

CALIBRATION CERTIFICATES

new!

**Simulator, type KA 7531
for Pt100, thermocouples, mV, V, mA, Hz
Option PC interface**



Technical features

- Universal manual simulator for simulating temperature sensors and process variables when testing measuring instruments, regulators, and other equipment
- Pt100 simulation with 5 fixed resistors in 4-conductor technology
Voltage and thermocouples simulation with 16-bit D/A converter
Current simulation with 16-bit D/A converter
Frequency and pulse generator with quartz-crystal oscillator
Continuity check with settable threshold
- All signals are available at the same time.
- Signals can be set either manually or automatically, in step or ramp form.
- All signals and all the programming can be shown on the illuminated graphics display.
- Connection of peripherals via ALMEMO® clamp connectors, cable with anti-kink protective sleeve and strain relief
- Power supply via battery, mains unit, USB cable ZA 1919-DKUV or connection to RS422 network distributor with connector ZA5099-FSV
- Modern, compact housing - also suitable for DIN top-hat rail mounting
- Option of PC-controlled operation via all ALMEMO® data cables, also networked with settable device address via network distributor and RS422 connector

Options

addressable PC interface

Order no. OA 7531-I

Included as standard

Simulator, 5 sockets for Pt100, thermocouples or 0 to 10 V, 0 to 20 mA, frequency, continuity tester
Graphics display and keypad, sockets DC, A1, batteries, including ALMEMO® clamp connector (for Pt100) and ALMEMO® connecting cable with 2 banana plugs and 2 test probes

Order no. KA7531I

Technical data

Signal Pt100	5 discrete resistance values in 4-conductor technology 0 / 50 / 100 / 200 / 300 °C
Accuracy	0.01%
Temperature drift	10 ppm / K
Signal voltage	16-bit DAC electr. isolated load > 1 MΩ
-10 to +55 mV	load > 100 kΩ
0.0 to 10.0 V	0.1% of final value
Accuracy	10 ppm / K
Temperature drift	100 μs
Time constant	
Thermocouples	type K, N, L, J, U, T, S, R, B
Signal current	16-bit DAC electr. isolated load < 500 Ω
0 to 20.0 mA	0.1% of final value
Accuracy	10 ppm / K
Temperature drift	100 μs
Time constant	
signal frequency	0 to 65000 Hz
Pulse width	1 to 99 %
Period	100 μs to 10 s
Pulse	10 μs to 1 s
Accuracy	0.1%
Temperature drift	10 ppm / K
Continuity	current approx. 0.1 mA
Threshold	10 to 1000 mV
Current consumption	Battery 4.5 V
Standard	approx. 50 mA
with illumination	approx. 85 mA
Current output	approx. 3.5 I _{out}
Display	graphics 128 x 64 (55 x 30 mm)
Illumination	2 white LEDs
Keypad	7 silicone keys (4 soft-keys)
Housing	(LxWxH) 127 x 83 x 42 mm ABS (-10 to +70 °C), 290 g

Accessories

ALMEMO® clamp connector	ZA1000KS
ALMEMO® connecting cable with 2 banana plugs and 2 test probes	ZA1000PK
Mains adapter 12 V / 200 mA	ZA1312NA1
USB data cable, electrically isolated	ZA1919DKU
As above but with 9 V supply, not electr. isol.	ZA1919DKUV
V24 data cable, electrically isolated	ZA1909DK5
Connector for RS422 network distributor	ZA5099FSV
Fixture for top-hat rail mounting	ZB2490HS
Rubber guard, gray	ZB2490GS2

Simulator KA 7531

Displays (examples):

```
SIMULATOR KA 7531  V6.01
P0: Pt100
P1: 0-10V
P2: 0-20mA
P3: 0-65kHz
P4: continuity

CONFIG *ON
```

Main menu

```
* DEVICE CONFIGURATION *
Device address: 00
Baud rate:      9600Bd
Language:       english
Illumination:   ✓  contr. 50%
switching off ✓ duration: 20s
UBat:           4.5V

F1 *ON
```

Device configuration

```
P0: Output Pt100
Function: steps individually

100.0 °C

F1 S *ON
```

Pt100 resistance values

```
P1: Output NiCr-Ni
Function steps automatically

0.0 °C
Step 100°C time: 10s

START F1 S *ON
```

NiCr-Ni step generator

```
P1: Output 0-10V
Function: steps individually

5.000 V
Step: 0.1 V

F1 S *ON
```

0 to 10 V step generator

```
P3: Output 0-20mA
Function ramp automatically

START: 4.000 mA
Stop: 15.000mA time: 30s

START F1 *ON
```

0 to 20 mA ramp generator

```
P4: Output Frequency
Function: steps individually

5000. Hz
Step: 1000Hz Pulse width: 50%

F1 S *ON
```

Frequency pulse generator

```
P4: Output yes
Function: steps individually

36 mV
Threshold: 100mV

F1 *ON
```

Continuity tester

10/2008 We reserve the right to make technical changes.