

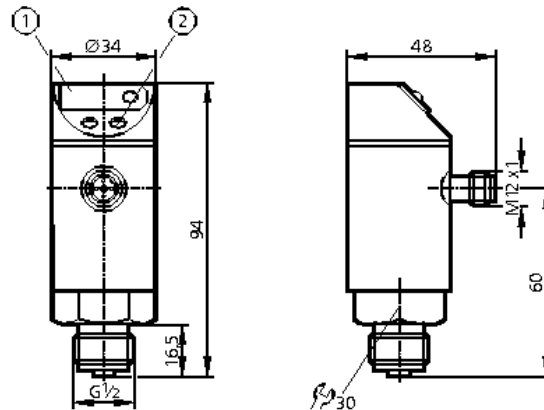
Evaluation systems

**TR2430**

Evaluation unit for temperature sensors  
TR

for temperature sensors TS / TT  
gold-plated contacts

Switching output, analogue  
output 4...20 mA or 0...10 V  
7-segment LED display  
Measuring range  
-40...150°C / -40...302°F



1: 7-segment LED display 2: Programming button

<b>Electrical design</b>	<b>DC PNP</b>
<b>Output</b>	<b>normally open / closed programmable; 4...20 mA or 0...10 V</b>
Operating voltage [V]	20...30 DC
Current rating [mA]	250
Short-circuit protection	pulsed
Reverse polarity protection	yes
Overload protection	yes
Integrated watchdog	yes
Voltage drop [V]	< 2
Current consumption [mA]	< 66
Analogue output	4...20 mA / 0...10 V
<b>Setting range</b>	
Analogue output/lower end, ASP [°C/°F]	-40...140 / -40...284
Analogue output/upper end, AEP [°C/°F]	-30...150 / -22...302
Switch-on point, SP [°C/°F]	-39.5...150 / -39...302
Switch-off point, rP [°C/°F]	-40...149.5 / -40...301
in steps of [°C/°F]	0.5 / 1
Programming options	hysteresis / window; normally closed/open; min./max. memory reset; °C/°F selectable; adjustment up to 10 K; analogue output selectable and scaleable
Adjustment of the switch point	Programming button
<b>Accuracy</b>	
Switching output [°C/°F]	± 0.2 / ± 0.36
Analogue output [°C/°F]	± (0.2 / 0.36 + 0.4%)
Display [°C/°F]	± (0.2 / 0.36 + ½ Digit)
<b>Resolution</b>	
Switching output [°C/°F]	0.5 / 1
Analogue output [°C/°F]	0.125 / 0.23
Display [°C/°F]	0.5 / 0.5
Temperature drift ( / 10 K)	0.1
Power-on delay time [s]	1.5
Measuring / display cycle [ms] [ms]	200

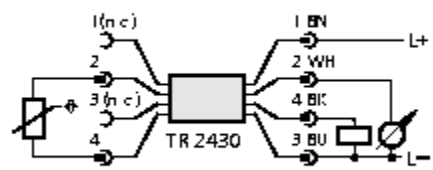
**TR2430**

Operating temperature [°C]	-25...70
Storage temperature [°C]	-40...85
Protection	IP 67, III
Insulation resistance [MΩ]	> 100 / 500V DC
Shock resistance [g]	50g (DIN / IEC 68-2-27, 11 ms)
Vibration resistance [g]	20g (DIN / IEC 68-2-6, 10-2000 Hz)
EMC	EN 61000-4-2 ESD: 4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-6 HF conducted: 10 V
Housing material	stainless steel (304S15); stainless steel (303S22); EPDM/X (Santoprene); PC (Macrolon); PBT (Pocan); FPM (Viton)
Function display	red
Switching status LED	7-segment LED display
Connection	M12 connector; gold-plated contacts

Wiring

Programming of the output function:

- Hno = hysteresis / N.O.
- Hnc = hysteresis / N.C.
- Fno = window function / N.O.
- Fnc = window function / N.C.



Remarks	n.c. = not connected load for current output: Rmax [Ohm]: (Ub - 10 V) x 50 / for voltage output: Rmin [Ohm]: 2000
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