

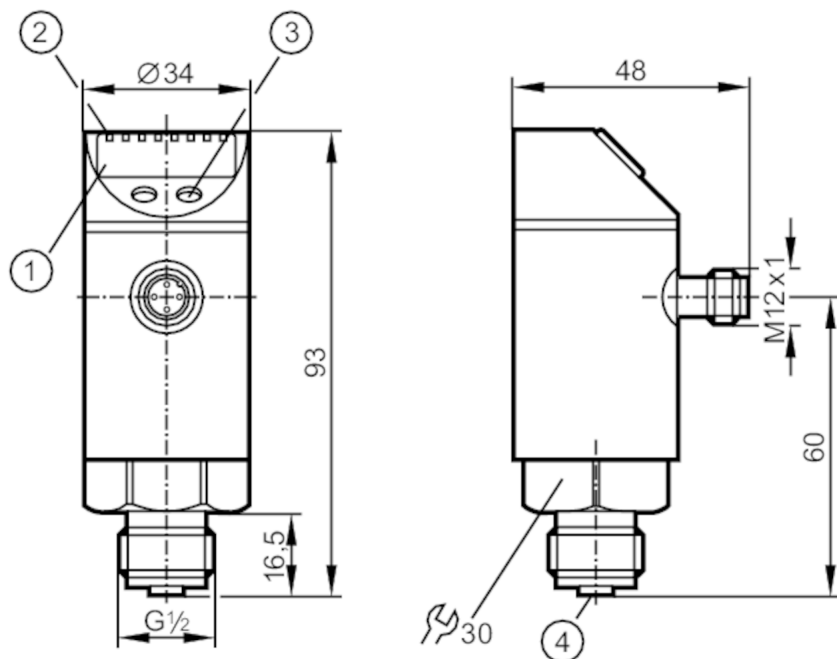


Evaluation unit with display for PT100/PT1000 temperature sensors

TR-...KDBR12-MFRKG/US/...../V

discontinued article

replaced by: TR2439 – Discontinuation date: 31.12.2017



- 1 alphanumeric display 4-digit
- 2 status LEDs
- 3 programming button
- 4 connector for temperature sensor M12 x 1



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1	
Measuring range	-40...300 °C	-40...572 °F
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
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Outputs		
Total number of outputs	2	
Output signal	switching signal; analogue signal; IO-Link; (configurable)	
Electrical design	PNP/NPN	
Number of digital outputs	1	
Output function	normally open / normally closed; (parameterisable)	
Max. voltage drop switching output DC [V]	2	
Permanent current rating of switching output DC [mA]	250	
Number of analogue outputs	1	
Analogue current output [mA]	4...20; (response time analogue output: 384 ms)	
Max. load [Ω]	(U _b - 10 V) x 50	
Analogue voltage output [V]	0...10; (response time analogue output: 384 ms)	
Min. load resistance [Ω]	2000	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload protection	yes	
Measuring/setting range		
Measuring range	-40...300 °C	-40...572 °F
Set point SP	-39.8...300 °C	-39.6...572 °F
Reset point rP	-40...299.8 °C	-40...571.6 °F
Analogue start point	-40...295 °C	-40...563 °F
Analogue end point	-35...300 °C	-31...572 °F
In steps of	0.1 °C	0.1 °F
Resolution		
Resolution of switching output [K]	0.1	
Resolution of analogue output [K]	0.1	
Resolution of display [K]	0.1	
Accuracy / deviations		
Switch point accuracy [K]	± 0,3	
Precision analogue output [K]	± 0,3	
Display accuracy [K]	± 0,3	
Temperature drift per 10 K [K]	0.1	
Response times		
Response time [ms]	130	
Interfaces		
Transmission type	COM2 (38,4 Kbaud)	
IO-Link revision	1.0	
Operating conditions		
Ambient temperature [°C]	-25...70	
Storage temperature [°C]	-40...85	
Protection	IP 67	



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Tests / approvals

EMC	DIN EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	DIN EN 61000-4-4 Burst	2 kV
	DIN EN 61000-4-5 Surge	1 kV
	EN 61000-4-6 HF conducted	10 V
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]	207	

Mechanical data

Weight [g]	231.2
Materials	stainless steel (1.4301 / 304); EPDM/X; PC; PBT; 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, 4-digit
	programming	alphanumeric display, 4-digit

Remarks

Pack quantity	1 pcs.
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Electrical connection

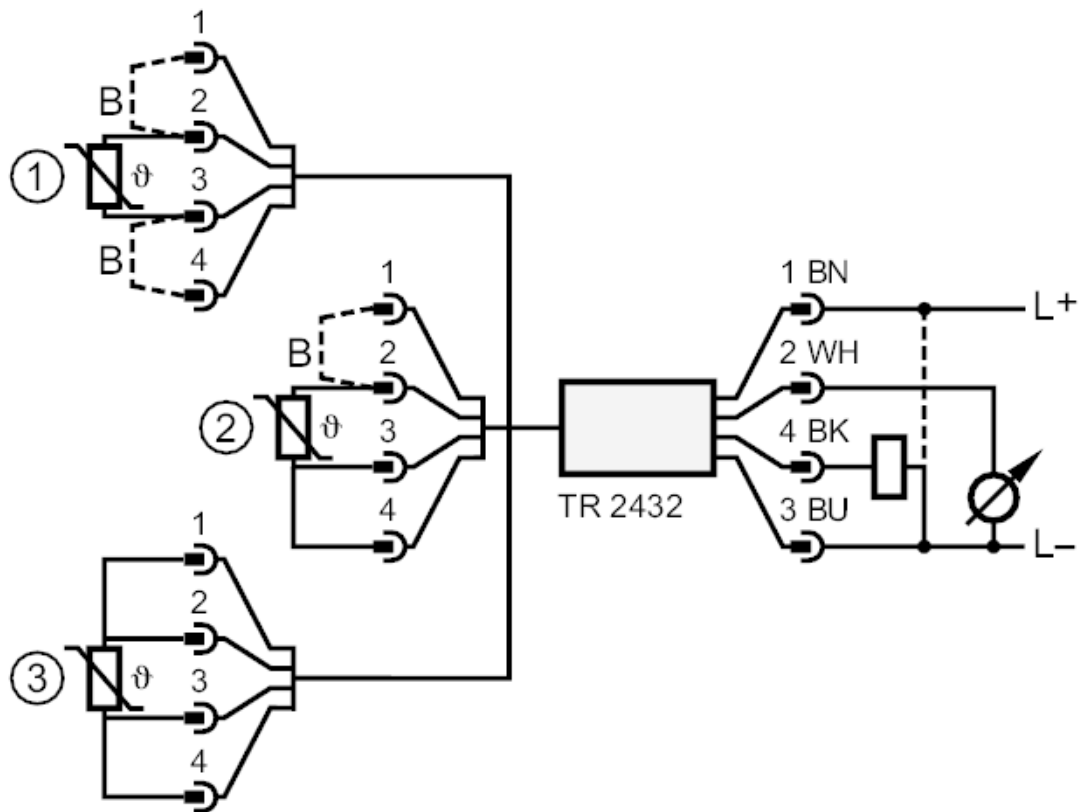
Connector: 1 x M12; Contacts: gold-plated



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Connection



- 1 = two-wire sensor
- 2 = three-wire sensor
- 3 = four-wire sensor
- B = link

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