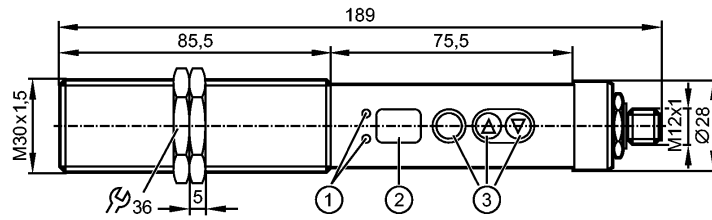


TW7001

TW-006CNDM30-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 1.0...1.7 µm
2 switching outputs
7-segment LED display (2 digits)
Measuring range: 250...1250 °C / 482...2282 °F

Application

Application	tempering temperatures, graphite, ceramics, metals, forging, sintering, heat treatment, rolling
-------------	-------------------------------------------------------------------------------------------------

Electrical data

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

Inputs

Test input	
------------	--

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

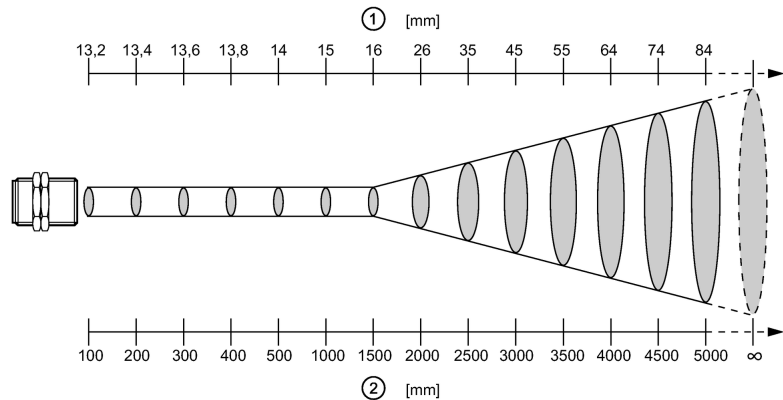
Measuring range	250...1250 °C	482...2282 °F
Factory setting	SP1 = 25 %; rP1 = 23 % SP2 = 75 %; rP2 = 73 %	
wave length range [µm]	1.0...1.7	

TW7001

TW-006CNDM30-QFPKG/US

Temperature sensors

Measuring range / distance [mm]



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

Setting range		
Set point, SP	250...1240 °C	482...2264 °F
Reset point, rP	250...1240 °C	482...2264 °F
in steps of	10 °C	18 °F
Resolution		
Switching output [K]	10	
Display [K]	10	

Accuracy / deviations

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

Reaction times

Response time Switching output[ms]	≤ 2	
------------------------------------	-----	--

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]	117	

Mechanical data

Housing materials	threaded sleeve: stainless steel (303S22); polyester	
Lens material	tempered optical glass	
Weight [kg]	0.425	

Displays / operating elements

Display	Switching status 2 x LED yellow	
---------	---------------------------------	--

TW7001

TW-006CNDM30-QFPKG/US

Temperature sensors

	Function display 7-segment LED display 2-digit Measured values 7-segment LED display 2-digit
Operating elements	3 Pushbuttons

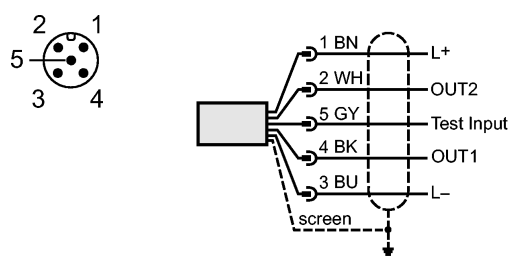
Electrical connection

Connection	M12 connector
------------	---------------

Wiring

Core colors

BK	black
BN	brown
BU	blue
GY	grey
WH	white



The diagram shows a 5-pin connector with pins numbered 1 to 5. The wiring connections are as follows:

- Pin 1 (BN) connects to L+
- Pin 2 (WH) connects to OUT2
- Pin 5 (GY) connects to Test Input
- Pin 4 (BK) connects to OUT1
- Pin 3 (BU) connects to L-
- The screen connects to ground.

Accessories

Accessories (included)	2 lock nuts
------------------------	-------------

Remarks

Remarks	MW = measured value MEW = final value of the measuring range
---------	-----------------------------------------------------------------

Pack quantity	[piece]	1
---------------	---------	---