

The multifunctional Temperature Calibrator **LR-Cal/ LTC 100** is a high-precision, hand-held calibrator for the calibration and troubleshooting of process control instrumentation.

- Measuring of Thermocouples, Resistances, Resistance Temperature Detectors RTD, mA, mV and circuit continuity
- Sourcing of Thermocouples, Resistances, RTDs, mA and mV
- Dual display enables simultaneous input and output view
- Internal 24 V loop supply to power transmitters and measure mA during tests
- Selectable Step- and Ramp functions
- Data logging via supplied SD memory card
- USB interface
- Powered by chargeable Lithium-Ion battery
- Graphically trend display

**3 in 1
functions**



The Temperature Calibrator **LR-Cal/ LTC 100** simultaneously measures and sources ten types of thermocouples and seven resistance temperature detectors (RTD), whilst automatically capturing the calibration results. It measures milliamps whilst sourcing or simulating millivolts, TCs, RTDs or ohms to calibrate transmitters.

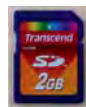
The **LR-Cal/ LTC 100** logging facility stores data on the SD card supplied, which is easily downloaded to a PC via the onboard USB port and usable in most of the common spreadsheet formats.

The trend feature is ideal for graphing temperature profiles and PID controller optimization with a programmable timebase. In addition, the **LR-Cal/ LTC 100** has the functionality necessary to install and maintain all powered and non-powered transducers using the built-in 24 V loop power supply.

The multifunctional Temperature Calibrator **LR-Cal/ LTC 100** is the economical choice for people wanting to do industrial field or workshop calibration.



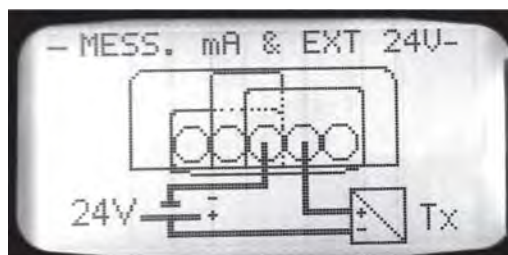
Included in standard delivery is a rubber boot, a SD memory card, a Thermocouple Extender (with cold junction compensation) and a plastic case with foam.



The operation of the Temperature Calibrator **LR-Cal/ LTC 100** is very simple and easy.

Example: the Help-Menu shows on the display Wiring Schematics for almost all kind of testing and calibration tasks.

**RTD
Thermocouple
mA Loop**



The keypad of model **LR-Cal/ LTC 100**:



Technical Data

MEASURING	Range:	Accuracy:	Resolution:
Milliamps mA	0...24 mA (Impedance ±17 Ω)	0.02% FS	1 μA
Millivolts mV	-10...+100 mV (> 1 MΩ)	0.01% FS	1 μV
Thermocouples	Types J, K, T, E, N, U, L	0.1% FS *)	0.1°C
Thermocouples	Types B, R, S	1% FS *)	0.1°C
Resistance Ω	0...400.00 Ω	0.05% FS	0.01 Ω
	0...2200.0 Ω	0.05% FS	0.1 Ω
Resistance Temp. Ind. RTD	Types Pt50, Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120	0.1% FS	0.01°C

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

SOURCING	Range:	Accuracy:	Resolution:
Milliamps mA	0...24 mA (max. load 500 Ω)	0.02% FS	1 μA
Millivolts mV	-10...+100 mV (min. load 100 Ω)	0.01% FS	1 μV
Thermocouples	Types J, K, T, E, N, U, L	0.1% FS *)	0.1°C
Thermocouples	Types B, R, S	1% FS *)	0.1°C
Resistance Ω	10.00...400.00 Ω	0.05% FS **)	0.01 Ω
	400.0...2200.0 Ω	0.05% FS **)	0.1 Ω
Resistance Temp. Ind. RTD	Types Pt50, Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120	0.1% FS **)	0.01°C

Measurement of Ohms and RTD in 2-, 3- or 4-wire configuration. Continuity with a 100Ω trigger (visual and audible confirmation)

General Data

Isolation:	Maximum 100 VDC between all input and output circuits
Thermocouple Extender:	Cold junction compensation Pt100 DIN EN 60751, 100 Ω at 0°C, Nom. resistance drift 0.04% after 1000 hours at 500°C
Power supply	Type: chargeable lithium-ion battery Charging time: approx. 5 h Running time: typically 8 h (depending on used functions)
Mains Charger:	Charger input at calibrator: 10...15 VDC Charger Input: 115...230 VAC; 0,5 A; 50/60 Hz Charger Output: 12 VDC at 1.5 A
Optional car charger:	12 VDC at 1 A via cigarette lighter plug
Temperature ranges:	Storage: -40...+50°C incl. battery Usage: 0...30°C
Relative Humidity:	0...85% r.h. (non-condensing)
Housing:	ABS plastic, IP54 dust & splash proof, UL94V-0 flame retardant
Rubber Boot:	green
Dimension:	without rubber boot 149 x 34 x 77 mm with rubber boot 155 x 43 x 86 mm
Weight:	approx. 340 g
Scope of standard Delivery:	Calibrator LR-Cal LTC 100 with rubber boot SD memory card Thermocouple Extender Set of safety test leads (1 x red, 1 x black) Mains Charger 115...230 VAC Plastic kit case Operating Manual (German/English) Factory Certificate of Calibration
Warranty:	24 months after date of delivery

*) Using Thermocouple Extender and CJ temp set to External.

***) at 1 mA excitation current (for different excitation currents please contact LR-Cal DRUCK & TEMPERATUR Leitenberger GmbH)

Accessories and Spare Parts

Order-Code	Description
LRCAL-100-KFZ-LADER	Car Charger (12 VDC Car Lighter)
LRCAL-100-SP-SICH	Spare Fuses 250 mA SMD
LRCAL-100-SP-KABEL	Spare set of Test Leads (red/black)
LRCAL-100-SP-BATT	Spare Battery Pack (Li-Ion)
LRCAL-100-SP-LADER	Spare Charger mains 115...230 VAC
LRCAL-100-SP-SCHUTZ	Spare Rubber Boot (green)
LRCAL-100-SP-KOFFER	Spare plastic Case with custom foam
LTC100-SP-TASTATUR	Spare Keypad

Plugged Thermocouple Extender

with cold junction compensation



3 in 1
functions

RTD
Thermocouple
mA Loop