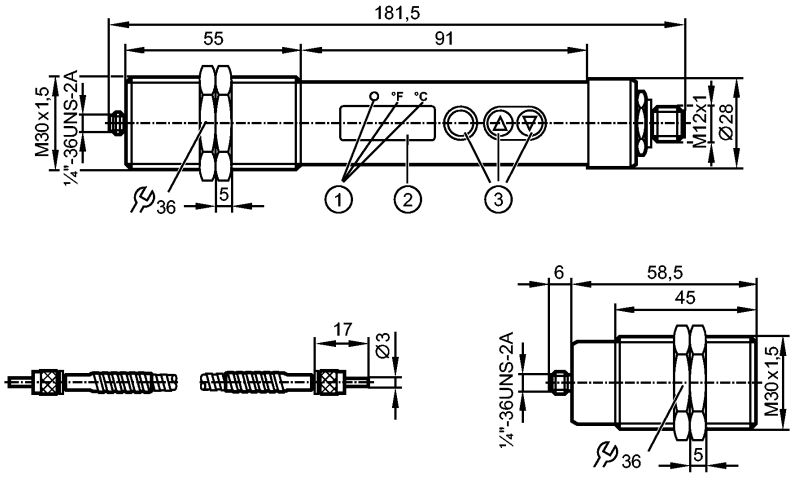
efector600

TW2011

TW-150KLBM30-KFDKG/US

Temperature sensors



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

CE

Product characteristics		
Infrared temperature sensor		
Threaded type M30 x 1.5		
M12 connector		
wave length range 1.0...1.7 µm		
Switching output, Analog output		
7-segment LED display (4 digits)		
Measuring range: 300...1600 °C / 572...2912 °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	[MΩ]	> 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

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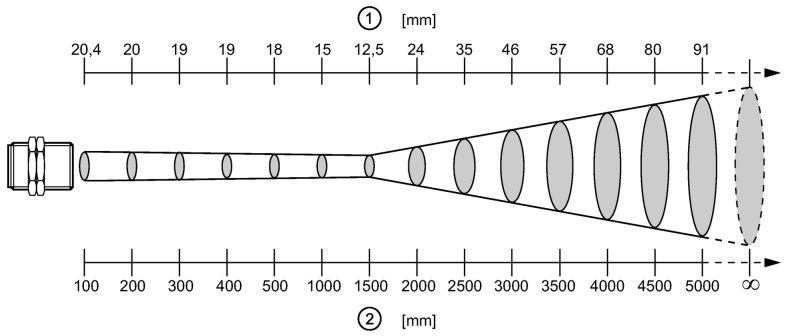
Max. load	[Ω]	500	
Measuring / setting range			
Measuring range		300...1600 °C	572...2912 °F
wave length range [µm]		1.0...1.7	
Measuring range / distance [mm]		 1: diameter of the measured spot; 2: measuring distance	
Setting range			
Set point, SP		301...1600 °C	574...2912 °F
Reset point, rP		300...1599 °C	572...2910 °F
Analog start point, ASP		300...1400 °C	572...2552 °F
Analog end point, AEP		500...1600 °C	932...2912 °F
in steps of		1 °C	1 °F
Resolution			
Switching output	[K]	1	
Analog output	[K]	0.2; + 0.03 % of the set measuring span	
Display	[K]	1	
Accuracy / deviations			
Accuracy		< ± 0.5 %; of the measured value, at least 4 K (degree of emission = 1, T = 23°C)	
Repeatability	[K]	1	
Reaction times			
Power-on delay time	[s]	< 1	
Response time Switching output	[ms]	< 2 (T > 600 °C)	
Software / programming			
Adjustment of the switch point		Programming buttons	
Programming options		Analogue range; NO / NC; switch-on / switch-off delay; damping, peak hold	
Environment			
Ambient temperature	[°C]	0...65, (-20...250 °C for fibre optic and measuring head)	
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			
Housing materials		threaded sleeve: stainless steel (303S22); polyester	

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Temperature sensors

Lens material		tempered optical glass
Connection		¼"-36UNS-2A
Weight	[kg]	0.851

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

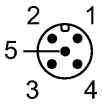
Electrical connection

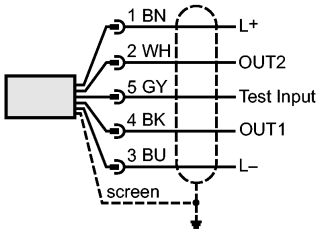
Connection	M12 connector

Wiring

Core colors

BK	black
BN	brown
BU	blue
GY	grey
WH	white





OUT1: Switching output
OUT2: Analog output

Accessories

Accessories (included)		2 lock nuts; 2 m fibre optic; 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 [piece]	1