

# LED temperature display

## KT-LED-24-PT100-24VDC

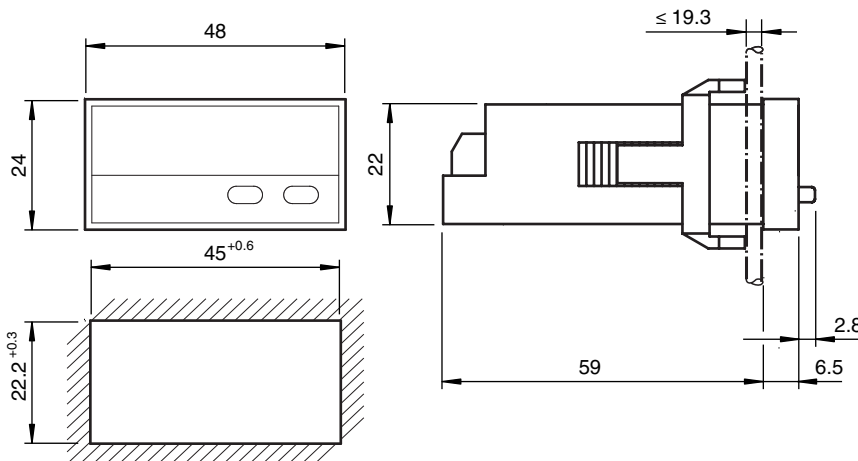


- Temperature display in °C or °F
- Resolution up to 0.1 °C
- Extremely bright, large LED indicator
- RTD types Pt100, Ni100 in 2-, 3-, or 4-wire mode
- Galvanic isolation
- Polarity reversal protected
- Degree of protection IP65 (front only)

LED temperature display for Pt100 temperature sensor, with 24 VDC supply voltage



### Dimensions



### Technical Data

General specifications	
Data storage	EEPROM
Programming	keypad-driven menu
Functional safety related parameters	
MTTF <sub>d</sub>	540 a
Mission Time (T <sub>M</sub> )	10 a
Diagnostic Coverage (DC)	0 %
Indicators/operating means	
Type	5-digit 7-segment LED display, red
Display value	digit height 8 mm
Display interval	-1999.9 ... 9999.9
Decimal point	0 to max 1 fractional digit
Temperature range	Pt100 acc. DIN IEC 751: -199.9 ... 850 °C (-327.8 ... 1562 °F) Ni100 acc. DIN 43760: -60 ... 250 °C (-76 ... 482 °F)
Resolution	0.1 °C (0.1 °F) bzw. 1 °C (1 °F)
Refresh cycle of the measured value output	1 - 2 s <sup>-1</sup>
Reset	manually or external

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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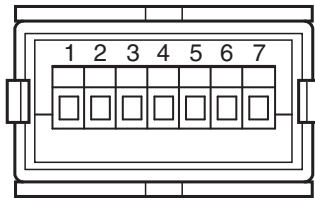
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## Technical Data

Electrical specifications		
Operating voltage	$U_B$	10 ... 30 V DC galvanically isolated
Operating current	$I_B$	max. 40 mA
Input		
Suitable sensors		Pt100/Ni100 resistance thermometer, with sensor breakage monitoring
Signal voltage		Display latch, display hold for current measured value
High		4 ... 30 V DC
Low		0 ... 2 V DC
Pt 100 range (-200 ... 850 °C)		0 ... 20 $\Omega$ 2-wire: programmable 3-/4-wire: no adjustment necessary
Ni 100-range (-60 ... 250 °C)		0 ... 20 $\Omega$ 2-wire: programmable 3-/4-wire: no adjustment necessary
Current		1 mA
Counting frequency		5 measurements per second
Linearity error		Pt100 < 0.1% at 20°C ambient temperature Ni100 < 0.2% at 20°C ambient temperature
Compliance with standards and directives		
Directive conformity		
EMC Directive 2004/108/EC		EN 61000-6-2:2005
Standard conformity		
Emitted interference		DIN EN 55011:2009, Class B
Ambient conditions		
Ambient temperature		-20 ... 65 °C (-4 ... 149 °F)
Storage temperature		-25 ... 70 °C (-13 ... 158 °F)
Relative humidity		≤ 85 % (noncondensing)
Temperature drift		0.1 K/K <sub>environment</sub>
Mechanical specifications		
Degree of protection		IP65 (front)
Mass		approx. 45 g
Dimensions		48 mm x 24 mm x 68.3 mm

## Connection

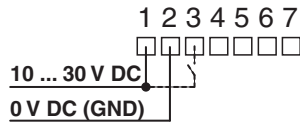


### Connections

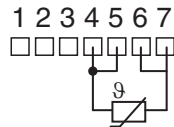
Pin	Function
1	10 - 30 V DC Supply voltage
2	0 V DC (GND)
3	Latch input
4	Pt100/Ni100
5	Pt100/Ni100
6	Pt100/Ni100
7	Pt100/Ni100

### Electrical connection

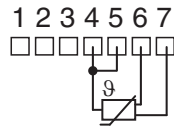
Connection supply Voltage / Latch input



2-wire resistance thermometer



3-wire resistance thermometer



4-wire resistance thermometer

