Temperature displays

Kübler

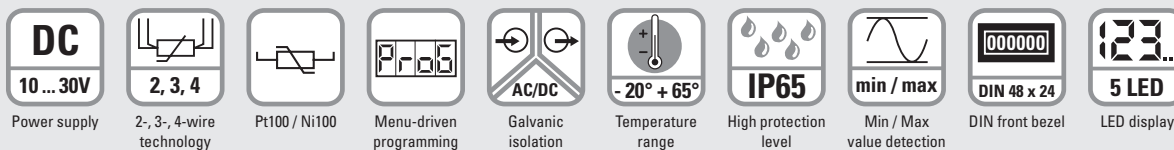| LED temperature displays	Pt100 and Ni100 input (DC)	Codix 531

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.

DC			ProG			IP65	min / max	DIN 48 x 24	123...
10 ... 30V	2, 3, 4	Pt100 / Ni100		AC/DC	- 20° + 65°				5 LED
Power supply	2-, 3-, 4-wire technology	Pt100 / Ni100	Menu-driven programming	Galvanic isolation	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** [1]

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.
Adapter front bezel, 72 x 36 [2.83 x 1.42]	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	**162704 Set**
Adapter front bezel, 48 x 48 [1.89 x 1.89]	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	**T008883**
Adapter front bezel, 60 x 50 [2.36 x 1.97]	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	**N003001**
Transparent cover, lockable, IP65	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]		**N003002**
Sealing cover type K1, IP65	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]		**G008301**
Mounting frame 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	**G300004**

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.

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

Power supply	10 ... 30 V DC, galvanically isolated with integrated reverse polarity protection
Current consumption	max. 40 mA
Circuit type	2-wire, 3-wire and 4-wire technology, programmable
EMC standards	EN 55011 class B EN 61000-6-2, EN 61000-6-3 EN 61326-1
UL approval	file E128604

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$_{Ambient}$

Temperature devices

Temperature displays

LED temperature displays	Pt100 and Ni100 input (DC)	Codix 531

Terminal assignment

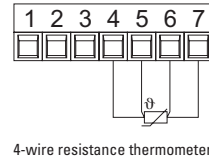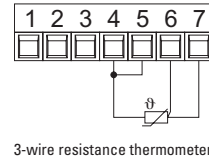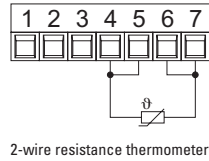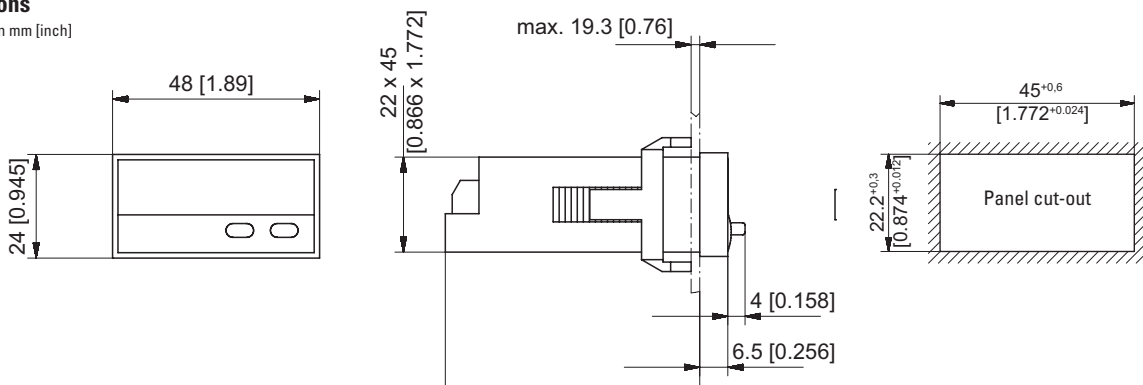| 1	2	3	4	5	6	7
10 ... 30 V DC	0 V DC (GND)	Latch input	Pt100/Ni100	Pt100/Ni100	Pt100/Ni100	Pt100/Ni100
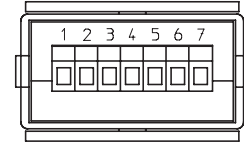
Connection power supply and latch input

3 Latch input

0 V DC (GND)

10 ... 30 V DC
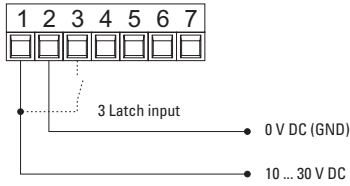
Connection resistance thermometer Pt100/Ni100

2-wire resistance thermometer

3-wire resistance thermometer

4-wire resistance thermometer

Dimensions
Dimensions in mm [inch]

48 [1.89]

24 [0.945]

22 x 45 [0.866 x 1.772]

max. 19.3 [0.76]

4 [0.158]

6.5 [0.256]

45 +0.6 [1.772 +0.024]

22.2 +0.3 [0.874 +0.012]

Panel cut-out

Front bezel

53 [2.087]

28 [1.103]

25 x 50 [0.984 x 1.969]

1 [0.039]

4 [0.158]

50 +0.6 [1.969 +0.024]

25 +0.5 [0.984 +0.02]

Panel cut-out

56 [2.205]

40 [1.575]

32 [1.26]

25 x 50 [0.984 x 1.969]

1 [0.039]

4 [0.158]

50 +0.6 [1.969 +0.024]

25 +0.5 [0.984 +0.02]

32 +0.1 [1.26 +0.004]

Panel cut-out

M3

1
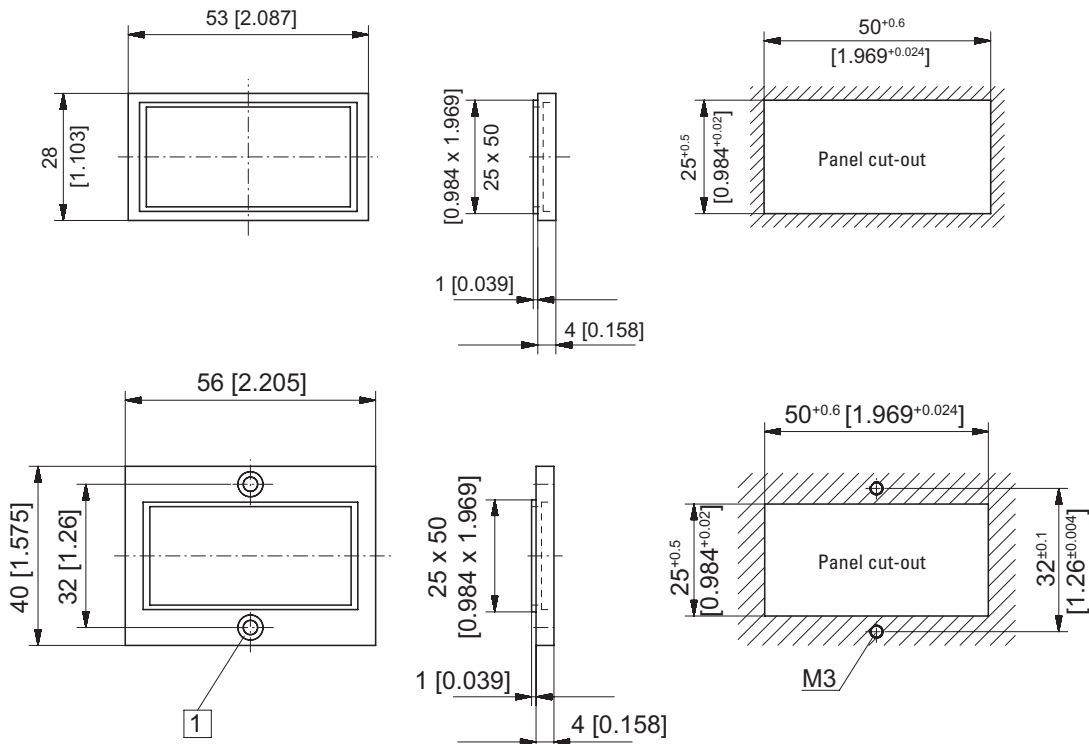
1 Countersinking Af3, DIN 74