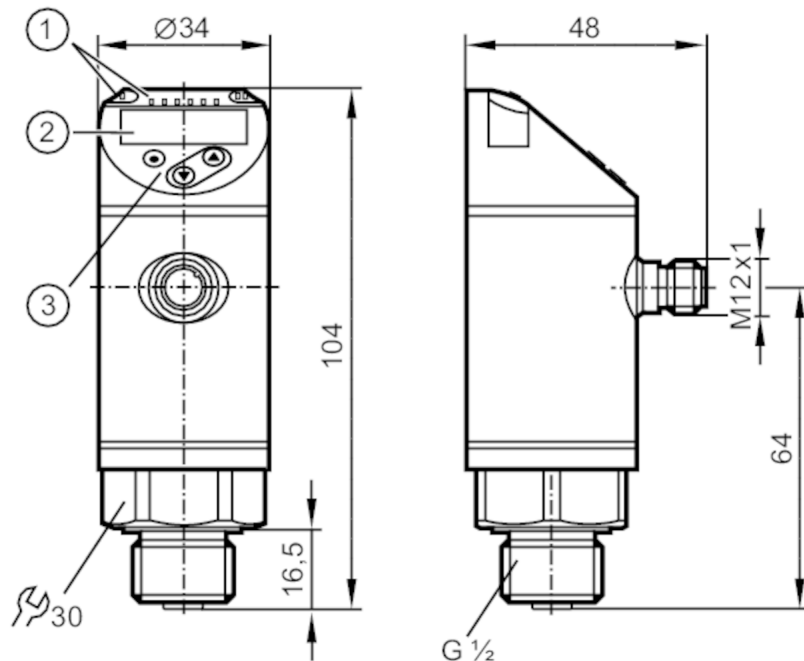


TR2439



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
Process connection	threaded connection G 1/2 external thread	

Application

System	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
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Evaluation unit with display for PT100/PT1000 temperature sensors

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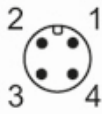
Outputs		
Total number of outputs		2
Output signal		switching signal; analog signal; IO-Link; (configurable)
Electrical design		PNP/NPN
Number of digital outputs		1
Output function		normally open / closed; (configurable)
Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching 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

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Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
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
UL approval	UL approval number	K011
Mechanical data		
Weight	[g]	200
Material	stainless steel (1.4404 / 316L); stainless steel (1.4301 / 304); PBT+PC-GF30; PBT-GF20; PC	
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: gold-plated		
		

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Evaluation unit with display for PT100/PT1000 temperature sensors

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Connection



OUT1: Switching output / IO-Link

OUT2: analog output

Colors to DIN EN 60947-5-2