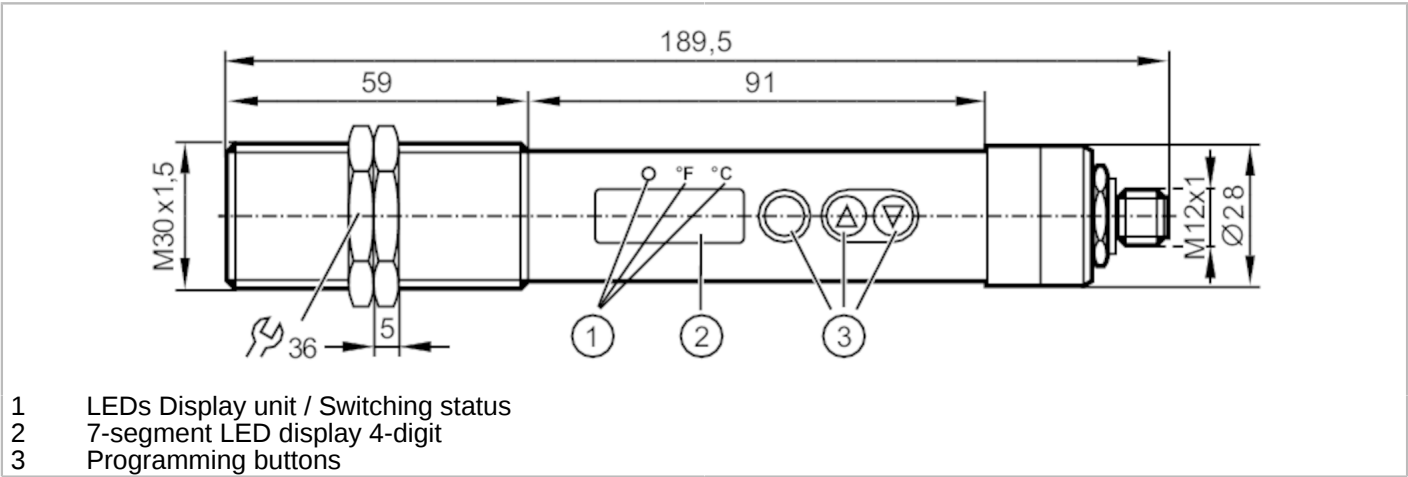


TW2000



Infrared temperature sensor

TW-030KLBM30-KFDKG/US



CE ENEC IO-Link

Product characteristics		
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	0...999.5 °C	32...1831 °F
Application		
Application	asphalt; coated metal; liquids; glass; rubber; wood; ceramics; plastics; lacquers; food products; paper; fabric	
Electrical data		
Operating voltage	[V]	18...32 DC; (to SELV/PELV)
Current consumption	[mA]	< 50
Min. insulation resistance	[MΩ]	100; (50 V DC)
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	< 1
Inputs / outputs		
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Inputs		
Test input	type 3 (IEC 61131-2)	



Infrared temperature sensor

TW-030KLBM30-KFDKG/US

Outputs		
Total number of outputs	2	
Output signal	switching signal; analog signal; IO-Link; (configurable)	
Electrical design	PNP	
Number of digital outputs	1	
Output function	normally open / closed; (configurable)	
Max. voltage drop switching output DC [V]	2.5	
Permanent current rating of switching output DC [mA]	150	
Number of analog outputs	1	
Analog current output [mA]	4...20	
Max. load [Ω]	500	
Short-circuit protection	yes	
Type of short-circuit protection	yes (non-latching)	
Short-circuit proof	yes	
Overload protection	yes	
Monitoring range		
Wave length range [μm]	8...14	
Measuring/setting range		
Measuring range	0...999.5 °C	32...1831 °F
Set point SP	1...999.5 °C	34...1831 °F
Reset point rP	0...998.5 °C	32...1829 °F
Analog start point	0...949.5 °C	32...1741.1 °F
Analog end point	50...999.5 °C	122...1831 °F
In steps of	0.5 °C	1 °F
Resolution		
Resolution of switching output [K]	0.5	
Resolution of analog output [K]	0.2; (+ 0.03 % of the set measuring span)	
Resolution of display [K]	0.5	
Accuracy / deviations		
Accuracy [K]	< ± 1 %; (of measured value, min. 2 K (degree of emission = 1, T = 23 °C))	
Repeatability [K]	1	
Reaction times		
Response time [ms]	100	
Software / programming		
Adjustment of the switch point	Programming buttons	
Parameter setting options	Analog range; normally open / closed; switch-on/switch-off delay; Damping; Peakhold; emissivity; simulation function	



Infrared temperature sensor

TW-030KLB30-KFDKG/US

Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
SIO mode	yes	
Required master port class	A	
Process data analog	16	
Process data binary	1	
Min. process cycle time [ms]	3.6	
Supported DeviceIDs	Type of operation	DeviceID
	default	716
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 61000-6-2	
	DIN EN 61000-6-4	
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]	88	
Mechanical data		
Weight [g]	411.5	
Housing	Threaded type	
Dimensions [mm]	M30 x 1.5	
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	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
Operating elements	3	Pushbuttons
Accessories		
Items supplied	lock nuts: 2	
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 pcs.	

TW2000

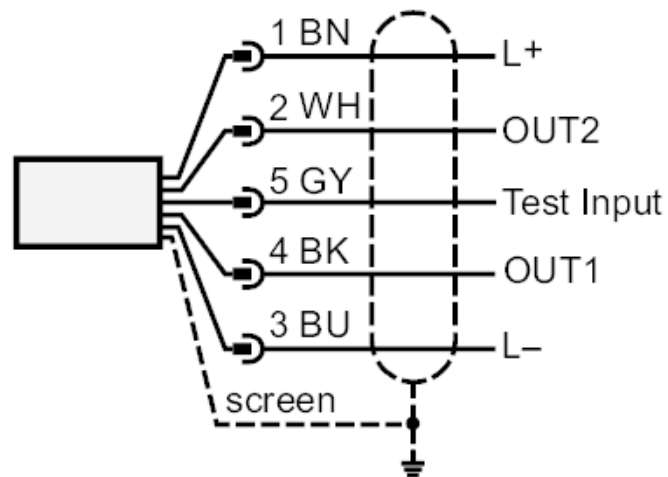


Infrared temperature sensor

TW-030KLBM30-KFDKG/US

Electrical connection

Connection



OUT1: Switching output / IO-Link

OUT2: analog output

Core colors :

BK = black

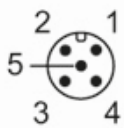
BN = brown

BU = blue

GY = grey

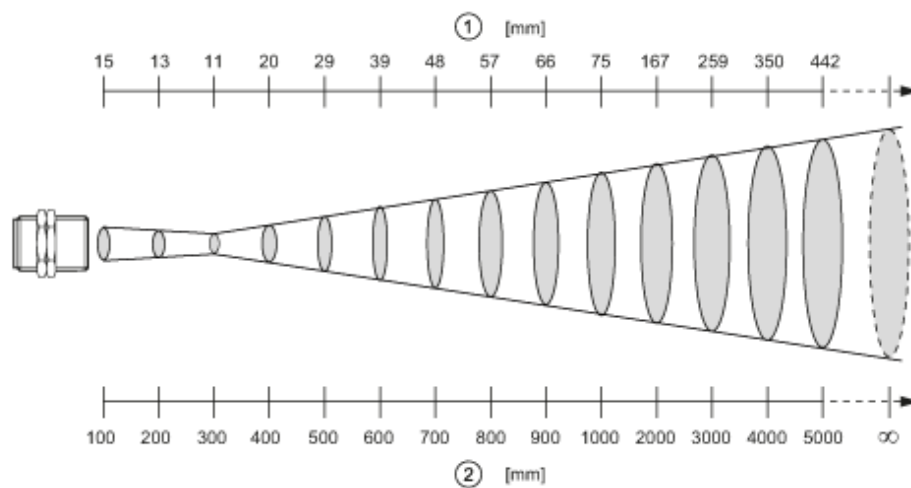
WH = white

Connector: 1 x M12; coding: A





Diagrams and graphs



- 1 diameter of the measured spot
- 2 measuring distance