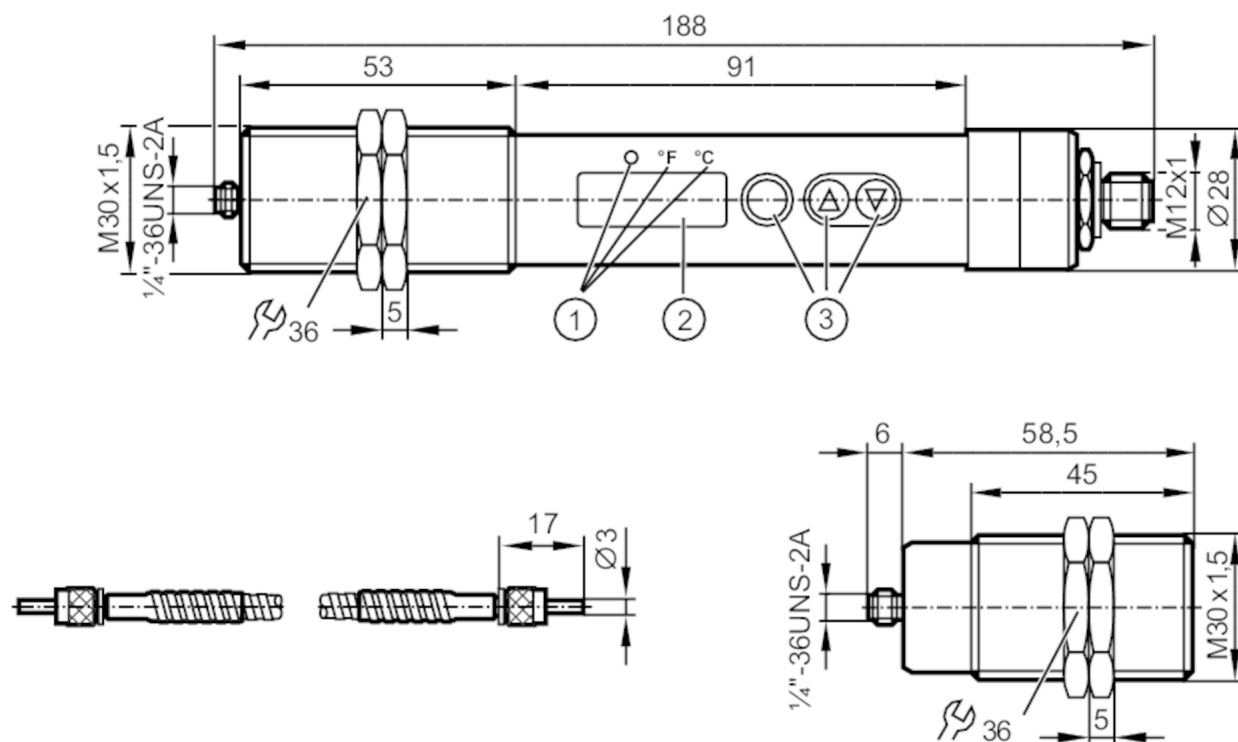


Infrared temperature sensor

TW-150KLB30-KFDKG/US



- 1 LEDs Display unit / switching status
- 2 7-segment LED display 4-digit
- 3 programming buttons

CE ENEC IO-Link

Application

Application

tempering temperatures; glass melting; graphite;
ceramics; metals; forging; sintering; heat treatment; rolling

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 analogue outputs: 1

Inputs

Test input

Typ_3_IEC_61131_2



Infrared temperature sensor

TW-150KLBM30-KFDKG/US

Outputs		
Total number of outputs	2	
Output signal	switching signal; analogue signal; IO-Link; (configurable)	
Electrical design	PNP	
Number of digital outputs	1	
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	
Number of analogue outputs	1	
Analogue current output [mA]	4...20	
Max. load [Ω]	500	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Short-circuit proof	yes	
Overload protection	yes	
Detection zone		
Wave length range [μm]	1...1.7	
Measuring/setting range		
Measuring range	300...1600 °C	572...2912 °F
Set point SP	301...1600 °C	574...2912 °F
Reset point rP	300...1599 °C	572...2910 °F
Analogue start point	300...1400 °C	572...2552 °F
Analogue end point	500...1600 °C	932...2912 °F
In steps of	1 °C	1 °F
Resolution		
Resolution of switching output [K]	1	
Resolution of analogue output [K]	0.2; (+ 0.03 % of the set measuring span)	
Resolution of display [K]	1	
Accuracy / deviations		
Accuracy [K]	< ± 0,5 %; (of measured value, min. 4 K (degree of emission = 1, T = 23 °C))	
Repeatability [K]	1	
Response times		
Response time [ms]	2; (T > 600 °C)	
Software / programming		
Adjustment of the switch point	programming buttons	
Parameter setting options	analogue range; normally open / normally closed; switch-on/switch-off delay; Damping; Peakhold; emissivity; simulation function	



Infrared temperature sensor

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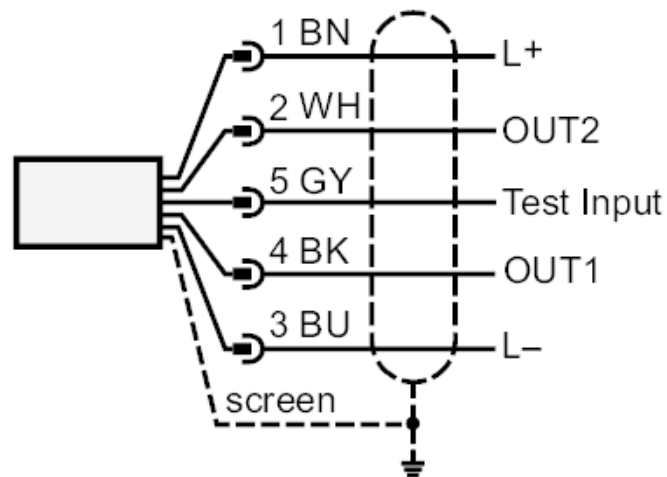
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
IO-Link device ID	719 d / 00 02 CC h	
SIO mode	yes	
Required master port type	A	
Process data analogue	16	
Process data binary	1	
Min. process cycle time [ms]	3.6	
Operating conditions		
Ambient temperature [°C]	0...65	
Note on ambient temperature	fibre optics and measuring head: -20...250 °C	
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]	74	
Mechanical data		
Weight [g]	851.2	
Housing	threaded type	
Dimensions [mm]	M30 x 1.5	
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	
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		
Accessories (supplied)	lock nuts: 2	
	fibre optic: 2m	
	Measuring head	
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.	

Infrared temperature sensor

TW-150KLBM30-KFDKG/US

Electrical connection

Connection



OUT1: switching output / IO-Link

OUT2: analogue output

Core colours :

BK = black

BN = brown

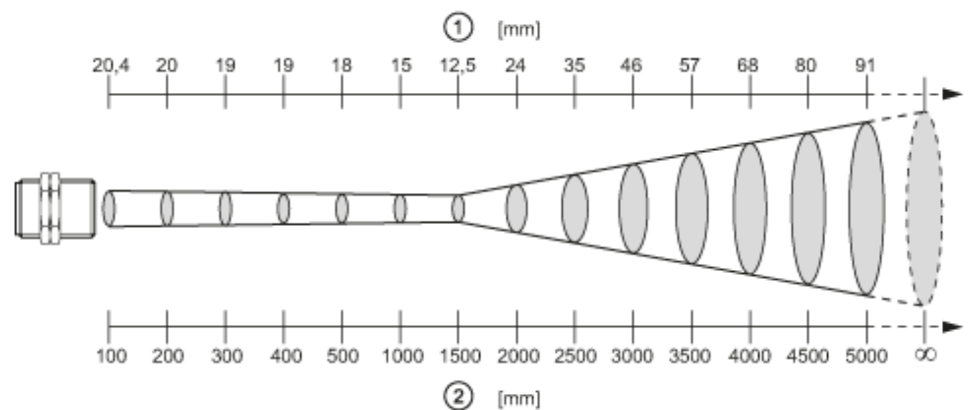
BU = blue

GY = grey

WH = white

Connector: 1 x M12

Diagrams and graphs



1 diameter of the measured spot

2 measuring distance