CE

Model Number

KT-LED-24-PT100-24VDC

LED temperature display for Pt100 temperature sensor, with 24 V_{DC} supply voltage

Features

- 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
- Protection degree IP65 (front only)

Technical data

General specifications		
Data storage		EEPROM
Programming		keypad-driven menu
Functional safety related parameters		
$MTTF_d$		540 a
Mission Time (T_M)		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 Ni100 acc. DIN 43760: -60 ... 250 °C
Resolution		0.1 °C (0.1 °F) bzw. 1 °C (1 °F)
Refresh cycle of the measured value output		1 - 2 s^{-1}
Reset		manually or external
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC electrically isolated
Operating current		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 Ω 2-wire: programmable 3-/4-wire: no adjustment necessary
Ni 100-range (-60 ... 250 °C)		0 ... 20 Ω 2-wire: programmable 3-/4-wire: no adjustment necessary
Current		1 mA
Counting frequency		5 measurement per second
Linearity error		Pt100 < 0.1% at 20°C ambient temperature Ni100 < 0.2% at 20°C ambient temperature
Ambient conditions		
Ambient temperature		-20 ... 65 °C (253 ... 338 K)
Storage temperature		-25 ... 70 °C (248 ... 343 K)
Relative humidity		≤ 85 % (non-condensing)
Temperature drift		0.1 $K/K_{environment}$
Mechanical specifications		
Protection degree		IP65 (front)
Mass		approx. 45 g
Dimensions		48 mm x 24 mm x 68,3 mm
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

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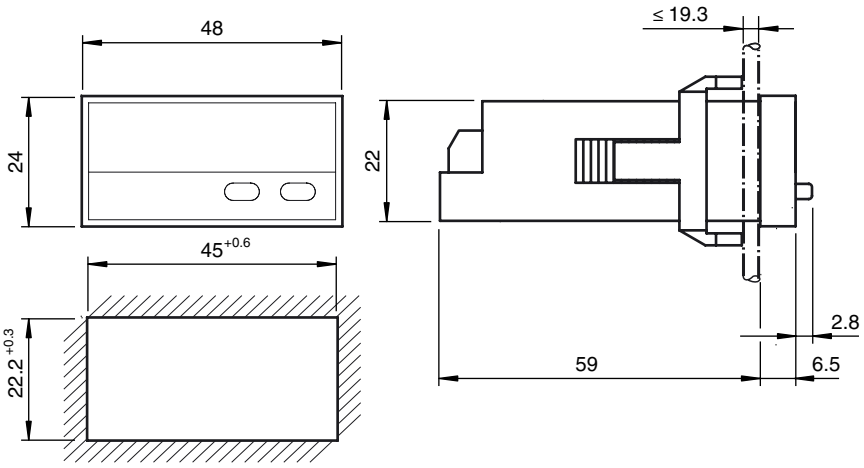
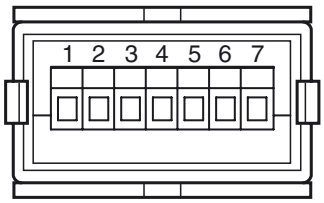
Dimensions



Electrical connection

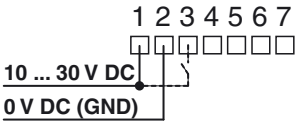


Connections

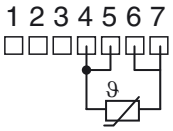
Pin	Function
1	10 - 30 V DC Supply voltage
2	0 V DC (GND)
3	Latch input
4	Pt100/Ni100
5	Pt100/Ni100
6	Pt100/Ni100
7	Pt100/Ni100

Electrical connection

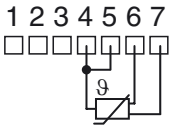
Connection supply Voltage / Latch input



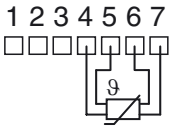
2-wire resistance thermometer



3-wire resistance thermometer



4-wire resistance thermometer



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