



Model Number

KT-LED-24-TC-24VDC

LED temperature display for thermocouples J/K/N, with 24 V_{DC} supply voltage

Features

- Temperature display in °C or °F
- Resolution up to 0.1 °C
- Extremely bright, large LED indicator
- For thermocouples J, K, and N
- 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	1400 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	-999.9 ... 1999.9
Decimal point	0 to max 1 fractional digit
Temperature range	acc. DIN IEC 584: J (Fe-Cu-Ni): -210 ... 1200 °C K (Ni-CrNi): -200 ... 1372 °C N (NiCrSi-NiSi): -200 ... 1300 °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	Thermocouple J, K, N, with sensor breakage monitoring
Signal voltage	Display latch, display hold for current measured value
High	4 ... 30 V DC
Low	0 ... 2 V DC
Counting frequency	5 measurement per second
Linearity error	< 0.4 % at 20°C ambient temperature
Compensation (reference junction CJC)	internal or external (programmable) Junction error: ±1.0 °C typ./±3.0 °C max.

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}

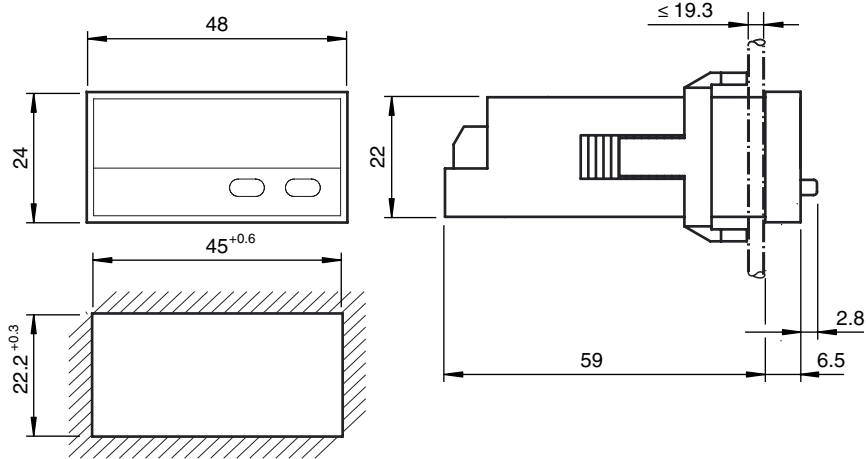
Mechanical specifications

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

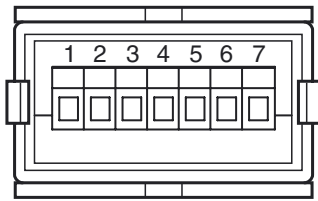
Compliance with standards and directives

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

Dimensions

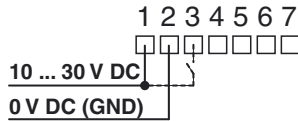


Electrical connection



Electrical connection

Connection supply Voltage / Latch input



Connections

Pin	Function
1	10 - 30 V DC Supply voltage
2	0 V DC (GND)
3	Latch input
4	not connected
5	Thermocouple "+"
6	not connected
7	Thermocouple "-"

Thermocouple Sensor

