

SLC100+ Loop Calibrator



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Overall Features

- Measurement and source of active or passive current signals from 0 to 20 mA.
- Voltage measurement from 0 to 30 V and sourcing from 0 to 20 V.
- Frequency measurement up to 50 kHz and sourcing up to 100 kHz.
- Signal measurement and sourcing can be performed simultaneously.
- Internal 24 V power supply for active current measurement and generation.
- Color LCD display.

Applications

- Testing and calibration of equipment with current, voltage, or frequency output.
- Testing and calibration of actuators.
- Simulation of transmitters with current or voltage output.

Functions

- Output ramp function with configurable time and steps.
- Percentage output display.

Technical Specifications

Performance

Inputs

Signal	Range	Accuracy ¹	Resolution	Observations
Voltage (V)	0 ... 30 V	± 0,05 % FS	0,001 V	$R_{input} \geq 2 \text{ M}\Omega$
Current	0 ... 20 mA	± 0,05 % FS	0,001 mA	$R_{input} \leq 100 \Omega$ $V_{input} \leq 30 \text{ V}$
Active current (24 V)	0 ... 20 mA	± 0,05 % FS	0,001 mA	$R_{input} \leq 100 \Omega$ $23 \text{ V} \leq V_{output} \leq 26 \text{ V}$
Frequency	0 ... 50 kHz	± 0,1 % FS	Auto-range (up to 0,0001 Hz)	$R_{input} \geq 100 \text{ k}\Omega$

Outputs

Signal	Range	Accuracy ¹	Resolution	Observations
Voltage (V)	0 ... 20 V	± 0,05 % FS	0,001 V	$R_{output} \leq 0,5 \Omega$
Simulate current / XMT	0 ... 20 mA	± 0,05 % FS	0,001 mA	$10 \text{ V} \leq V_{external} \leq 30 \text{ V}$
Source current (24 V)	0 ... 20 mA	± 0,05 % FS	0,001 mA	$R_{loop} \leq 1 \text{ k}\Omega$ at 20 mA
Frequency	0 ... 99,999 Hz	± 0,5 % FS	0,001 Hz	-
	0 ... 999,99 Hz		0,01 Hz	
	0 ... 9999 Hz		1 Hz	
	0 ... 100 kHz		100 Hz	

¹Operation between 17 °C and 25 °C during 1 year after calibration

Simultaneous source and measure

Allows for the simultaneous generation and reading of current or voltage signals, displaying both the value of the read signal and the value of the generated signal on the screen at the same time.

Percentage display

In addition to displaying signals that are read or generated as voltage (V), current (mA), or frequency, it also displays values as percentages, with a configurable range.

Automatic output (ramp up/down)

Features an automatic ramp-down function for current, voltage, or frequency, with configurable steps and dwell times.

Automatic shutdown

Automatic shutdown can be enabled to conserve battery life and configured to turn off the device after 30 minutes, 60 minutes, 90 minutes, or 120 minutes.

Features

4 types of signal inputs and outputs

SLC100+ works with 4 types of signals:

- **Voltage signals**, with an input range of 0 to 30 V and an output range of 0 to 10 V.
- **Passive current signals** (require an external source for signal measurement or generation), with a range of 0 to 20 mA.
- **Active current signals** (the calibrator provides power for measuring or generating the current), with a range of 0 to 20 mA.
- **Frequency signals**, with a range of 0 to 50 kHz for the input and 0 to 100 kHz for the output.



Physical Specifications

Operating temperature

-10 ... 70 °C (14 ... 158 °F)

Storage temperature

-20 ... 85 °C (-4 ... 185 °F)

Relative humidity (RH %)

0 ... 95 % without condensation

Weight

≈ 0,175 kg

Case material

ABS.

Display

- Color IPS LCD with a backlight whose brightness can be adjusted via the menu.
- Input and output signal values are displayed on two separate lines, allowing for simultaneous viewing.

Battery

3.7 V rechargeable lithium battery with a capacity of 2500 mAh.

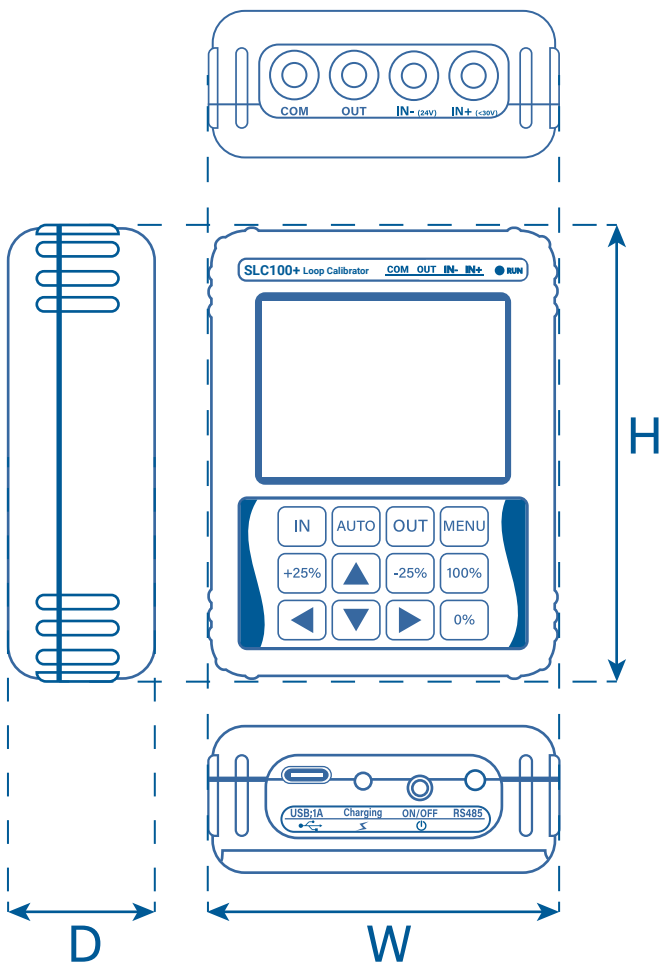
Charging via the USB Type-C port on the bottom of the device (5 V, 1000 mA).

Autonomy

≈ 20 hours (in measurement mode with the 24 V power supply turned off).

≈ 8 hours (with the 24 V power supply turned on—24 V mA OUT mode or 24 V mA IN mode).

Dimensions



Dimension	Length
H	(92,0 ± 0,2) mm
W	(71,0 ± 0,2) mm
D	(30,4 ± 0,2) mm

Included Items

- Carrying case for equipment and accessories
- 4 x 4 mm banana plug cables for alligator clips, 100 cm long—colors: black, red, blue, and yellow (model **A-CB-00007**)
- USB-C male to USB-A male cable for charging
- 5 V / 1 A power supply with USB-A connector
- SLC100+ User Manual