The Loop Simulator Professional was developed to assist maintenance personnel and integrators in analog input testing, troubleshooting and application development.

This 3-in-1 device simulates a 2-wire loop powered transmitter, provides 4 - 20mA current source, and 0 - 10 voltage source.

A specific output selected via on-screen menus.

**Warning:** Selecting Current Source or Voltage Mode with an externally powered loop will damage simulator.

In Current 2-Wire and Source Modes 17 pre-set output settings are available with 1mA increments and individual correction.

Voltage Source Mode has 11 preset values with 1V increments and individual correction.

Each output point can be corrected by user using Calibration Mode. To enter Calibration Mode

Press OK after selecting output value. While in Calibration Mode the specific output can be corrected using up and down keys. OK will save new values, Cancel will revert to the original settings.

To revert to Factory setting, hold OK while powering the device and follow on-screen instructions.

**Power ON:** Press and release Cancel button.

**Power OFF:** Press and hold Cancel button for 5 seconds until “Shutting Down” message appears.

Device options include:

- Adjustable Sleep timer with Disable Option
- Adjustable Screen Dim timer
- Adjustable Screen Brightness

**Important:**

A typical Current 2-Wire installation requires a loop power supply usually provided by an external 24VDC power supply.

Some sourcing Analog Input modules can provide loop power also.

Follow the Analog Input Module specification for a power supply selection.

In Current Source mode, Loop Simulator will provide the loop power and voltage signal source using internal boost converter powered by 2 AA Alkaline or rechargeable Ni-MH batteries.

**Important:**

Do not use this device for an input module or instrument calibration. This device is a simple tester that provides current or voltage signal within a selected range.

**DISCLAIMER**

This device is intended to provide general assistance with current loop debugging, testing and application development. It should not be permanently used in live production systems. Accordingly, production system must be tested and commissioned with real instruments to ensure safe and reliable operation.

**SPECIFICATION**

**Functionality**

- 4-20 mA 2-Wire Device
- 4-20 mA Current Source
- 0-10 V Voltage Source

**Power Supply**

- Internal Power: Battery 2xAA
- Ni-MH or Alkaline
- 2-Wire Current: 12–30V DC External Power

**Current Output**

- Output Range: 4mA to 20mA
- Fixed Steps: 1mA increments
- Output Accuracy: ±1% of full scale
- Load Range: 0-500 Ohm

**Voltage Output**

- Output Range: 0V to 10V
- Fixed Steps: 1V increments
- Output Accuracy: ±1% of full scale
- Minimum Load: 20kOhm

**Protection**

- Reverse Polarity,
- Over-current, Open Wire,
- Excessive Loop Voltage

**Do Not Operate Device Unless Area Is Non-Hazardous**

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