

Temperature displays

LED temperature displays	Pt100 and Ni100 input (DC)	Codix 531
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Cost-effective temperature display for front panel mount with bright 5-digit LED display for values in °C or °F.

For very accurate temperature measurements using Pt100 and Ni100 resistance thermometers in 2, 3 or 4-wire technology, with permanently stored characteristic curves.

Minimum and maximum value detection for temperature monitoring over long periods of time.



DC 10 ... 30 V Supply voltage	 2, 3, 4 2-, 3-, 4-wire technology	 Pt100, Ni100 Pt100 / Ni100	 Menu-driven programming	 AC/DC Galvanic isolation	 -20°... +65°C Temperature range	 IP65 High protection level	 min / max Min / Max value detection	 DIN 48x24	 5 LEDs LED display
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Product features

- Input range: resistance thermometer.
- Compact and low-price temperature display.
- Easy programming and operation.
- Modern industrial design.
- 5 measurements/second.

Benefits

- Temperature display in °C or °F.
- MIN/MAX value acquisition and data backup in case of power off.
- Galvanic isolation with protection against incorrect polarity.
- Screw terminal connection: pitch 5 mm.
- Display hold input.

Order no.

Temperature display for Pt100 and Ni100 resistance thermometer

6.531.012.300

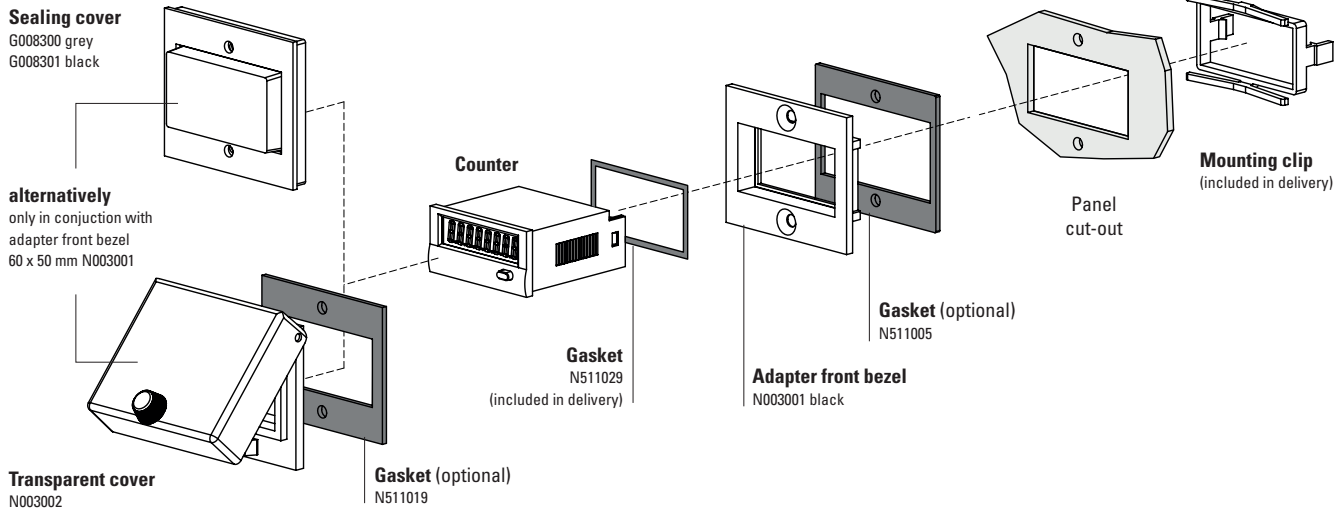
Delivery specification

- Digital display
- Mounting clip
- Gasket
- Front bezel for screw mounting (T008181) 56 x 40 mm [2.20 x 1.57"], panel cut-out 50 x 25 mm [1.97 x 0.98"]
- Front bezel for clip mounting (T008180) 53 x 28 mm [2.09 x 1.10"], panel cut-out 50 x 25 mm [1.97 x 0.98"]
- 1 set of self-adhesive symbols
- Instruction manual, multilingual

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Accessories / Mounting examples



		Type / size	Description		Order no.	suitable gasket
Adapter front bezel		53 x 28 mm [2.09 x 1.10"]	for cut-out 50 x 25 mm [1.97 x 0.98"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	grey black anthracite	T008164 T008165 T008180	N511015
		56 x 40 mm [2.20 x 1.57"]	for cut-out 50 x 25 mm [1.97 x 0.98"] to cut-out 45 x 22.2 mm [1.77 x 0.94"] screw mounting	black anthracite	T008161 T008181	N511045
		72 x 36 mm [2.83 x 1.42"]	for cut-out 68 x 33 mm [2.68 x 1.30"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black and silver anodised as set	162704Set	–
		60 x 50 mm [2.36 x 1.97"]	for cut-out 54 x 29 mm [2.13 x 1.14"] to cut-out 45 x 22.2 mm [1.77 x 0.94"] screw mounting	black	N003001	N511005
		48 x 48 mm [1.89 x 1.89"]	for cut-out 45 x 45 mm [1.77 x 1.77"] to cut-out 45 x 22.2 mm [1.77 x 0.94"]	black	T008883	–
Sealing cover IP65		K1	only in conjunction with adapter front bezel 60 x 50 mm N003001	transparent / grey transparent / black	G008300 G008301	–
Transparent cover IP65		1 Dv (mounted on bezel)	cover lockable, for cut-out 54 x 29 mm [2.13 x 1.14"], only in conjunction with adapter front bezel 60 x 50 mm N003001	transparent / black	N003002	N511019
Gasket counter			48 x 24 mm (for installation in adapter front bezel) 49 x 25 mm		N511029 N511034	
Mounting frame		cut-out 50 x 25 mm [1.97 x 0.98"]	via adapter T008180 for snap-on mounting on 35 mm [1.38"] top-hat DIN rail	chromated	G300004	–
Enclosure blind		48 x 24 mm [1.89 x 0.94"]	for cut-out 45 x 22.2 mm [1.77 x 0.94"] and cut-out 50 x 25 mm [1.97 x 0.98"]	anthracite	G003836	–

incl. in delivery

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Technical data

General technical data	
Display	5 digits, red 7 segment LED display; 8 mm [0.32"] high
Display refresh	1 ... 2 times per second
Data backup	EEPROM
Operating temperature	-20 °C ... +65 °C [-4 °F ... +149 °F] (non-condensing)

Electrical characteristics	
Supply voltage	10 ... 30 VDC, galvanically isolated with integrated reverse polarity protection
Current consumption	max. 40 mA
Circuit type	2-wire, 3-wire and 4-wire technology, programmable

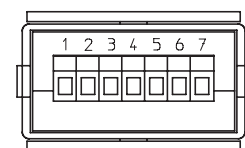
Mechanical characteristics	
Housing	front panel mount 48 x 24 mm [1.89 x 0.94"] acc. to DIN 43700; RAL 7021, dark grey
Protection	IP65 (front side)
Weight	approx. 50 g [1.76 oz]
Connections	screw terminal, pitch 5.08 mm [2"], 7 pin

Measuring signal inputs	
Measuring rate	5 measurements / second
Input	Pt100 resistance thermometer Ni100 resistance thermometer with sensor breakage monitoring
Control inputs	HIGH 4 ... 30 V DC LOW 0 ... 2 V DC
Supply current	1 mA
Supply line	2-wire max. 20 Ω, programmable 3-wire, 4-wire max. 20 Ω, no balancing required
Temperature ranges	Pt100 acc. to DIN IEC 751 -199.9 °C ... +850.0 °C [-327.8 °F ... +1562.0 °F] Ni100 acc. to DIN 43760 -60.0 °C ... +250.0 °C [-76.0 °F ... +482.0 °F]
Resolution	0.1 °C (0.1 °F) or 1 °C (1 °F)
Linearity error	Pt100 < 0.1 % for the whole measuring range at an operating temperature of 20 °C [68 °F] Ni100 < 0.2 % for the whole measuring range at an operating temperature of 20 °C [68 °F]
Temperature drift	0.1 K/K _{Ambient}

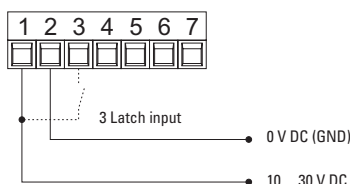
Approvals	
UL compliant in accordance with	File no. E128604
CE compliant in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU

Terminal assignment

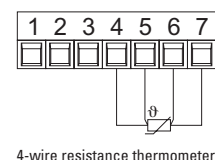
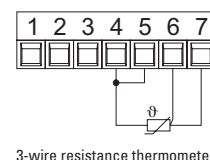
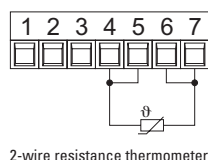
1	2	3	4	5	6	7
10 ... 30 V DC	0 V DC (GND)	Latch input	Pt100/Ni100	Pt100/Ni100	Pt100/Ni100	Pt100/Ni100



Connection supply voltage and latch input



Connection resistance thermometer Pt100/Ni100



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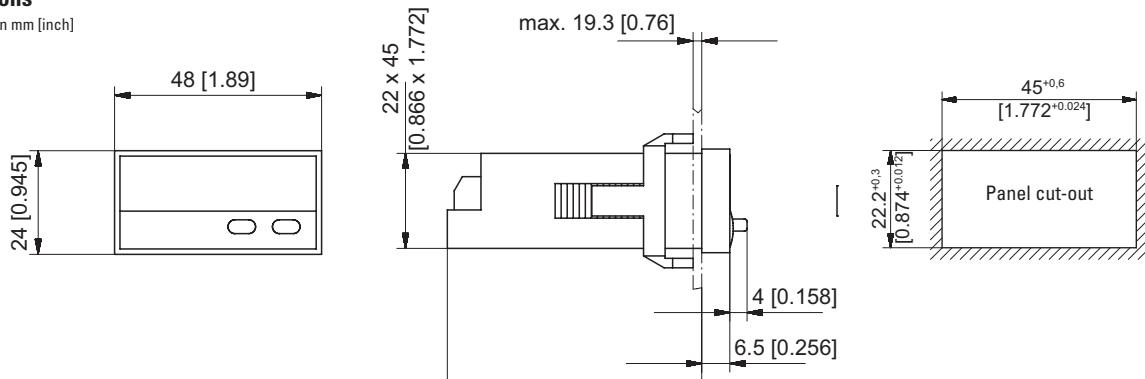
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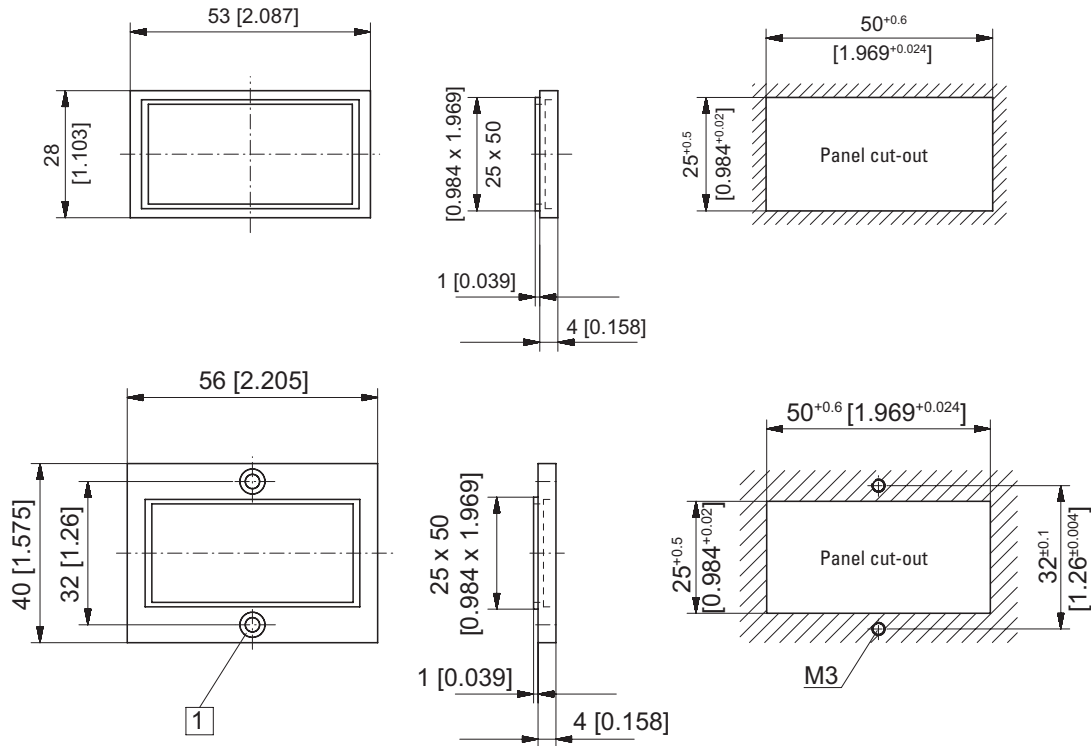
Codix 531

Dimensions

Dimensions in mm [inch]



Front bezel



1 Countersinking Af3, DIN 74