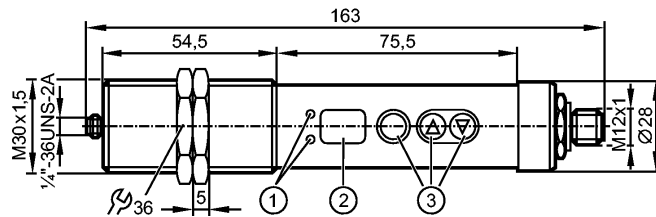


**TW7011**

TW-008CODM30-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: 350...1350 °C / 662...2462 °F

**Application**

Application	tempering temperatures, graphite, ceramics, metals, forging, sintering, heat treatment, rolling
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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	350...1350 °C	662...2462 °F
Factory setting	SP1 = 25 %; rP1 = 23 %   SP2 = 75 %; rP2 = 73 %	
wave length range [µm]	1.0...1.7	
Measuring range / distance [mm]	See data sheet for measuring head (E35060)	
Setting range		
Set point, SP	350...1340 °C	662...2444 °F
Reset point, rP	350...1340 °C	662...2444 °F
in steps of	10 °C	18 °F
Resolution		
Switching output [K]	10	

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Display	[K]	10
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**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]	≤ 2	
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**Software / programming**

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

Ambient temperature	[°C]	0...65
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Storage temperature	[°C]	-20...80
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Max. relative air humidity	< 95 % (non condensing)	
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Protection	IP 65	
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**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)
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Vibration resistance	DIN EN 60068-2-6	5 g (10...2000 Hz)
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MTTF	[Years]	117
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**Mechanical data**

Housing materials	threaded sleeve: stainless steel (303S22); polyester	
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Lens material	tempered optical glass	
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Connection	¼"-36UNS-2A	
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Weight	[kg]	0.366
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**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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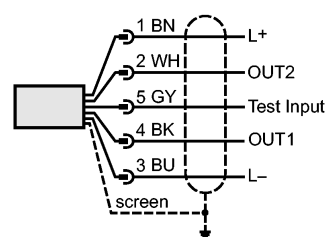
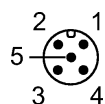
Operating elements	3 Pushbuttons
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**Electrical connection**

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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Accessories (optional)	Fiber optics E35061 / E35062; Measuring head E35060	
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**Temperature sensors**

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