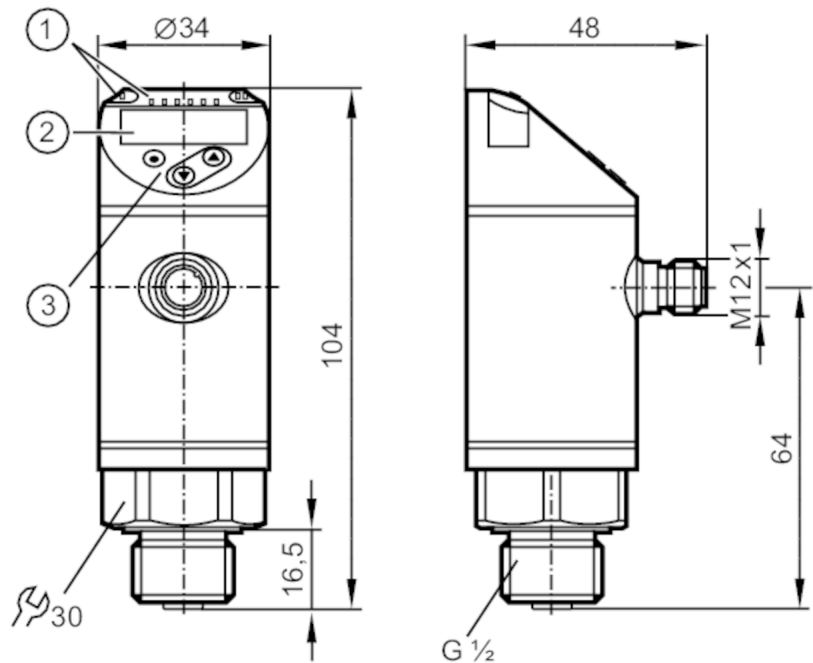




Evaluation unit with display for PT100/PT1000 temperature sensors

TR-000KDBM12-MFPKG/US/



- 1 LEDs Display unit / Switching status
- 2 alphanumeric display 4-digit red/green
- 3 Programming buttons



Product characteristics		
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-100...600 °C	-148...1112 °F
Communication interface	IO-Link	
Process connection	threaded connection G 1/2 external thread	
Application		
Special feature	gold-plated contacts	
Application	for Pt100 and Pt1000 measuring elements	
Electrical data		
Operating voltage	[V]	18...32 DC; (cULus - Class 2 source required)
Current consumption	[mA]	< 50
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	1
Integrated watchdog		yes
Inputs / outputs		
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Outputs		
Total number of outputs	2	
Output signal	switching signal; analog signal; IO-Link; (configurable)	
Electrical design	PNP/NPN	



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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]	250
Number of analog outputs	1
Analog current output [mA]	4...20
Max. load [Ω]	500
Analog voltage output [V]	0...10
Min. load resistance [Ω]	2000
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes
Measuring/setting range	
Measuring range	-100...600 °C -148...1112 °F
Factory setting	-40...300 °C / -40...572 °F
Set point SP	-99.8...600 °C -147.6...1112 °F
Reset point rP	-100...599.8 °C -148...1111.6 °F
Analog start point	-100...595 °C -148...1103 °F
Analog end point	-95...600 °C -139...1112 °F
In steps of	0.1 °C 0.1 °F
Resolution	
Resolution of switching output [K]	0.1
Resolution of analog output [K]	current output: MS / 4096; voltage output: MS / 3561
Resolution of display [K]	0.1
Accuracy / deviations	
Switch point accuracy [K]	± 0,3 + (± 0,1 % MS)
Precision analog output [K]	± 0,3 + (± 0,1 % MS)
Display accuracy [K]	± 0,3 + (± 0,1 % MS)
Temperature coefficient [% of the span / 10 K]	0,1; (In case of deviation from the reference condition 25 ± 5 °C)
Reaction times	
Response time [ms]	390
Max. response time analog output [ms]	390
Software / programming	
Parameter setting options	hysteresis / window; normally open / closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output
Interfaces	
Communication interface	IO-Link
Transmission type	COM2 (38,4 kBaud)
IO-Link revision	1.1

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Profiles	Smart Sensor - SSP 0		Generic Profiled Sensor
	Function		Device identification
	Function		Process data variable
	Function		Device diagnosis
Min. process cycle time	[ms]	2.3	
Supported DeviceIDs	Type of operation	DeviceID	
	default	584	

Operating conditions			
Ambient temperature	[°C]	-25...80	
Storage temperature	[°C]	-40...100	
Protection		IP 67	

Tests / approvals			
EMC	DIN EN 61000-6-3		
	DIN EN 61000-6-2		
Shock resistance	DIN IEC 68-2-27	50 g (11 ms)	
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)	
MTTF	[years]	233	

Mechanical data			
Weight	[g]	200	
Housing		tubular	
Dimensions	[mm]	Ø 34 / L = 104	
Material		Process connection: stainless steel (1.4305 / 303); housing: stainless steel (1.4404 / 316L); PBT+PC-GF30; PC; Connection: PEI; TPU (urethane); O-ring: FKM	
Process connection		threaded connection G 1/2 external thread	

Displays / operating elements			
Display	Display unit	2 x LED, green	
	Switching status	LED, yellow	
	Measured values	alphanumeric display, red/green 4-digit	

Remarks			
Remarks	MS = set measuring span		
Pack quantity	1 pcs.		

Electrical connection			
Connector: 1 x M12; coding: A; Contacts: 4, gold-plated			
			



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Connection



OUT1: Switching output / IO-Link
 OUT2: analog output
 Colors to DIN EN 60947-5-2