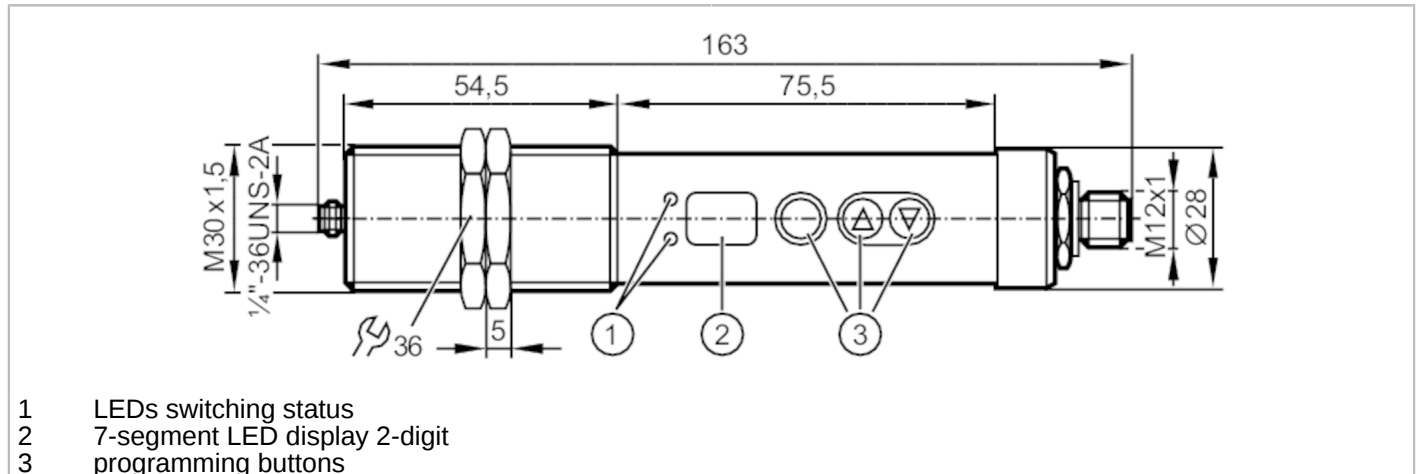


# TW7011



## Infrared temperature sensor

TW-008CODM30-QFPKG/US



| Product characteristics                              |  |
|--|--|
| Number of inputs and outputs                         | Number of digital outputs: 2   |
| Measuring range                                      | 350...1350 °C<br>662...2462 °F   |
| Application  |  |
| Application  | tempering temperatures; graphite; ceramics;<br>metals; forging; sintering; heat treatment; rolling |
| 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   |
| Inputs   |  |
| Test input   | test function active at $U(\text{test}) > 9 \text{ V}$   |
| Outputs  |  |
| Total number of outputs                              | 2  |
| Output signal  | switching signal   |
| Electrical design                                    | PNP  |
| Number of digital outputs                            | 2  |
| Output function                                      | normally open / normally closed; (parameterisable)   |
| 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                     | pulsed   |
| Overload protection                                  | yes  |
| Detection zone                                       |  |
| Wave length range [µm]                               | 1...1.7  |

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| Measuring/setting range            |   |                     |
|------------------------------------|---|---------------------|
| Measuring range                    | 350...1350 °C   | 662...2462 °F       |
| Factory setting                    | SP1 = 25 %; rP1 = 23 %; SP2 = 75 %; rP2 = 73 %                          |                     |
| 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                         |   |                     |
| Resolution of switching output [K] | 10  |                     |
| Resolution of display [K]          | 10  |                     |
| Accuracy / deviations              |   |                     |
| Accuracy [K]                       | < ± 1 %; (of VMR (degree of emission = 1 and T = 23 °C))                |                     |
| Response times                     |   |                     |
| Response time [ms]                 | 2   |                     |
| Software / programming             |   |                     |
| Adjustment of the switch point     | programming buttons   |                     |
| Parameter setting options          | Hysteresis; normally open / normally 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]                       | 117   |                     |
| Mechanical data                    |   |                     |
| Weight [g]                         | 374   |                     |
| Housing                            | threaded type   |                     |
| Dimensions [mm]                    | M30 x 1.5 / L = 163   |                     |
| Thread designation                 | M30 x 1.5   |                     |
| Fibre optic connection             | ¼"-36UNS-2A   |                     |
| Materials                          | threaded sleeve: stainless steel (1.4305 / 303); polyester              |                     |
| Lens material                      | tempered optical glass  |                     |

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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 |
| Operating elements            | 3                | pushbuttons                    |

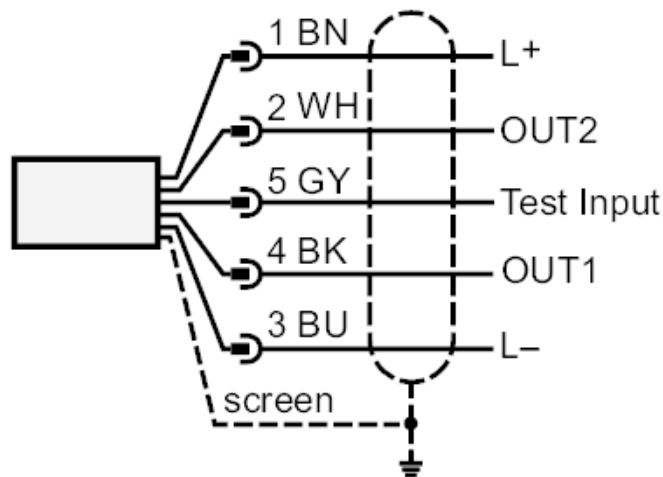
| Accessories            |                                |
|------------------------|--------------------------------|
| Accessories (supplied) | lock nuts: 2                   |
| Accessories (optional) | fibre optics:, E35061 / E35062 |
|                        | Measuring head:, E35060        |

| Remarks       |  |
|---------------|--|
| Remarks       | MW = measured value                      |
|               | MEW = Final value of the measuring range |
| Pack quantity | 1 pcs.                                   |

### Electrical connection

#### Connection



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

Connector: 1 x M12