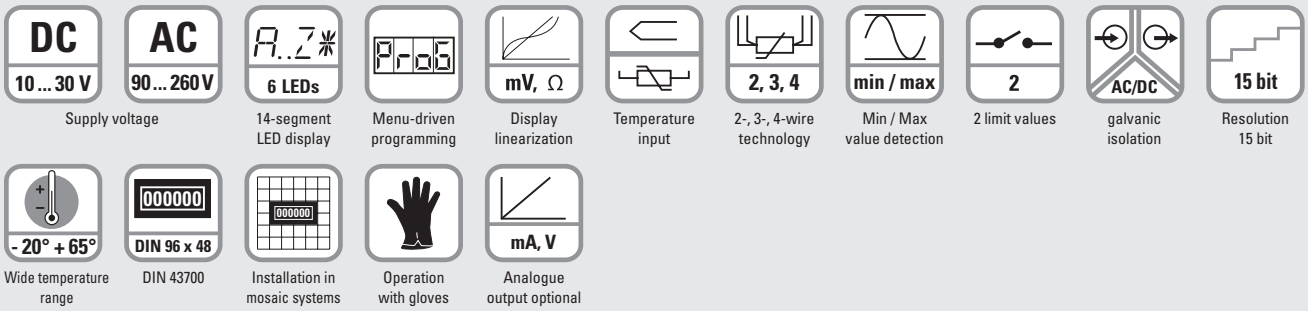
LED temperature controllers | For temperature sensors | Codix 564

pending

The temperature controller Codix 564 displays temperature values in high resolution. In addition it can monitor and control 2 limit values. All current temperature sensors, such as thermocouple types B, E, J, K, N, R, S and T, as well as mV inputs, Pt100 and resistance inputs, can be connected to the device.

These fast displays set new standards when it comes to user friendliness. Their easy-to-read 14-segment LED display, easy-to-understand running Help Texts and a practical quick-start guide eliminate the need to wade through time-consuming full instruction manuals.

NEW: with optional analogue output



Supply voltage | 14-segment LED display | Menu-driven programming | Display linearization | Temperature input | 2-, 3-, 4-wire technology | Min / Max value detection | 2 limit values | galvanic isolation | Resolution 15 bit

Wide temperature range | DIN 43700 | Installation in mosaic systems | Operation with gloves | Analogue output optional

User-friendly

- Practical quick-start guide for setting the parameters and operating the device
- Help text as running text
- Easy-to-read 14-segment LED, 6-digit display
- Simple programming via 4 keys on the front
- One front key as well as 2 additional inputs can be programmed for specific applications
- Characteristic curves for thermocouples and RTD permanently stored
- MIN/MAX memory function, individually resettable

Powerful

- Sampling rate of 10 readings per second
- Customised linearization via 12 control points
- 2 relay outputs (changeover contacts) for limit monitoring with hysteresis and ON/OFF delay function
- Analogue output for the current measured value, MIN-value, MAX-value
- Auxiliary sensor power supply with AC version
- Inputs and outputs galvanically isolated
- Digital filter (first-order) for smoothing display fluctuations with unstable input signals

Order code

6.564 . 0 1 0 . X 0 X

(a) (b) (c) (d)

(a) *Input type*
4 = Temperature [1)]

(b) *Outputs*
0 = relays [1)]

(c) *Supply voltage*
0 = 90 ... 260 V AC [1)]
3 = 10 ... 30 V DC [1)]

(d) *Further outputs (optional)*
0 = none [1)]
9 = analogue output [1)]
(only for DC version)

Delivery specification:
- Process device
- Panel mounting clip
- Gasket
- Multilingual operating instructions
- One sheet of self-adhesive symbols
- Quick-start guide

[1)] Stock types

Quick-start guide for setting the parameters and operating the device.

The guide can be affixed directly to the front of the unit and can be removed and re-applied as required.

Accessories

Mounting frame with cut-out 92 x 45 mm	for snap-on mounting on 35 mm top-hat DIN rail, for counters 96 x 48 mm	**G300005**

Further accessories can be found in the accessories section or in the accessories area of our website at: www.kuebler.com/accessories

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General technical data

Display	6-digit, 14 segment LED
Digit height	14 mm
Display range	-199999 … 999999, with leading zero blanking
Data retention	> 10 years, EEPROM
Operation	5 keys
Operating temperature	-20°C ... +65°C
Storage temperature	-25°C ... +75°C
Relative humidity (non-condensing)	R.H. 93 % at 40°C
Altitude	up to 2000 m

Electrical characteristics

Supply voltage	AC supply	90 ... 260 V AC / max. 9 VA 50 / 60 Hz ext. fuse protection: T 0,1 A
	DC supply	10 ... 30 V DC / max. 3,8 W with galvanic isolation and reverse polarity protection ext. fuse protection: T 0,4 A
Mains hum suppression (programmable)		50 Hz or 60 Hz
Sensor supply voltage	AC supply	24 V DC ±15 %, 30 mA
EMC Noise immunity		EN 61000-6-2 with shielded signal and control cables
EMC Noise emission		EN 55011 Class B
Device safety	designed to	EN 61010 part 1
	Protection Class	2
	Application area	Pollution level 2

Mechanical characteristics

Housing		Panel mount housing to DIN 43700, RAL 7021
Dimensions		96 x 48 x 102 mm
Panel cut-out		92 + 0,8 x 45 + 0,6 mm
Installation depth		approx. 92 mm incl. terminals
Weight		approx. 180 g 200 g with analogue output
Protection		IP65 from front
Housing material		Polycarbonate UL94 V-2
Vibration resistance	acc. to EN 60068-2-6	10 - 55 Hz / 1 mm / XYZ 30 min in each direction
Shock resistance	acc. to EN 60068-2-27	100G / XYZ 3 times in each direction
	acc. to EN 60068-2-29	10G / 6 ms / XYZ 2000 times in each direction
Connections		
Supply voltage and outputs		Plug-in screw terminal, 8-pin, RM5,00, Core cross-section max. 2,5 mm²
Signal and control inputs		Plug-in screw terminal, 9-pin, RM 3,50, Core cross-section max. 1,5 mm²

Alarm outputs

Relays		changeover contacts
Switching voltage	max.	250 V AC / 125 V DC
	min.	5 V AC / 5 V DC
Switching current	max.	5 A AC / 5 A DC
	min.	10 mA DC
Switching capacity	max. 1	250 VA / 150 W
Pull-in time		approx. 10 ms

Measuring signal inputs

Sampling rate	10 readings/sec
Temperature drift	< 100 ppm/K

Input Thermocouple

sensor:	range:	accuracy at 23°C:
type B	+250°C ... 1820°C	typ. 1.0°C, max. 2.0°C
E	-200°C ... 1000°C	typ. 0.2°C, max. 0.5°C
J	-210°C ... 1200°C	typ. 0.2°C, max. 0.5°C
K	-200°C ... 499,9°C -500°C ... 1372°C	typ. 0.6°C, max. 1.0°C typ. 0.3°C, max. 0.5°C
N	-200°C ... 1300°C	typ. 0.3°C, max. 0.7°C
R	-50°C ... 1768°C	typ. 1.0°C, max. 2.0°C
S	-50°C ... 1768°C	typ. 1.0°C, max. 2.0°C
T	-200°C ... 400°C	typ. 0.2°C, max. 0.5°C

Resolution J, K, T, E, N	1 or 0,1°C/°F
Resolution S, R, B	1°C/°F
Reference point	internal or external constant
Reference point accuracy	≤ ±1°C

Input mV

Measuring range	± 105 mV (resolution ±15 bit)
Measuring accuracy at 23°C (% of range)	typ. 0,02 / max. ≤ 0,05
Input resistance	> 2 MΩ

Input Pt100

Measuring range	-200°C … +850°C
Resolution	1 or 0,1°C / °F
Measuring accuracy at 23°C	typ. 0,3°C, max. ≤ 0,6°C
Measuring current	200 µA
Connection	2-, 3-, 4-wire
Lead wire resistance	max. 25 Ω per wire

Input 500 Ω

Measuring range	0 ... 525 Ω (resolution ±15 bit)
Measuring accuracy at 23°C	typ. 0,1 Ω, max. ≤ 0,2 Ω
Measuring current	200 µA
Connection	2-, 3-, 4-wire
Lead wire resistance	max. 25 Ω v

Control inputs MPI 1 / MPI 2

Quantity		2 optocouplers
Function		programmable
Switching levels	low	< 2 V
	high	> 4 V (max. 30 V)
Pulse length		> 100 ms

Analogue output (optional - only for DC version)

Output ranges		0 (4) ... 20 mA / 0 (2) ... 10 V
Load	current output	≤ 500 Ω
	voltage output	≥ 2000 Ω
Resolution		15 bit
Update time (basic device measuring rate)		100 ms
Temperature drift		≤ 100 ppm/K
Accuracy		± 0,1% of the output range high value
Output ripple		≤ 10 mV
Isolation voltage		500 V AC for 1 minute or 1 kV DC for 1 second

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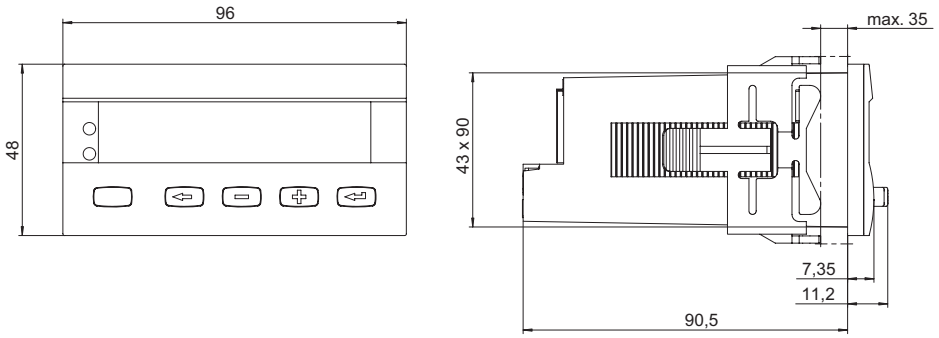
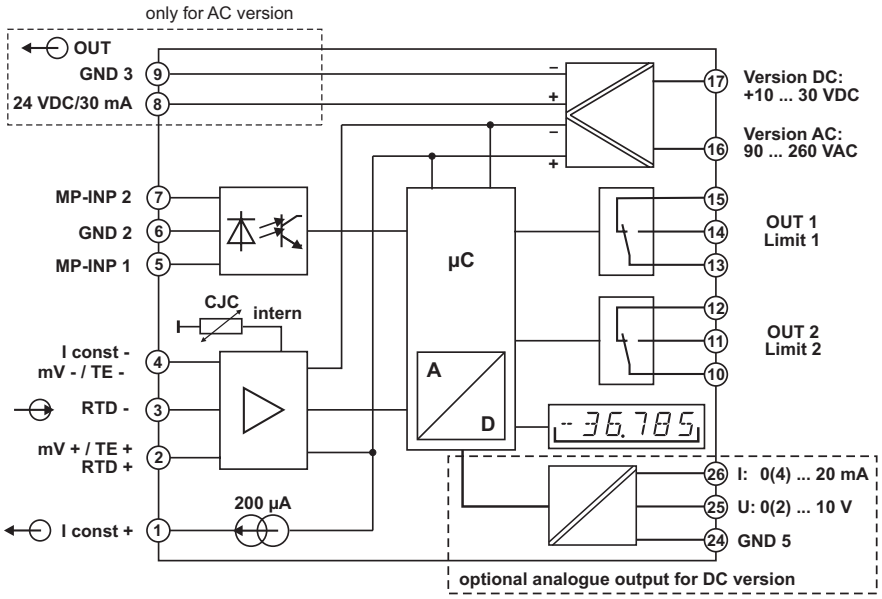
Dimensions

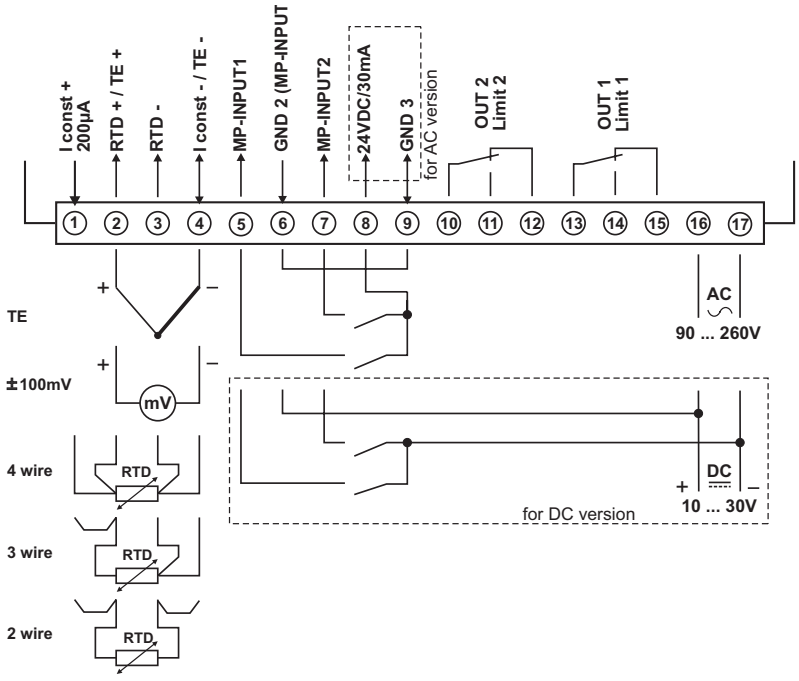
Panel cut-out
92 mm $^{+0,8}$ x 45 mm $^{+0,6}$



Block diagram



Terminal assignment



Rear side view