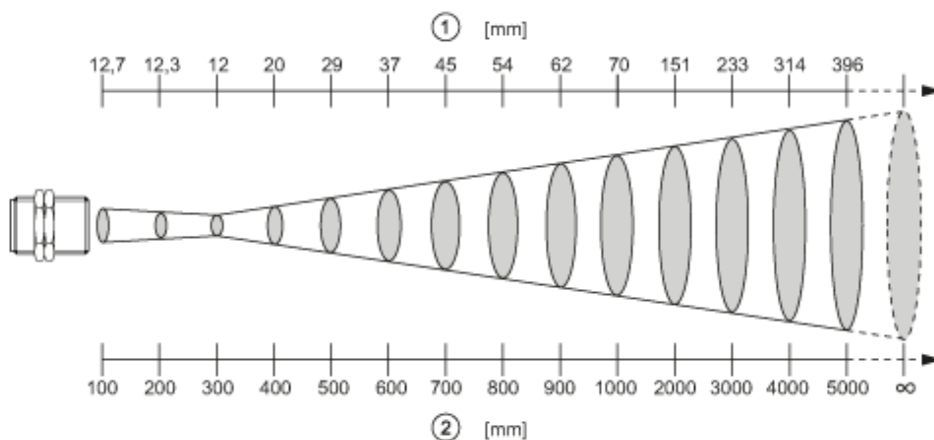
Accessories	
Items supplied	lock nuts: 2
Remarks	
Remarks	MW = Measured value MEW = Final value of the measuring range
Pack quantity	1 pcs.
Electrical connection	
Connection	



Core colors :  
 BK = black  
 BN = brown  
 BU = blue  
 GY = grey  
 WH = white

Connector: 1 x M12

## Diagrams and graphs



- 1 diameter of the measured spot
- 2 measuring distance