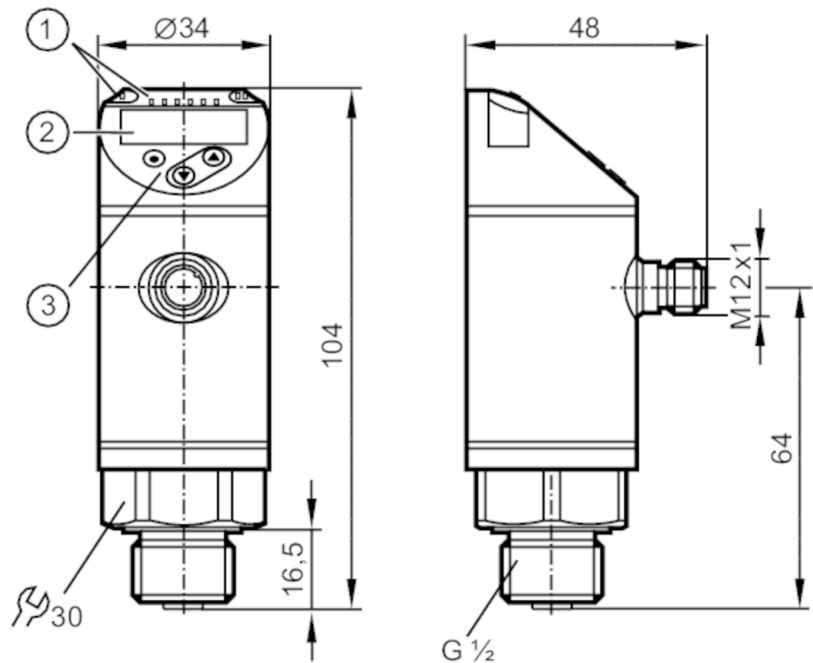




Evaluation unit with display for PT100/PT1000
temperature sensors

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 analogue outputs: 1
Measuring range [°C]	-100...600
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; ("supply class 2" to cULus)
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 analogue outputs: 1
Outputs	
Total number of outputs	2
Output signal	switching signal; analogue signal; IO-Link; (configurable)



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Electrical design		PNP/NPN
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]	250
Number of analogue outputs		1
Analogue current output	[mA]	4...20
Max. load	[Ω]	500
Analogue voltage output	[V]	0...10
Min. load resistance	[Ω]	2000
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes

Measuring/setting range

Measuring range	[°C]	-100...600
Factory setting		-40...300 °C
Set point SP	[°C]	-99.8...600
Reset point rP	[°C]	-100...599.8
Analogue start point	[°C]	-100...595
Analogue end point	[°C]	-95...600
In steps of	[°C]	0.1

Resolution

Resolution of switching output	[K]	0.1
Resolution of analogue 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 analogue 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 °C)

Response times

Response time	[ms]	390
Max. response time analogue output	[ms]	390

Software / programming

Parameter setting options		hysteresis / window; normally open / normally closed; switch-on/switch-off delay; Damping; current/voltage output
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Interfaces

Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)



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TR-000KDBM12-MFPKG/US/
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 no.	K011

Mechanical data

Weight	[g]	191
Materials	stainless steel (304/1.4301); EPDM/X; PC; PBT; FPM	
Process connection	threaded connection G 1/2 external thread	

Displays / operating elements

Display	Display unit	1 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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Connection



OUT1: switching output / IO-Link
 OUT2: analogue output
 colours to DIN EN 60947-5-2