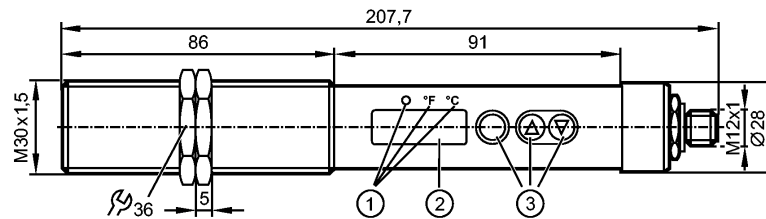




TW-150KLBM30-KFDKG/US

Temperature sensors



- 1: LEDs (display unit / switching status)
- 2: 7-segment LED display (4 digits)
- 3: Programming buttons



Product characteristics

Infrared temperature sensor

Threaded type M30 x 1.5

M12 connector

wave length range 0.78...1.06  $\mu\text{m}$

Switching output, Analog output

7-segment LED display (4 digits)

Measuring range: 500...2500  $^{\circ}\text{C}$  / 932...4532  $^{\circ}\text{F}$

Application

Application: tempering temperatures, glass melting, graphite, ceramics, metals, forging, sintering, heat treatment, rolling

Electrical data

Electrical design

DC PNP

Operating voltage [V]

18...32 DC; to SELV/PELV

Current consumption [mA]

< 50

Insulation resistance [M $\Omega$ ]

> 100 (50 V DC)

Protection class

III

Reverse polarity protection

yes

Inputs

Test input

Outputs

Output

Switching output, Analog output

Output function

normally open / closed programmable

Current rating [mA]

150

Voltage drop [V]

< 2.5

Short-circuit protection

yes (non-latching)

Short-circuit proof

yes

Overload protection

yes

Analog output

4...20 mA

Max. load [ $\Omega$ ]

500

Measuring / setting range

Measuring range

500...2500  $^{\circ}\text{C}$

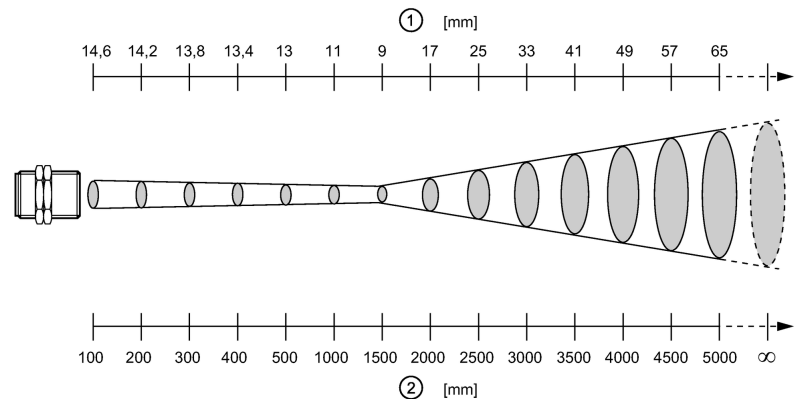
932...4532  $^{\circ}\text{F}$

wave length range [ $\mu\text{m}$ ]

0.78...1.06

# TW2002 - Infrared temperature sensor - eclass: 27371245 / 27-37-12-45

Measuring range / distance [mm]



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

Setting range

Set point, SP

Reset point, rP

Analog start point, ASP

Analog end point, AEP

in steps of

Resolution

Switching output [K]

Analog output [K]

Display [K]

Accuracy / deviations

Accuracy

Repeatability [K]

Reaction times

Power-on delay time [s]

Response time Switching output [ms]

Software / programming

Adjustment of the switch point

Programming options

Environment

Ambient temperature [°C]

Storage temperature [°C]

Max. relative air humidity

Protection

Tests / approvals

EMC

Shock resistance

Vibration resistance

MTTF [Years]

Mechanical data

Housing materials

Lens material

Weight [kg]

Displays / operating elements

Display

Operating elements

Electrical connection

Connection

**Wiring**

502...2500 °C

936...4532 °F

500...2498 °C

932...4528 °F

500...2100 °C

932...3812 °F

900...2500 °C

1652...4532 °F

1 °C

1 °F

1

0.2; + 0.03 % of the set measuring span

1

< ± 0.3 %; of the measured value, at least 4 K (degree of emission = 1, T = 23°C)

1

< 1

< 2 (T > 900 °C)

Programming buttons

Analogue range; NO / NC; switch-on / switch-off delay; damping, peak hold

0...65

-20...80

< 95 % (non condensing)

IP 65

DIN EN 61000-6-2

DIN EN 61000-6-4

DIN EN 60068-2-27

30 g (11 ms)

DIN EN 60068-2-6

5 g (10...2000 Hz)

74

threaded sleeve: stainless steel (303S22); polyester

tempered optical glass

0.427

Display unit 2 x LED yellow

Switching status 1 x LED yellow

Function display 7-segment LED display 4-digit

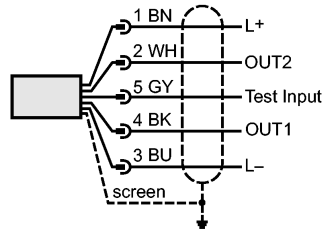
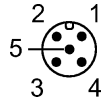
Measured values 7-segment LED display 4-digit

3 Pushbuttons

M12 connector

**TW2002 - Infrared temperature sensor - eclass: 27371245 / 27-37-12-45**

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



OUT1: Switching output  
 OUT2: Analog output

Accessories	
Accessories (included)	2 lock nuts
Remarks	
Remarks	Use a screened cable to protect infrared temperature sensors from interference. The screen must be connected to the housing of the sensor via the connector.
Pack quantity	1
	[piece]