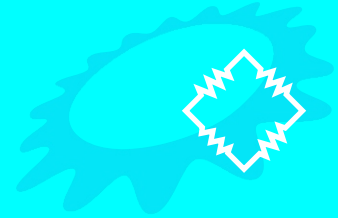


- CALOG - Loop
- CALOG - Loadcell
- CALOG - Process
- CALOG - Thermocouple
- CALOG - Pressure
- CALOG - RTD

CALOG Calibrators



CALOG - LC



The *CALOG - LC* is a hand-held precision calibrator specifically designed for loadcell system testing. Including insulation breakdown weighing system measurement, electrical pre-calibration or simulation. This unit is rugged, portable, lightweight and user friendly.

Simply connect a loadcell (or strain gauge wheatstone bridge) to the spring terminals and press 'test'... The back-lit graphic display will show four or six wire, zero balance, in and output resistance and bridge balance.

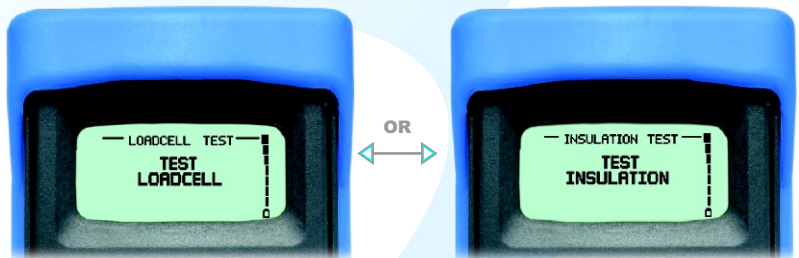
Connect the loadcell screen and wire the housing to the spring terminals and press 'insulation test' for a 50 volt dc test. Displays bridge to housing, bridge to screen and housing to screen insulation in megohms.

For weighing system measurement, connect the test leads to the loadcell output to show millivolts measurement.

Alternatively include excitation measurement or value and set up to display mass in a variety of selectable units. A loadcell transmitter output in milliamps can also be selected for simultaneous display of mass, mV, excitation and mA.

Weighing systems electrical pre-calibration can be carried out by injecting millivolts into the loadcell transmitter or indicator. By including excitation measurement or value, setting the sensitivity (mV/V) and units, the main display can indicate mass. Output milliamps can also be selected for display.

Finally, the calibrator can simulate a loadcell transmitter by injecting milliamps into a loadcell display or SCADA system. The display can be in mA or set to display mass and output.



MEASURING

LC-TEST

50V

mV

V

mA

ZERO BALANCE

ANALOGUE INPUT RANGES

	RANGE	IMPEDANCE	ERROR LIMITS	RESOLUTION
Bridge balance	-5 to 10.000mV/V	>1 M Ω	0.02mV/V	0.001mV/V
Resistance	0 to 2000.0 Ω		0.03%FS	0.1 Ω
Millivolt	-4.5 to 35.000mV	>1 M Ω	0.005%F Ω	0.001mV
Voltage	0 to 20.000V	>110k Ω	0.005%FS	0.01V
Current	0 to 24.000mA	\pm 17 Ω	0.01%FS	0.001mA
Insulation	0 to 5000M Ω		1%FS	1 M Ω

SOURCING

ANALOGUE OUTPUT RANGES

	RANGE	IMPEDANCE	ERROR LIMITS	RESOLUTION
Millivolts	-4.5 to 35.000mV	min 500 Ω	0.005%FS	0.001mV
Milliamps	0 - 24.000mA	max 600 Ω	0.01%FS	0.001mA

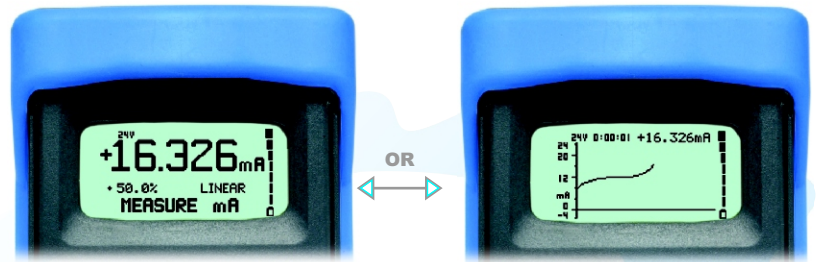
CALOG - LOOP



The **CALOG- LOOP** is a high precision, multi-function, hand-held calibrator designed for the process control industry. It's function includes measure and source of mA loops with a selectable internal transmitter supply.

It's small size, long battery life and high precision make the **CALOG- LOOP** calibrator ideal for industrial field calibration.

It measures, sources and simulates 0-24mA with a 0.01% accuracy and a 1µA resolution. It can measure 32V with a 0.005% accuracy with a 1mV resolution. Continuity test function is also included. Sourcing can be increment, step, ramp or value stroking. A trend logging feature with programmable time base supplied for long term loop monitoring. It can display values in mA and % or % and mA, with built in 24V excitation loop power



MEASURING



ANALOGUE INPUT RANGES

0-24mA

0-32V

Continuity with a 100Ω trigger and 1mA. Gives a visual and audible confirmation.

IMPEDANCE

Input impedance ±17Ω

Input impedance ±110kΩ

ACCURACY

0.01%

0.005%

RESOLUTION

1µA

1mV

SOURCING

ANALOGUE OUTPUT RANGES

0-24mA

MAX LOAD

Output load max500Ω

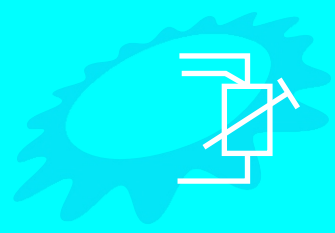
ACCURACY

0.01%

RESOLUTION

1µA

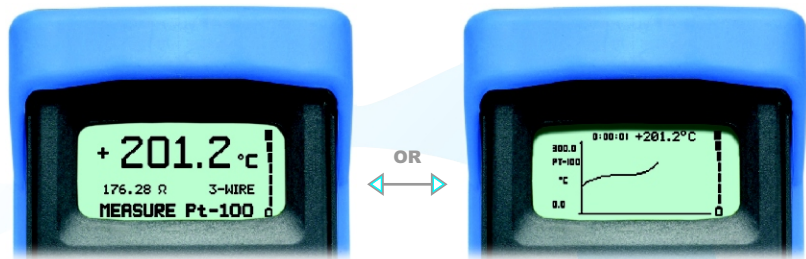
CALOG - RTD



The **CALOG-RTD** is a high precision, multifunction, handheld calibrator suitable for resistance temperature detection (RTD) and mA measurement and sourcing. The combination of RTD and mA makes this calibrator most suitable for the process control market where accurate low and medium temperatures are the norm, such as the food industry. Temperature or ohmic resistance up to 2200Ω can be measured in two, three or four wire configurations with full internal linearisation for the temperature sensors. These RTD sensors can be the Platinum Pt50, Pt100, Pt200, Pt500, Pt1000 or the Nickel Ni100 or Ni120. Between them these elements cover ranges from -200°C to + 850°C. Using the simultaneous, isolated, combination of RTD sourcing and mA measuring it is possible to calibrate any RTD/mA temperature transmitter. The mA measurement can be passive with a remote supply or active 4-20mA 2-wire with the **CALOG-RTD** generating the 24V DC in-line supply.

The accurate mA measure and source on the calibrator allows it to be used for all mA loop testing and instrument calibration.

For temperature monitoring over time the **CALOG-RTD** can be set into trend mode with a selectable timebase to graph a temperature profile. This is ideal for testing ovens or for optimising PID temperature controllers.



MEASURING



ANALOGUE INPUT RANGES

0 to 24mA
0 to 2200.0Ω
RTD types Pt50, Pt100, Pt200, Pt500 and Pt1000
Ni100 and Ni120

Continuity with a 100Ω trigger. Visual and audible confirmation.

IMPEDANCE

Input impedance ±17Ω

ACCURACY

0.01%
0.01%FS
0.01%FS

RESOLUTION

1μA
0.01/0.1Ω
0.1°C

SOURCING

ANALOGUE OUTPUT RANGES

0-24mA
1 to 400.00Ω
1 to 2200.0Ω

MAX LOAD

Output load max500Ω
10 - 400Ω
10 - 2k2Ω

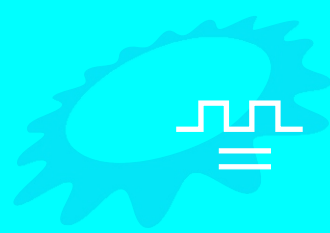
ACCURACY

0.01%
0.01%FS
0.01%FS

RESOLUTION

1μA
0.01Ω
0.1Ω

CALOG - PRO



The **CALOG-PRO** is a high precision, multi-function, hand-held calibrator designed for the process control industry. The unit is capable of displaying measured values, sourced values or split screen measure and source simultaneously. Variables are milliamps, volts, millivolts, frequency and counts. It is especially suitable for PLC and SCADA applications. Circuit continuity can be measured with both audible and visual indication.

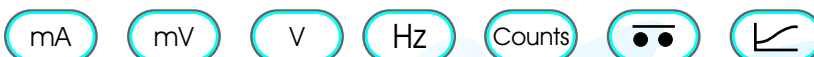
The back-lit LCD shows the actual values measured and sourced, alternatively graphs the trend with a programmable time base. This important feature can be used for recording, fault finding or optimizing control settings.



OR



MEASURING



ANALOGUE INPUT RANGES

0 to 24mA
0 to 32V
-10 to 100mV
0.5 to 100Hz
1 to 20 000Hz

Continuity with a 100Ω trigger. Visual and audible confirmation.

IMPEDANCE

Input impedance ±17Ω
Input impedance ±110kΩ
input impedance > 1MΩ
Input impedance 110kΩ
Input impedance 110kΩ

ACCURACY

0.01%
0.005%
0.005%
0.001%
0.001%

RESOLUTION

1μA
1mV
1μV
0.1Hz
1Hz

SOURCING

ANALOGUE OUTPUT RANGES

0 to 24mA
0 to 12V
-10 to 100mV
0.5 to 100Hz
1 to 20 000Hz

Continuity with a 100Ω trigger and 1mA. Gives visual and audible confirmation.

Max load

Output load max 500Ω
Output load min 600Ω

ACCURACY

0.01%
0.01%

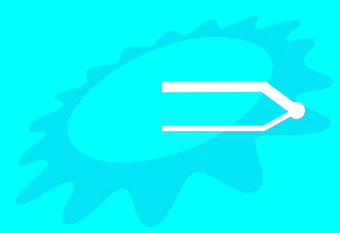
RESOLUTION

1μA
1mV

INSULATION

Max 100VDC between all input and output circuits

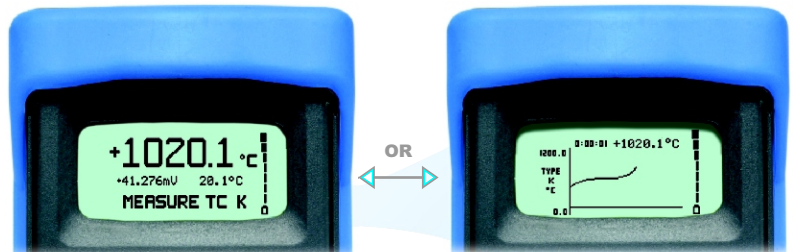
CALOG - TC



The **CALOG - TC** is a high precision, multi-functional, hand-held calibrator suitable for the process control industry. It's speciality is thermocouple based instruments. It measures and sources, thermocouple, millivolts and milliamps. It can measure DC Volts and continuity. The trend feature is ideal for graphing temperature profiles and PID controller optimization. It's small size, long battery life and high precision make the **CALOG - TC** ideal for industrial field or workshop calibration.

Measures and sources types: J, K, T, E, R, S, B and N Thermocouples. Configurable internal or manual cold-junction compensation, in either °C, °F, Kelvin or Rankine. Accuracy is better than 0.5°C, excluding cold junction errors and thermocouple errors. The **CALOG-TC** has a resolution of 0.1°C. Measures and sources -10 to 100mV with 0.01% accuracy and 1µV resolution.

It can simultaneously source a thermocouple and measure mA (isolated). The trend feature is useful for temperature graphs or controller optimising.



MEASURING



ANALOGUE INPUT RANGES

0 to 24mA
0 to 32V
-10 to 100mV
Thermocouple types are the K, J, T, B, R, S, E, N, C(W5) and D(W3) (IEC 584-3).

IMPEDANCE

Input impedance $\pm 17\Omega$
Input impedance $\pm 110k\Omega$
Input impedance $> 1M\Omega$
Input impedance $> 1M\Omega$

ACCURACY

0.01%
0.005%
0.01%
0.05%

RESOLUTION

1µA
1mV
1µV
0.1°C

SOURCING

ANALOGUE OUTPUT RANGES

0 to 24mA
-10 to 100mV
Thermocouple types are the K, J, T, B, R, S, E, N, C(W5) and D(W3) (IEC 584-3).

IMPEDANCE

Max load 500Ω
Min. load 600Ω
Min. load 600Ω

ACCURACY

0.01%
0.01%
0.05%

RESOLUTION

1µA
1µV
0.1°C

ISOLATION

Max 100VDC between mV/TC output and mA input circuits

CALOG - PRESSURE

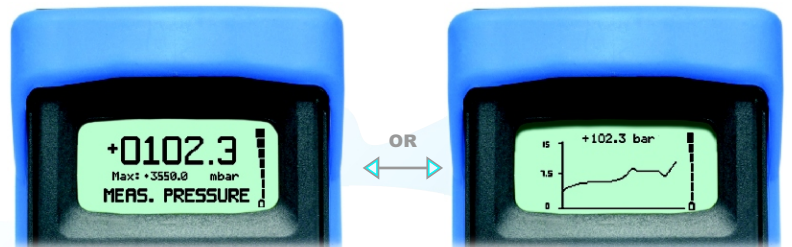


The *CALOG* - PRESSURE is a high precision, multi-function, hand-held calibrator designed for the process control industry. It's speciality is pressure measurement. DC voltage, milliamps and circuit continuity can also be measured. It can source and simulate milliamps.

Measurement of pressure and milliamps may be used for pressure transmitter calibration. Measurement of pressure and source milliamps can be used for I/P convertor testing or calibration. With tracking switched on, the milliamp output will follow the measured pressure.

Ideal for recording, data logging or in place of a pressure transmitter in an emergency.

The trend feature is useful for graphing pressure profiles. The pressure value can be scaled and the time base selected.



MEASURING



ANALOGUE INPUT RANGES

0-24mA
0-32V

Continuity with a 100Ω trigger 1V @ 1mA.

Pressure accuracy is 0.05% with an 0.02% option, the resolution is dependent on the units selected. A wide range of digital pressure transmitters are available from -1 to +1 bar up to 0-1000 bar

IMPEDANCE

Input impedance ±17Ω
Input impedance ±110kΩ

ACCURACY

0.01%
0.005%

RESOLUTION

1μA
1mV

SOURCING

ANALOGUE OUTPUT RANGES

0-24mA

Max load

Output load max 500Ω

ACCURACY

0.01%

RESOLUTION

1μA

CALOG Calibrators

The CALOG range of process instrumentation calibrators are designed for servicing, repairs in the workshop and the plant environment. They are tough, sophisticated precision instruments that are portable, compact and user-friendly.

Robust enough to withstand the rigors of most industrial environments, they are powered by long-life Nickel metal hydride batteries, monitored by 'fuel gauges' and incorporate a clear, back-lit graphic display.

For quick source value set-up, the CALOG uses the "key-per-digit" numeric setting feature that enables the user to scroll each digit up or down.

The graphic display can be selected to display the measured value or trend with programmable time base.

Features

- Small, rugged, handheld with a protective rubber cover.
- Graphic display of measured value, percent and battery status
- Contain serial technology components for compact size, accuracy and reliability
- Programmable auto-off, restart at last setting and selectable display resolution
- NiMH Battery pack, charger, carry case, and test leads supplied as standard
- 1 year guarantee

Environmental

- | | | |
|--------------------------|-----------------------------|---------------------|
| <input type="checkbox"/> | Operating temperature range | 0 to +50°C |
| <input type="checkbox"/> | Storage temperature range | -20 to +55°C |
| <input type="checkbox"/> | Humidity | <85% non-condensing |

Mechanical Specifications

- | | | |
|--------------------------|----------------------------------|--|
| <input type="checkbox"/> | Dimensions (with the boot on) | 85 x 155 x 43mm, IP54 rating (dust and splash proof) |
| <input type="checkbox"/> | Dimensions (without the boot on) | 77 x 145 x 34mm, IP54 rating (dust and splash proof) |
| <input type="checkbox"/> | Protection | UL 94 V-0 flame retardant ABS plastic with rubber boot |
| <input type="checkbox"/> | Weight | 340g |

General Specifications

- | | | |
|--------------------------|--------------|---|
| <input type="checkbox"/> | Display | 128 x 64 graphics display with back-lit LCD |
| <input type="checkbox"/> | Keypad | 16 Key embossed buttons |
| <input type="checkbox"/> | Batteries | NiMH battery pack with temperature sensing |
| <input type="checkbox"/> | Battery life | Approx. 10 Hours, loop power enabled sourcing 12mA
Approx. 50 Hours, loop power disabled |

Error messages

- | | | |
|--------------------------|----------------------|---|
| <input type="checkbox"/> | Over range | ^^^ with audible warning |
| <input type="checkbox"/> | Under range | vvv with audible warning |
| <input type="checkbox"/> | mA loop error | "loop error" with audible warning |
| <input type="checkbox"/> | mA loop ohms to high | "check loop Ω " with audible warning |

Distributed by