

## GENERAL

**ALIACA** The ACA60 Series is mainly designed for the calibration and maintenance of on-site industrial thermodynamic 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 24 VDC 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,  $\Omega$ , 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
- ❑ 24 VDC 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, 7.2 VDC           |
|                       | : T/C (S, K, E, T, J, B, R, N, W325)  | ● Charger Supply     | : 90-260 VAC 50/60 Hz                    |
|                       | : Frequency, 0-5000 Hz (4 VDC)        | ● Power Consumption  | : 2 W                                    |
|                       | : Resistance, 10-510 $\Omega$         | ● Accessory Included | : Test leads two pairs                   |
|                       | : 24 VDC, 30 mA Max.                  |                      | : Power Adaptor (90-260 VAC, 50/60 Hz)   |
| ● 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 * 45 mm                      |
| ● Response Time       | : 80 ms                               |                      | : 9.1" * 4.1" * 1.8"                     |
| ● Operating Temp.     | : -10~55 °C                           | Carrying Case        | : 330 * 250 * 150 mm                     |
| ● 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 Silicone 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	1 mV	±0.05% FS
DCmA	0-24.000 mA	Max. 250 Ω	1 μA	±0.05% FS
DCmV	0-99.999 mV	Min. 100 Ω	1 mV	±0.05% FS
R <sup>(1)</sup>	10.0-510.0 Ω	**	0.1 Ω	±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	0-1000 Hz	Min. 350 Ω	1 Hz	±1 Hz
	0-5.00 kHz	Min. 350 Ω	0.01 kHz	±0.02% kHz
Built-in 24 VDC	24 VDC	Max. 30 mA	**	**

Measurement				
Function	Range	Impedance	Resolution	Accuracy
DCV	0-5.000 V	1.4 MΩ	1 mV	±0.1% FS
DCmA	0-24.000 mA	20.3 Ω	1 μA	±0.05% FS
DCmV	0-99.999 mV	1.4 MΩ	1 mV	±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	0-5000.0 Hz	1.4 MΩ	0.1 Hz	±0.2% Hz

1): Resistance simulation need excitation current 0.6 mA

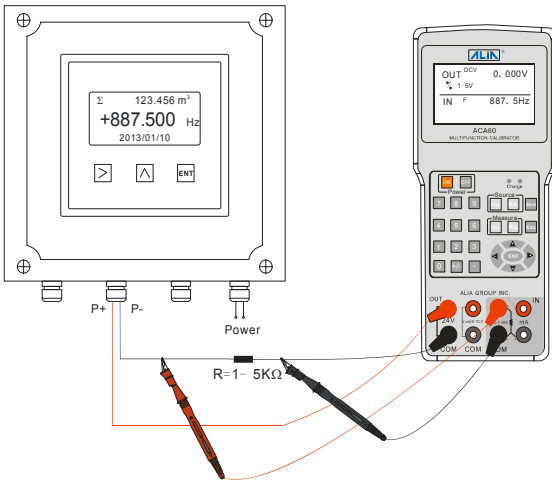
TC Measurement and Source					
Sensor Type		Display (°C)	mV	Measurement	Simulation
				1Year Uncertainty <sup>(1)</sup>	1Year Uncertainty <sup>(1)</sup>
K	NiCr-Ni	0000.0-1768.0	0.000-54.874	±0.35 °C	±0.35 °C
T	Cu-Con	000.0-320.0	0.000-16.029	±0.25 °C	±0.25 °C
E	NiCr-Con	0000.0-1000.0	0.000-76.354	±0.25 °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

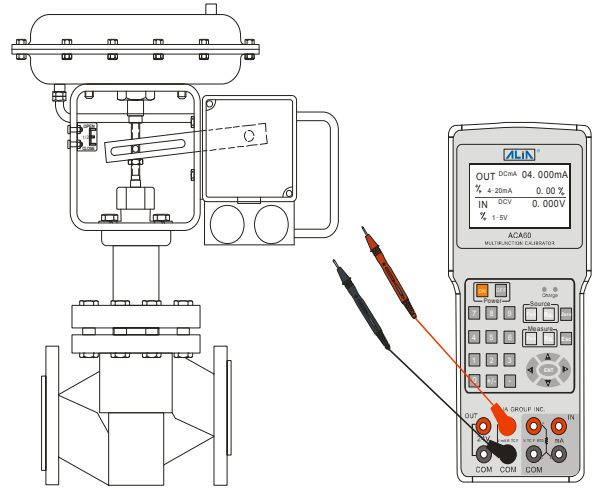
RTD Measurement and Simulation					
Sensor Type		Display (°C)	Ω	Measurement	Simulation
				1Year Uncertainty <sup>(1)</sup>	1Year Uncertainty <sup>(1)</sup>
PT100		-200.0~800.0 °C	18.52-375.7	0.2 °C	0.25 °C
CU50		-50.00~150.00 °C	39.242-82.134	0.25 °C	0.9 °C

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

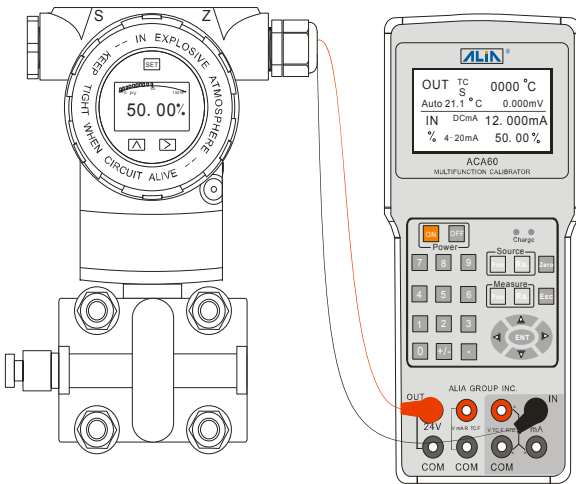
TYPICAL APPLICATIONS



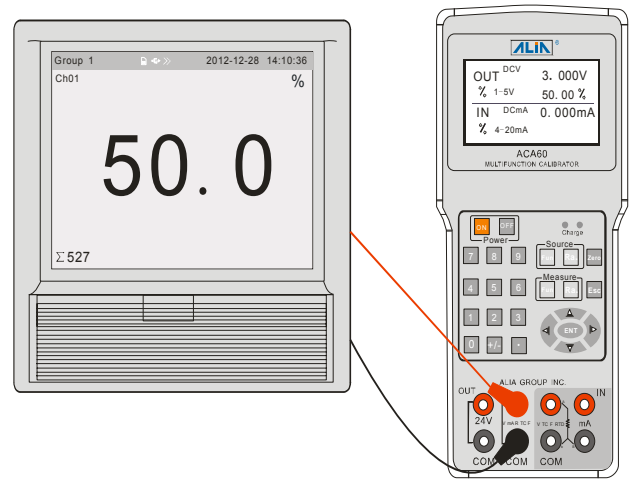
Frequency / Pulse measurement



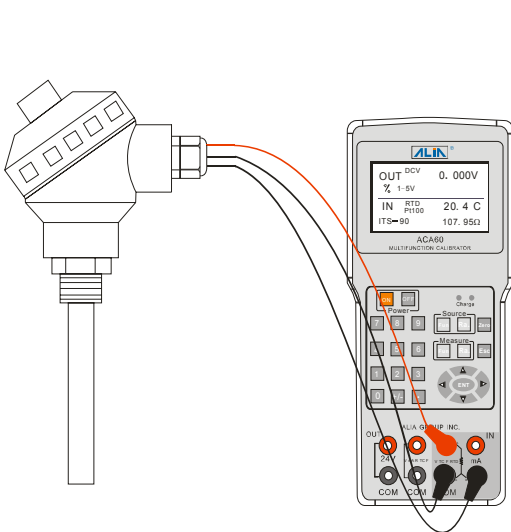
4-20 mA output of control valve simulation



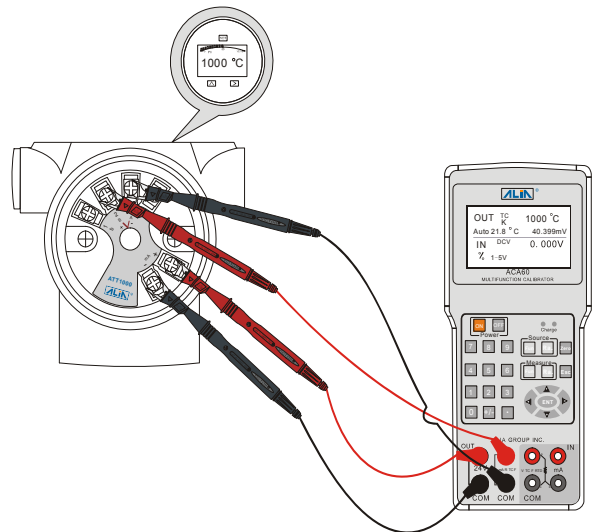
24 VDC power supply and 4-20 mA measurement



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

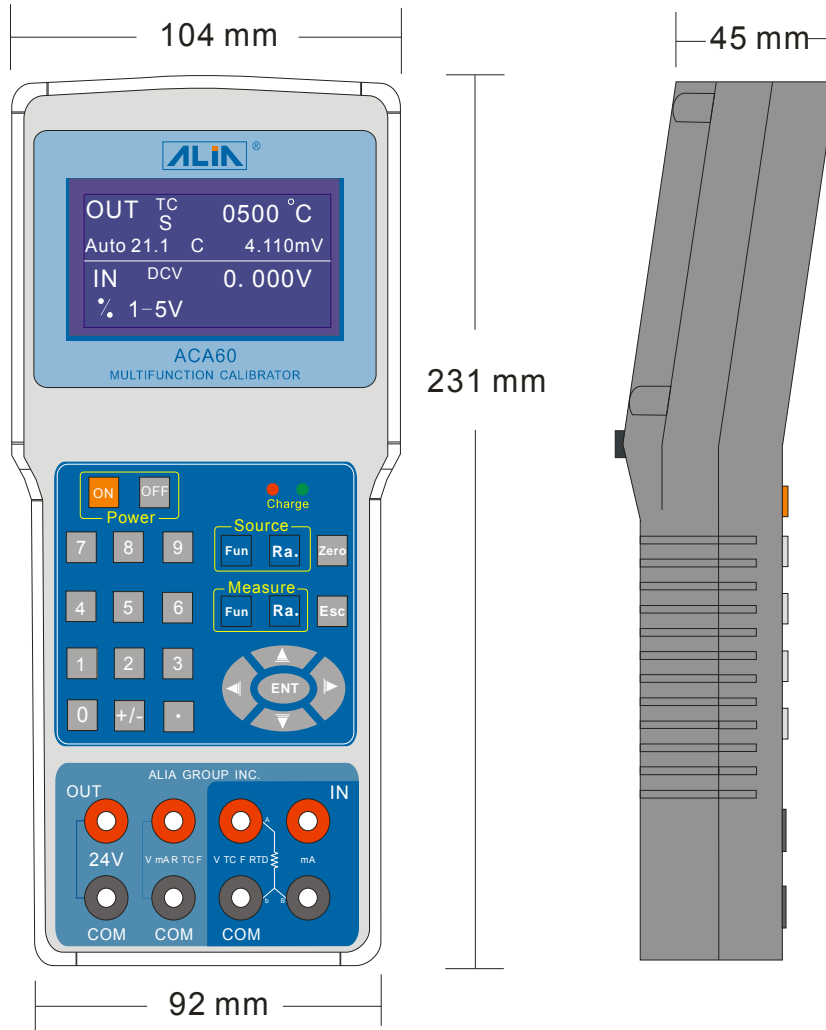


RTD-3W measurement



24 V power supply and T/C converter simulation

**➤ DIMENSIONS**



**➤ ACCESSORIES**

