

# Signal calibrator

Committed to process automation solutions

## Datasheet



**GUP-100**  
**GUP-200**

Multi-functional Hand-held Signal Calibrator has a multiple signal Output and measurement including voltage, current and thermoelectric couple with LCD screen and silicone keypad, simple operation, longer standby time, higher accuracy and programmable output.

## Product Introduction



Model	GUP-100
Operating temperature and humidity	-10~55°C, 20~80% RH
Storage temperature	-20-70°C
Size	115*70*26 (mm)
Weight	300g
Power	3.7V lithium battery or 5V/1A power adapter
Power dissipation	300mA, 7~10hour
OCP	30V



Model	GUP-200
Operating temperature and humidity	-10~55°C, 20~80% RH
Storage temperature	-20-70°C
Size	115*71*30 (mm)
Weight	300g
Power	4 AAA batteries or 5V/1A power adapter
Power dissipation	200mA, 4 hours under full load when powered by 4 AAA batteries (nominal capacity of a single battery is 1100mAh), and 17 hours in standby mode
OCP	30V

## Features

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- Highly accurate within 0.1% of the DC voltage range for source and measure
- Source and measurement can be performed simultaneously.
- Loop power supply function (24 VDC)
- Sweep functions that allow 3 types of continuous outputs:
  - > Line out function
  - > Stepping out function
  - > Segmentation output(c/m) function

## Application

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LAB Industrial field;

PLC Process Instrument;

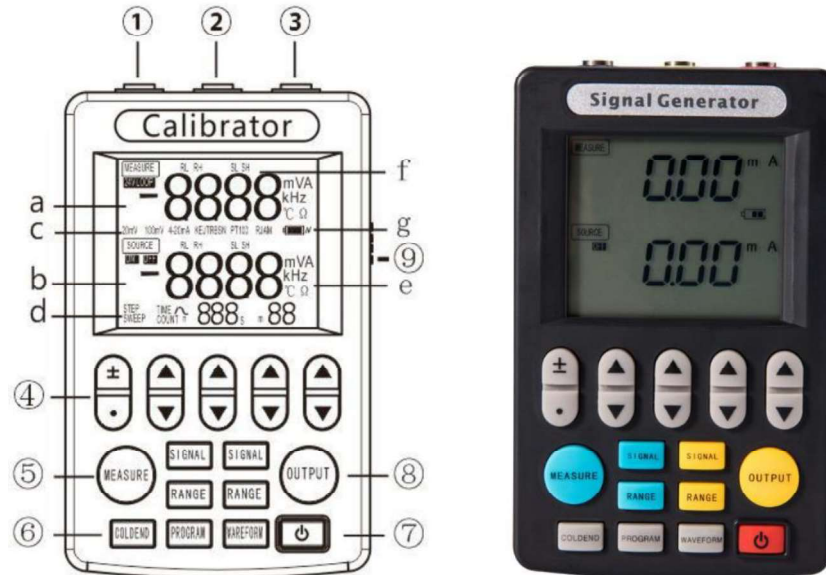
Electric value;

other area's debugging.

## Function and system design

### Technical Specifications

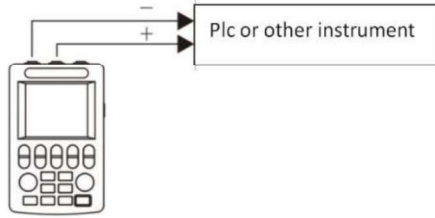
Item	Signal	Range	Accuracy	Resolution	Remark
DC voltage	20mV	0.00-24.00mV	±0.2%	0.01mV	Output: max current 30mA measure: input Impedance 1.2MΩ
	100mV	0.0-100.0mV	±0.2%	0.1mV	
	V	Output 0.00-15.00V	±0.2%	0.01V	
		Measure 0.00-30.00V	±0.2%	0.01V	
DC current	mA	0.00-24.00mA	±0.2%	0.01V	Output: max load 750Ω measure: input Impedance 100Ω
	4-20mA	4/8/12/16/20mA	±0.2%	0.01mA	
Passive current	mA	0.00-24.00mA	±0.2%	0.01mA	Output: external Power 16-30V
Power output	24VLOOP	24V/16V	10%	0.1V	Drive Current 24mA
Thermocouple	K	-270-1372°C	±1%	1°C	Output: start from 0°C
	E	-270-1000°C	±1%	1°C	
	J	-210-1200°C	±1%	1°C	
	T	-270-400°C	±1%	1°C	
	R	-50-1768°C	±1%	1°C	
	B	0-1820°C	±1%	1°C	
	N	-270-1300°C	±1%	1°C	
Resistance	Ω	15.0-400.0Ω	±0.2%	0.1Ω	
		0.0-400.0Ω	±0.2%	0.1Ω	
The thermal resistance	PT100	-199.9-650.0°C	±0.2%	0.1°C	



Each part and function

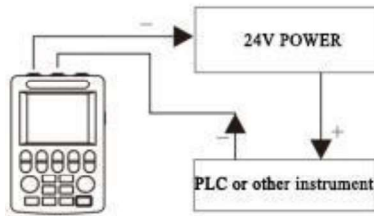
No.	Type	Remark
①	Common (black)	/
②	Output(yellow)	/
③	Measure(red)	/
④	Modify button	▲ ▼ Increase and reduce the value ◦ Switch the decimal point ± Toggle the value plus or minus
⑤	Measure function button (blue)	<b>【Signal】</b> : select the type of the signal <b>【Range】</b> : select the measuring range <b>【Measure】</b> : open/exit the output function
⑥	Cold end and program function button	<b>【Cold end】</b> : show/modify cold end(only when measuring TC) <b>【Program】</b> : enable the program function <b>【Waveform】</b> : change the programmable output wave
⑦	Power	Turn on/off
⑧	Output function(yellow)	<b>【Signal】</b> : select the type of output signal <b>【Range】</b> : select the range of output signal <b>【Output】</b> : open/exit the output function
⑨	Switch (factory default off)	1. auto power off: auto power off if there's not any operation 2. manual cold end: manual setting when measuring the TC 3. passive output: output the passive current signal 4. Low power mode: output the 16v voltage to transmitter when Input the passive current. In order to reducing the power dissipation and lengthen the working time.

1. 4~20mA/TC output:



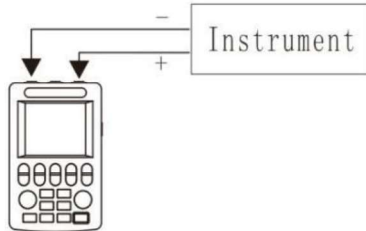
output active current/voltage to instrument

2. passive current output



2 wires transmitter simulator

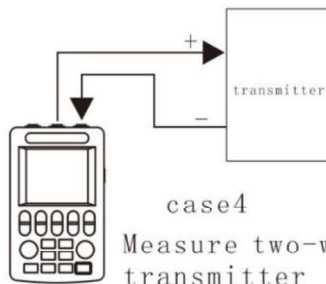
3. voltage, active current measurement



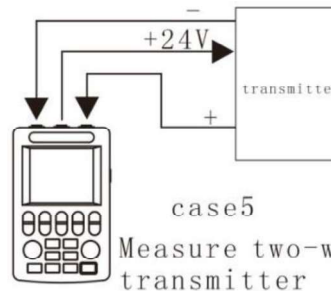
Measure voltage/active current signal

Use and wiring

4. passive current measure

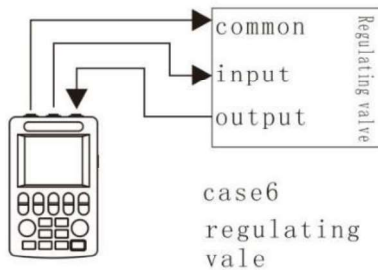


case4  
Measure two-wires transmitter



case5  
Measure two-wires transmitter



5. regulating valve

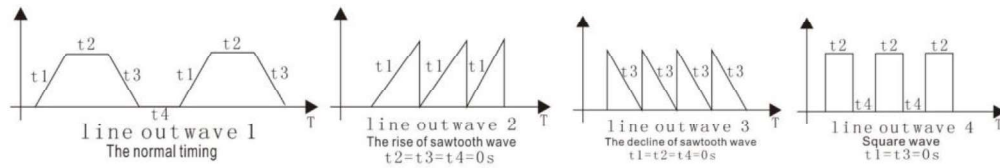


case6  
regulating valve

• Line out



The signal can be output linearly according to the time set by the user.

- ①press   set the Main setpoint
- ②press **【waveform】** , “sweep” shows in screen, open the line out function
- ③press **【program】** , set the “time” 0-999s there' s 4 sections(rise time/hold time[top]/fall time/hold time[low])
- ④press **【program】** , set the “count” :0-999
- ⑤@the same to 5.1

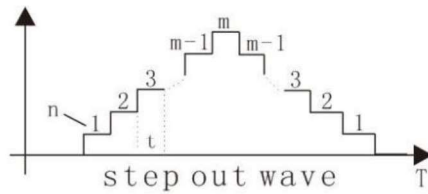


• Stepping out

The signal can be output by step according to the value set by the user.

- ①press   set the Main setpoint
- ②press **【waveform】** , “step” shows in screen, open the step out function
- ③press **【program】** set “time” :0-999s
- ④press **【program】** again, set n/m
- ⑤@the same to 5.1

Functions



• Segmentation output(n/m)

Through segmentation you can sprite voltage, current, TC signal to n/m times output. Output value=Main setpoint\*(n/m)

- ①press to change the Main setpoint
- ②press **【program】** open the segmentation output mode. Show the n/m manual
- ③press **【program】** set the M:1-20
- ④press set the N:0-m
- ⑤press **【output】** open/exit the output
- ⑥press **【program】** exit the program function.



**GLOBAL INSTRUMENTS**

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