

# Temperature displays

LED temperature displays

Pt100 and Ni100 input (DC)

Codix 531



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.



<b>DC</b> 10 ... 30V	 2, 3, 4	 Pt100 / Ni100	 Menu-driven programming	 Galvanic isolation	 - 20° + 65°	 IP65	 min / max	 DIN 48 x 24	 5 LED
Power supply	2-, 3-, 4-wire technology				Temperature range	High protection level	Min / Max value detection	DIN front bezel	LED display

## 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 <sup>1)</sup>

### 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

1) Stock types.

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Accessories	Dimensions in mm [inch]	Order no.
<b>Adapter front bezel, 72 x 36 [2.83 x 1.42]</b>	for cut-out 68 x 33 [2.68 x 1.30] to cut-out 45 x 22.2 [1.77 x 0.87], for counters 48 x 24 [1.89 x 0.94], as set	black and silver anodized <b>162704 Set</b>
<b>Adapter front bezel, 48 x 48 [1.89 x 1.89]</b>	for cut-out 45 x 45 [1.77 x 1.77] to cut-out 45 x 22.2 [1.77 x 0.87], with clip mounting for counters 48 x 24 [1.89 x 0.94]	black <b>T008883</b>
<b>Adapter front bezel, 60 x 50 [2.36 x 1.97]</b>	for cut-out 54 x 29 [2.13 x 1.14] to cut-out 45 x 22.2 [1.77 x 0.87], with screw mounting and gasket for counters 48 x 24 [1.89 x 0.94]	black <b>N003001</b>
<b>Transparent cover, lockable, IP65</b>	for cut-out 54 x 29 [2.13 x 1.14], for screw mounting to front bezel F1B or adapter front bezel N003001, for counters with cut-out 50 x 25 [1.97 x 0.98] or 45 x 22.2 [1.77 x 0.87]	<b>N003002</b>
<b>Sealing cover type K1, IP65</b>	suitable for front bezel 60 x 50 [2.36 x 1.97], for screw mounting of electromech. counters and via adapter front bezel N003001 for counters 48 x 24 [1.89 x 0.94]	<b>G008301</b>
<b>Mounting frame</b> with cut-out 50 x 25 [2.36 x 1.97] via separate adapter also for 45 x 22.2 [1.77 x 0.87]	for snap-on mounting on 35 [1.38] top-hat DIN rail, for counters 53 x 28 [2.09 x 1.10] and via separate adapter (T008180) for counters 48 x 24 [1.89 x 0.94]	chromated <b>G300004</b>

Suitable gaskets, other accessories and installation examples for optional accessories can be found in chapter accessories or in the accessories section under: [www.kuebler.com/accessories](http://www.kuebler.com/accessories).

Technical data	
General technical data	
<b>Display</b>	5 digits, red 7 segment LED display; 8 mm [0.32"] high
<b>Display refresh</b>	1 ... 2 times per second
<b>Data backup</b>	EEPROM
<b>Operating temperature</b>	-20°C ... +65°C [-4°F ... +149°F] (non-condensing)
Electrical characteristics	
<b>Power supply</b>	10 ... 30 VDC, galvanically isolated with integrated reverse polarity protection
<b>Current consumption</b>	max. 40 mA
<b>Circuit type</b>	2-wire, 3-wire and 4-wire technology, programmable
<b>EMC standards</b>	EN 55011 class B EN 61000-6-2, EN 61000-6-3 EN 61326-1
<b>UL approval</b>	file E128604
Mechanical characteristics	
<b>Housing</b>	front panel mount 48 x 24 mm [1.89 x 0.94"] acc. to DIN 43700; RAL 7021, dark grey
<b>Protection</b>	IP65 (front side)
<b>Weight</b>	approx. 50 g [1.76 oz]
<b>Connections</b>	screw terminal, pitch 5.08 mm [2"], 7 pin
Measuring signal inputs	
<b>Measuring rate</b>	5 measurements / second
<b>Input</b>	Pt100 resistance thermometer Ni100 resistance thermometer with sensor breakage monitoring
<b>Control inputs</b>	HIGH 4 ... 30 V DC LOW 0 ... 2 V DC
<b>Supply current</b>	1 mA
<b>Supply line</b>	2-wire max. 20 Ω, programmable 3-wire, 4-wire max. 20 Ω, no balancing required
<b>Temperature ranges</b>	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]
<b>Resolution</b>	0.1°C (0.1°F) or 1°C (1°F)
<b>Linearity error</b>	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]
<b>Temperature drift</b>	0.1 K/K <sub>Ambient</sub>

# Temperature displays

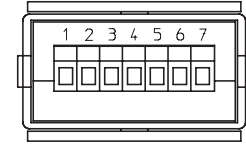
## LED temperature displays

## Pt100 and Ni100 input (DC)

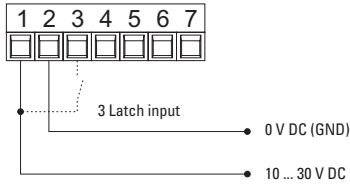
## Codix 531

### Terminal assignment

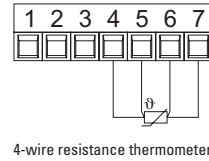
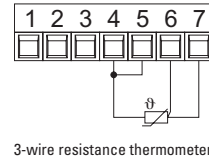
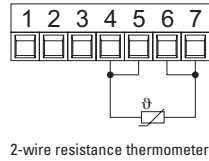
1	2	3	4	5	6	7
10 ... 30 V DC	0 V DC (GND)	Latch input	Pt100/Ni100	Pt100/Ni100	Pt100/Ni100	Pt100/Ni100



### Connection power supply and latch input

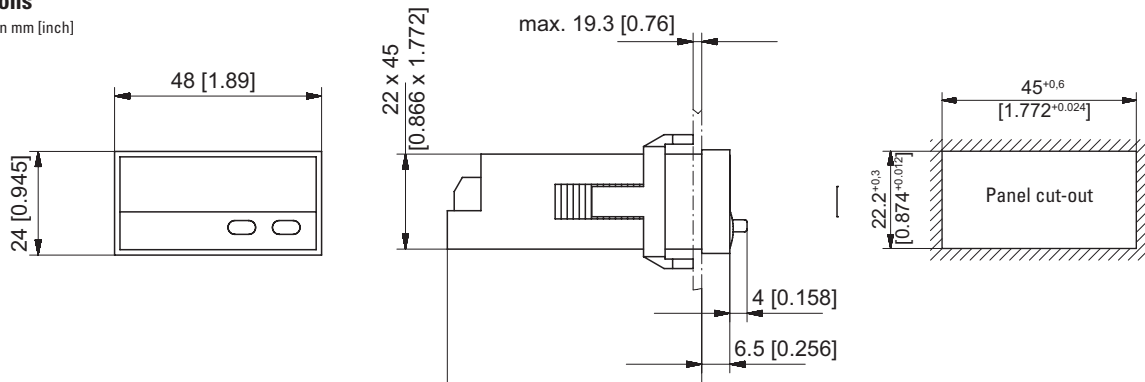


### Connection resistance thermometer Pt100/Ni100

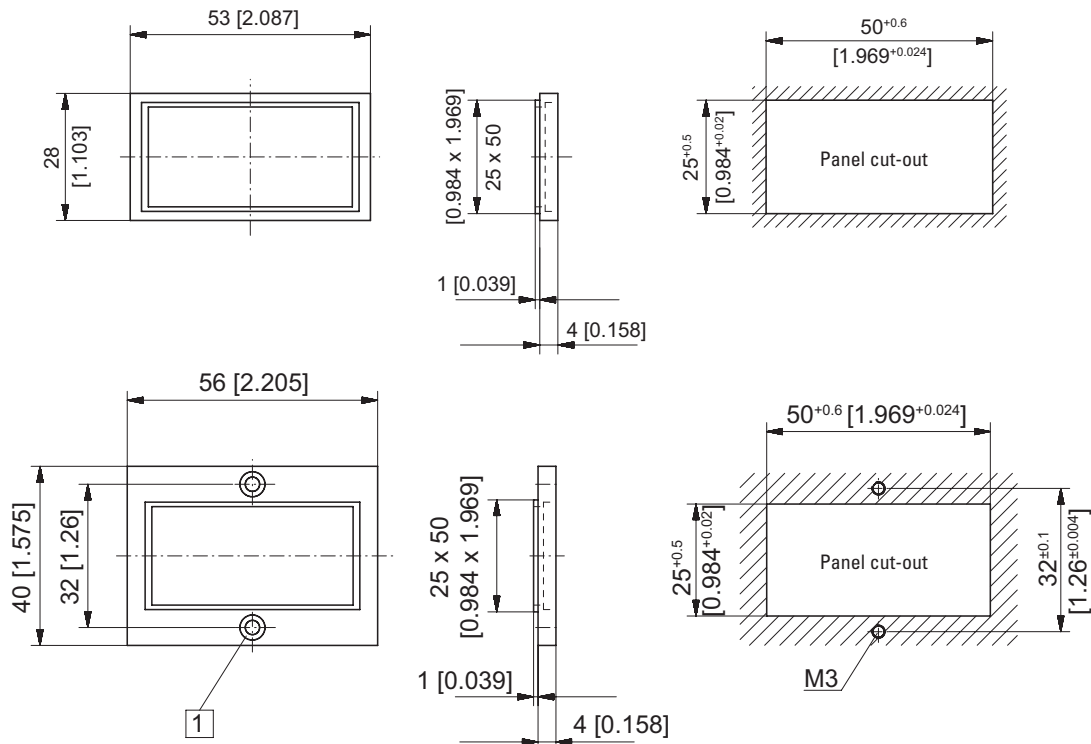


### Dimensions

Dimensions in mm [inch]



### Front bezel



Countersinking Af3, DIN 74