



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}

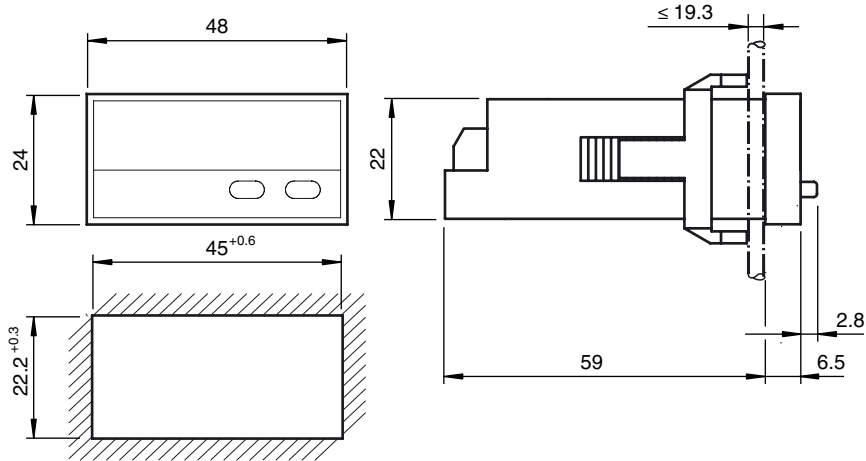
Mechanical specifications

Protection degree	IP65 (front)
Mass	approx. 45 g
Dimensions	48 mm x 24 mm x 68,3 mm

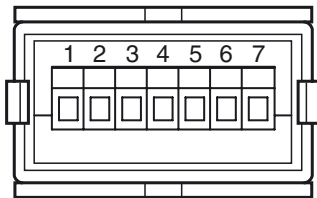
Compliance with standards and directives

Directive conformity	
EMC Directive 2004/108/EC	EN 61000-6-2:2005
Standard conformity	
Emitted interference	DIN EN 55011:2009, Class B

Dimensions



Electrical connection

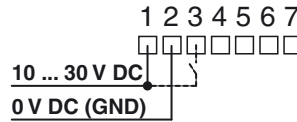


Connections

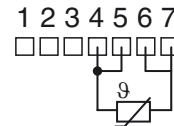
Pin	Function
1	10 - 30 V DC Supply voltage
2	0 V DC (GND)
3	Latch input
4	Pt100/Ni100
5	Pt100/Ni100
6	Pt100/Ni100
7	Pt100/Ni100

Electrical connection

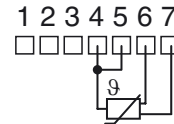
Connection supply Voltage / Latch input



2-wire resistance thermometer



3-wire resistance thermometer



4-wire resistance thermometer

