Model Number

KT-LED-96-2R-230VAC

Temperature control unit with LED display and 90 ... 260 V_{AC} supply voltage

Features

- Protection degree IP65 (front only)

Technical data

General specifications		
Data storage		10^6 storage cycles or 10 years, EEPROM
Programming		keypad-driven menu
Functional safety related parameters		
$MTTF_d$		350 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 14.2 mm
Display interval		-19999 ... 99999 with suppression of leading zeros
Decimal point		0 to max 1 fractional digit
Reset		manually or external
Electrical specifications		
Fusing		100 mA/T
Operating voltage	U_B	90 ... 260 V AC
Power consumption	P_0	max. 6 VA
Input 1		
Input type		measurement for thermoelements B, E, J, K, N, R, S, T
Resolution		0.1 °C (0.1 °F)
Compensation (reference junction CJC)		internal or external (programmable)
Input 2		
Input type		Measurement input for resistance thermometer type Pt100, Pt1000
Resolution		0.1 °C (0.1 °F)
Connection		2-, 3- und 4-Leiter-Anschlusstechnik, programmierbar
Current		800 µA at Pt100 80 µA at Pt1000
Input 3		
Input type		Measurement input for resistance measurement
Resistor		0 ... 400 Ω 0 ... 4000 Ω
Resolution		14 Bit
Connection		2-, 3- und 4-Leiter-Anschlusstechnik, programmierbar
Current		800 µA at 400 Ω 80 µA at 4000 Ω
Input 4		
Input type		Millivolt measurement input with automatic zero adjustment
Voltage range		0 ... 100 mV DC -100 ... 100 mV DC
Resolution		14 Bit
Input resistance		≥ 2 MΩ
Measuring frequency		approx. 1 measurement per sec.
Input 5		
Input type		Digital inputs, Input MPI: Display hold or reset limit value latch Input KEY: Keyboard lock
Signal voltage		
High		4 ... 30 V DC
Low		0 ... 2 V DC
Minimum pulse duration		≥ 5 ms
Output 1		
Output type		2 limit value outputs, relay with floating changeover contact
Switching voltage		250 V AC / 300 V DC
Switching current		max. 3 A AC/DC min. 30 mA DC
Switch power		50 W / 2000 VA
Output 2		
Output type		Auxiliary power output for signal converter/measurement sensor, galvanically isolated
Output voltage		10 V DC ± 3 %, 30 mA, 24 V DC ± 15 %, 50 mA
Ambient conditions		
Ambient temperature		-20 ... 65 °C (253 ... 338 K)
Storage temperature		-40 ... 85 °C (233 ... 358 K)
Relative humidity		≤ 75 % (non-condensing)
Mechanical specifications		
Protection degree		IP65 (front)
Mass		approx. 213 g
Dimensions		96 mm x 48 mm x 90,7 mm
Compliance with standards and directives		
Directive conformity		

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Low Voltage Directive 2006/95/EC	EN 61010-1:2001; protection class: 2
EMC Directive 2004/108/EC	EN 61000-6-2:2005
Standard conformity	
Emitted interference	DIN EN 55011:2009, Class B

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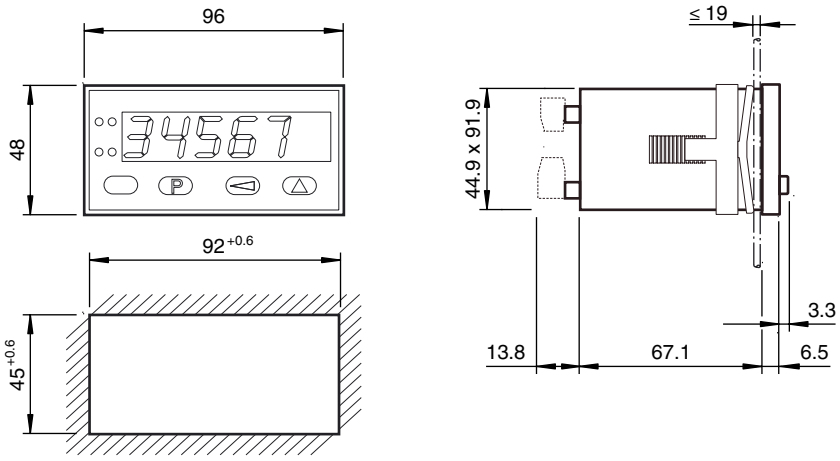
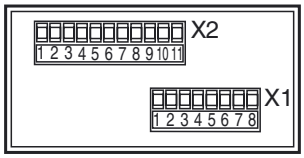
Dimensions



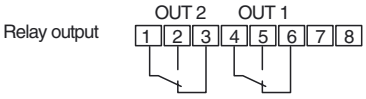
Electrical connection

Wire assignment



X1: Pin Function

Power supply and alarm outputs



7	90 ... 260 V AC (N~)
8	90 ... 260 V AC (L~)

X2: Pin Function

Thermocouples

1	Positive sensing arm
2	Negative sensing arm

Resistance thermometer

1	Pt100 or 0 ... 400 Ω
2	Pt1000 or 0 ... 4000 Ω

Voltage measurement

1	Voltage input (V)
2	GND 1 (analog)

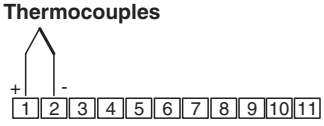
Control inputs and auxiliary power (Vout)

6	Keypad lock-out “Key”
7	GND2 Key/MPI
8	MP-input “Reset-alarm-latch/ Display-Hold”
9	GND3 (for Vout)
10	Vout + 10 V/30 mA
11	Vout + 24 V/ 50 mA

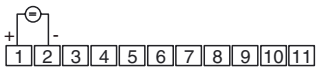
Electrical connection

Electrical connection X2

Thermocouples

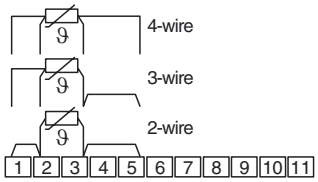


Voltage measurement

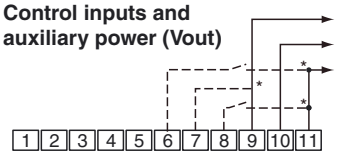


Resistance thermometer

Pt100/Pt1000



Control inputs and auxiliary power (Vout)



* Alternatively connect directly to DC power supply (galvanic isolation of control and measurement inputs

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