



Evaluation unit with display for PT100/PT1000
temperature sensors

TR-...KDBR12-SFPKG/US/...../V

phase-out article

Alternative articles: TR7439
When selecting an alternative article and accessories please note that technical data may differ!

For 8-pole sockets the core colours are not standardised.
Please note the wiring of the sensor and the sockets (see data sheet).

Technical drawing of the TR8430 evaluation unit. The front view shows a cylindrical body with a diameter of 34 mm at the top. Callouts 1, 2, and 3 point to the alphanumeric display, status LEDs, and programming button respectively. The total height is 93 mm, and the bottom connection is G 1/2 with a height of 16.5 mm. The side view shows a height of 48 mm for the main body and 60 mm for the total height including the bottom connection. Callout 4 points to the M12 x 1 connector for the temperature sensor. A 30-degree chamfer is also indicated.

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: 4	
Measuring range	-40...150 °C	-40...302 °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...28 DC; (to SELV/PELV)
Current consumption	[mA]	< 90; (when display is active)
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	1.5
Integrated watchdog		yes



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Inputs / outputs		
Number of inputs and outputs	Number of digital outputs: 4	
Outputs		
Total number of outputs	4	
Output signal	switching signal	
Electrical design	PNP	
Number of digital outputs	4	
Output function	normally open / normally closed; (parameterisable)	
Max. voltage drop switching output DC [V]	2	
Permanent current rating of switching output DC [mA]	500; (max. value for each single output)	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload protection	yes	
Measuring/setting range		
Measuring range	-40...150 °C	-40...302 °F
Set point SP	-39.8...150 °C	-39.5...302 °F
Reset point rP	-40...149.8 °C	-40...301.5 °F
In steps of	0.2 °C	0.5 °F
Resolution		
Resolution of switching output [K]	0.2	
Resolution of display [K]	0.2	
Accuracy / deviations		
Switch point accuracy [K]	± 0,2	
Display accuracy [K]	± (0,2 + ½ Digit)	
Temperature drift per 10 K [K]	0.1	
Temperature coefficient [X22]	in case of deviation from the reference condition 25 ± 5 °C	
Response times		
Response time [ms]	200	
Software / programming		
Adjustment of the switch point	programming button	
Parameter setting options	hysteresis / window; normally open / normally closed; min/ max memory reset; Display unit; zero-point calibration	
Operating conditions		
Ambient temperature [°C]	-25...70	
Storage temperature [°C]	-40...85	
Protection	IP 67	
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
	EN 61000-4-6 HF conducted	10 V

TR8430



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Shock resistance	DIN IEC 68-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF	[ANN]	175

Mechanical data		
Weight	[g]	265.5
Materials	stainless steel (1.4301 / 304); stainless steel (1.4305 / 303); 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	4 x LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit

Remarks		
Remarks	n.c. = not used	
	referring to UL: for use on a low voltage circuit with overcurrent protection	
	in accordance with UL873 tab. 28.1 or I _{max} = 100/U _b (U _b = voltage of the circuit)	
	total current rating of the unit: max. 1 A	
	Two outputs can be switched in parallel to achieve a total current rating of 1 A.	
	Switch-on points and switch-off points and the programming of the outputs must correspond exactly.	
Pack quantity	1 pcs.	

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection

