

## GENERAL

**ALIACA** ACA60 is mainly designed for the calibration and maintenance of on-site industrial thermodynamic(al) instrument and their system. Its complete and practical functions are easily accessible. With latest extensive digital-converted integrative circuit and large-screen display, it is supplied with functions of output, measurement, ITS-90 query and 24VDC power supply, making it convenient for you to check and calibrate sensor, transmitter, displayed instruments, and control system on spot.

## FEATURES

- ❑ Large 2-line LCD with backlit display
- ❑ Sources and reads mA, mV, V, Ohms, RTD and frequency
- ❑ Keypad to enter output parameters directly
- ❑ Simultaneous millivolt display when in temperature measurement mode
- ❑ Small, streamlined shape, easy to carry and hold
- ❑ Thermocouple measurement/output with automatic or manual cold junction compensation
- ❑ Quick query to resistance & temperature, and millivolt & temperature
- ❑ 24VDC loop power supply
- ❑ Ni-MH battery available, continuous use for at least 6 hours
- ❑ Concurrent input/output, convenient to operate
- ❑ Temperature unit °C and °F available.

## STANDARD SPECIFICATION

- |                       |                                      |                      |  |
|-----------------------|--------------------------------------|----------------------|--|
| ● Source              | : VDC, mA, mV                        | ● Battery Type       | : NiMH Pack, 1800 mAh, 7.2VDC            |
|                       | : T/C(S, K, E, T, J, B, R, N, W325)  | ● Charger Supply     | : 90 ~ 260VAC 50/60 Hz                   |
|                       | : Frequency, 0-5000 Hz (4VDC)        | ● Power Consumption  | : 2W                                     |
|                       | : Resistance, 10Ω - 510Ω             | ● Accessory Included | : Test leads two pairs                   |
|                       | : 24VDC, 30mA Max.                   |                      | : Power Adaptor (90-260VAC, 50/60Hz)     |
| ● Read                | : VDC, mA, mV                        |                      | : Reinforced aluminum carrying case      |
|                       | : T/C(S, K, E, T, J, B, R, N, W325)  |                      | : Shoulder straps for carrying case only |
|                       | : Frequency, 0-5000 Hz (24 VDC Max.) | ● Dimension          |  |
|                       | : RTD(PT100, Cu50)                   | Calibrator           | : 231 * 104 * 45mm                       |
| ● Response Time       | : 80ms                               |                      | : 9.1" * 4.1" * 1.8"                     |
| ● Operating Temp.     | : -10 ~ +55 °C                       | Carrying Case        | : 330 * 250 * 150mm                      |
| ● Ambient Humidity    | : 0 - 90% RH non-condensing          |                      | : 13" * 9.8" * 6.0"                      |
| ● Display             | : 2" (128*64 Pixels), Backlight LCD  | ● Weight             | : 0.7 Kg                                 |
| ● Display Update Rate | : 4 / second                         | ● Enclosure          | : IP54                                   |
| ● Keyboard            | : 25 Membrane keyboard               |                      |  |
| ● Password Protection | : 4 Digits                           |                      |  |
| ● Battery Operation   | : 6-8 Hours                          |                      |  |
| ● Charge Time         | : 8-12 Hours                         |                      |  |



**TECHNICAL SPECIFICATION**

Source				
Function	Range	Load	Resolution	Accuracy
DCV	0~5.000 V	Min 350 Ω	1mV	±0.05%FS
DCmA	0~24.000mA	Max 250 Ω	1mA	±0.05%FS
DCmV	0~99.999mV	Min 100 Ω	1mV	±0.05%FS
R <sup>(1)</sup>	10.0~510.0Ω	**	0.1Ω	±0.15%FS
TC	K、T、E、J、N	**	0.1 °C / 0.1 °F	±0.1%FS
	R、S、B、W325	**	0.1 °C / 0.1 °F	±0.2%FS
Hz	0~1000Hz	Min 350 Ω	1Hz	±1Hz
	0~5.00KHz	Min 350 Ω	0.01KHz	±0.02%KHz
Built-in 24VDC	24VDC	Max 30mA	**	**

Measurement				
Function	Range	Impedance	Resolution	Accuracy
DCV	0~5.000 V	1.4 MΩ	1mV	±0.1%FS
DCmA	0~24.000 mA	20.3 Ω	1μA	±0.05%FS
DCmV	0~99.999 mV	1.4 MΩ	1mV	±0.05%FS
RTD	PT100、CU50	**	0.1 °C / 0.1 °F	±0.1%FS
TC	K、T、E、J、N	1.4 MΩ	0.1 °C / 0.1 °F	±0.1%FS
	R、S、B、W325	1.4 MΩ	0.1 °C / 0.1 °F	±0.2%FS
F	0~5000.0Hz	1.4 MΩ	0.1Hz	±0.2%Hz

1): Resistance simulation need excitation current 0.6mA

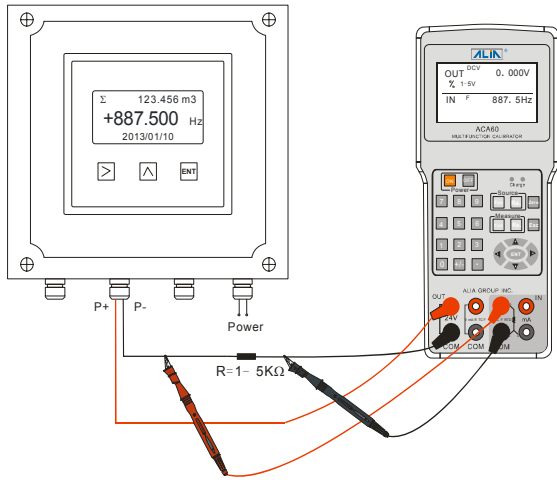
TC Measurement and Source					
Sensor Type		Display( °C)	mV	Measurement	Simulation
				1Year Uncertainty <sup>(1)</sup>	1Year Uncertainty <sup>(1)</sup>
K	NiCr-Ni	0000.0~1768.0	0.000~54.874	±0.35 °C	±0.35 °C
T	Cu-Con	000.0~320.0	0.000~16.029	±0.25 °C	±0.25 °C
E	NiCr-Con	0000.0~1000.0	0.000~76.354	±0.25 °C	±0.25 °C
J	Fe-Con	0000.0~1200.0	0.000~69.535	±0.3 °C	±0.3 °C
N	NiCrSi-NiSi	0000.0~1300.0	0.000~47.513	±0.4 °C	±0.4 °C
R	Pt13Rh-Pt	0000.0~1760.0	0.000~21.006	±0.8 °C	±0.8 °C
S	Pt10Rh-Pt	0000.0~1768.0	0.000~18.696	±0.85 °C	±0.85 °C
B	Pt30Rh-Pt6Rh	0000.0~1820.0	0.000~13.814	±1.5 °C	±1.5 °C
W325	WRe3-WRe25	0000.0~2300.0	0.000~39.353	±0.9 °C	±0.9 °C

TC Measurement and Source Reference Junction	
Range( °C)	1Year Uncertainty <sup>(1)</sup>
-10~50 °C	±0.28°C

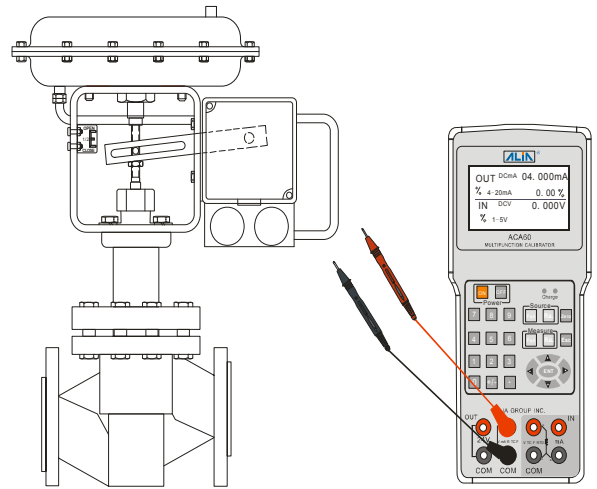
RTD Measurement and Simulation					
Sensor Type		Display( °C)	Ω	Measurement	Simulation
				1Year Uncertainty <sup>(1)</sup>	1Year Uncertainty <sup>(1)</sup>
PT100		-200.0~800.0 °C	18.52~375.7	0.2 °C	0.25 °C
Cu50		-50.00~150.00 °C	39.242~82.134	0.25 °C	0.9 °C

1): Uncertainty include reference uncertainty , hysteresis , non-linearity , repeatability and typical long-term stability for the mentioned period .

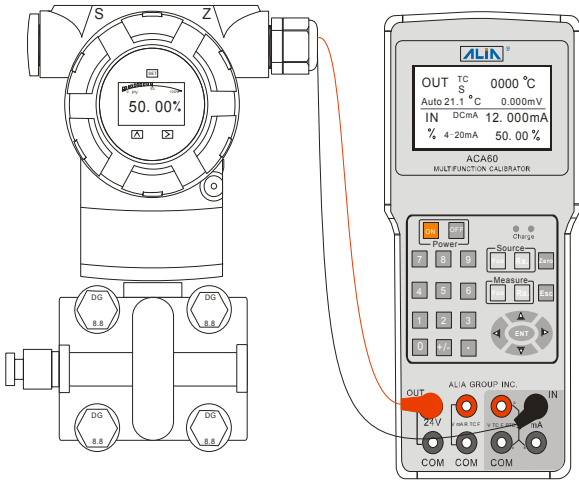
TYPICAL APPLICATIONS



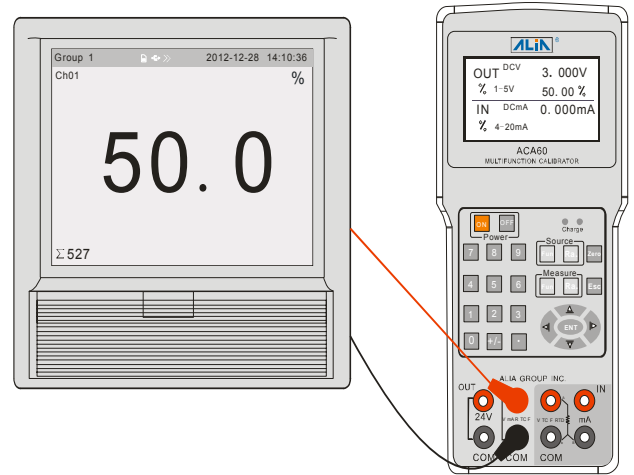
Frequency/Pulse measurement



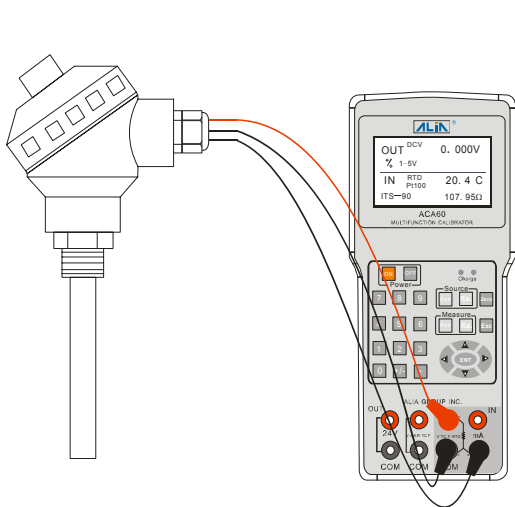
4-20 mA output of control valve simulation



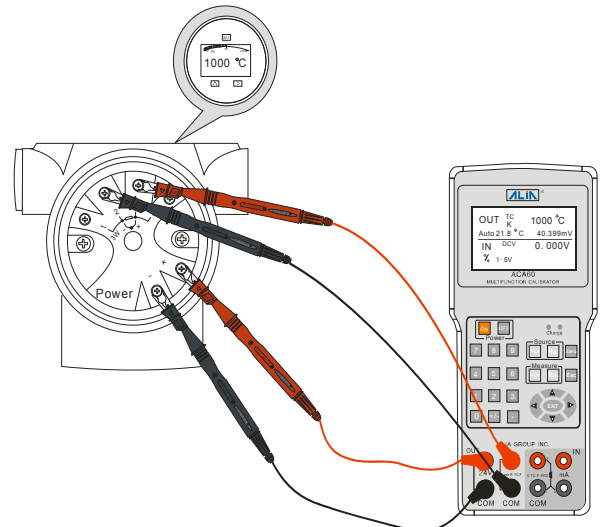
24VDC power supply and 4~20mA measurement



1-5V/4-20 mA simulation for recorder

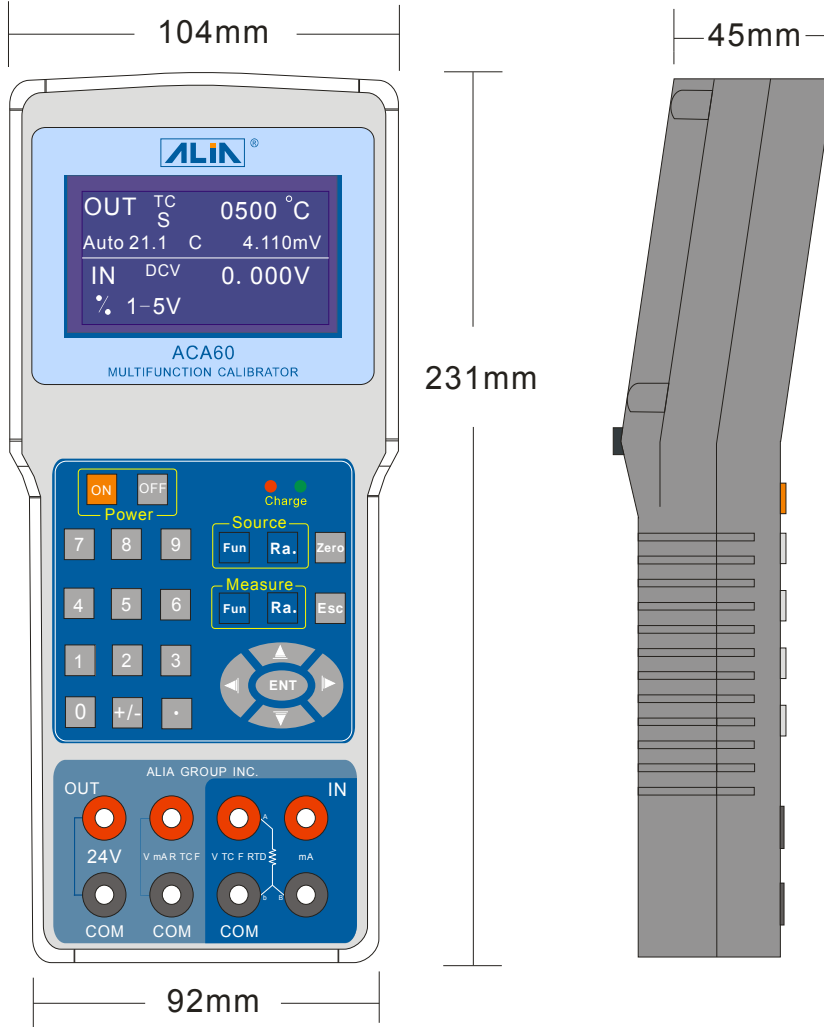


RTD-3w measurement



24V power supply and T/C converter simulation

**➤ DIMENSIONS**



**➤ ACCESSORIES**

