MARTEL ELECTRONICS

TEST TOOLS

- Calibrators
- Anemometers
- Data Loggers
- AC/DC Clamp Meters
- Data Logging Software
- Economy Series
- Humidity/ Temperature Meters
- Humidity Calibration Cells
- Insulation Testers
- Light Meters
- Multimeters
- Pressure Meters
- Sound Level Meters
- Tachometers
- Temperature Meters
- Temperature Probes

Humidity and Temperature

C-310

Humidity/Triple Display Temperature

- -20 °C to +60 °C, ±0.7 °C temperature*
- Resolution 0.1 °C/0.1 °F
- 0-100% RH, ±2.5% RH
- HOLD/MAX/MIN functions
- Timer function
- RS232 PC serial interface
- Auto power off
- Includes: battery, manual, RS232 cable, and carrying case
- *   (-4 °F to +140 °F, ±1.4 °F)

C-314

Humidity/Dual Input, Triple Display Temperature Meter/Data Logger

- -20 °C to +60 °C, ±0.7 °C temperature*
- -200 °C to +1,370 °C, ±0.3% of reading +1 °C, Type K**
- 0-100% RH, ±2.5% RH
- Resolution 0.1 °C/0.1 °F, 0.1 %RH
- HOLD/MAX/MIN/CLOCK functions
- Timer function
- RS232 PC serial interface
- 16,000 record data logger
- Auto power off
- Includes: battery, manual, carrying case, Type K bead sensor, RS232 cable, and TestLink 310 Windows software
- *   (-4 °F to +140 °F, ±1.4 °F)
- ** (-328 °F to +2,498 °F, ±0.3% of reading +2 °F)

Specs (@25°C)
Input Ranges (Accuracy):

K type:	200 to 1370 °C (±0.3%+1 °C)
	-328 to 2498 °F (±0.3%+2 °F)
Temp:	-20 to 60 °C (±0. 7 °C)
	-4 to 140 °F (±1.4 °F)
Hum:	0 to 100 %RH (±2.5 %RH)

TestLink Software (SE-310)

The included RS232 cable connects the C-310 Temperature / Humidity Meter to an unused COMM port on your PC or laptop. The TestLink software provides real-time control and analysis of the C-310 data, and allows the C-310 to be used as a remote temperature / humidity measurement system.

C-315

Mini Humidity/Temperature

- Dual display
- -20 °C to +60 °C, ±0.8 °C temperature (-4 °F to +140 °F, ±1.6 °F)
- 1-99% RH, ±3% RH
- Resolution ±0.1% RH; ±0.1 °C/0.1 °F
- REL/HOLD/MAX/MIN functions
- Small size

Specs (@25°C)
Input Ranges (Accuracy):

Temp:	-20 to 60 °C (±0. 8 °C)
	-4 to 140 °F (±16 °F)
Hum:	1 to 99 %RH (±3 %RH)

CHC33/75 Kit

Humidity Calibration Cells

- Predictable and stable humidity reference
- Portable; brings calibration to the measurement location
- 33% RH and 75% RH
- Works with C-310, C-314, and C-315

Specs (@25°C)

Ratings:	32.8% (CHC33)
	75.3% (CHC75)
Accuracy:	±1 %RH at 25 °C ±1 °C
	±1 %RH at 77 °F ±2 °F
Port:	15mm (0.6") dia. gland nut
Dim.:	39mm dia. x 83mm high

C-303

Dual Input, Dual Display

- Type J and Type K thermocouples
- -200 °C to +1,370 °C measurement range
- 0.1 °C/0.1 °F resolution
- 60 VDC/24 VACrms input protection
- Auto power off
- REL/HOLD/MAX/AVG/MIN functions
- RS232 PC serial interface
- Includes: battery, manual, RS232 cable, and two Type K bead sensors
- Options: Refer to page 10 for temperature probes & kits

Specs (@25°C)
Input Ranges (Accuracy):
K type: 200 to 1370 °C (±0.1%+0.7 °C)
           200 to 2498 °F (±0.1%+1.4 °F)
J type: 200 to 760 °C (±0.1%+0.7 °C)
           200 to 1400 °F (±0.1%+1.4 °F)

ThermoLink Software (SE-300)

The included RS232 cable connects the C-303 Temperature/Humidity Meter to an unused COMM port on your PC or laptop. The TestLink software provides real-time control and analysis of the C-303 data, and allows the C-303 to be used as a remote temperature/humidity measurement system.

C-306

Dual Input, Triple Display, Data Logger

- Type K thermocouples
- -200 °C to +1,370 °C measurement range
- 0.1 °C/0.1 °F resolution
- 60 VDC/24 VACrms input protection
- Auto power off
- 16,000 data record data logging
- TIME/HOLD/MAX/MIN functions
- RS232 PC serial interface
- Includes: battery, manual, two Type K bead sensors, RS232 cable, and ThermoLog data logging/analysis Windows software
- Options: Refer to page 10 for temperature probes & kits

Specs (@25°C)
Input Ranges (Accuracy):
K type: 200 to 1370 °C (±0.3%+1 °C)
           200 to 2498 °F (±0.3%+2 °F)

C-307

Mini Thermometer

- Single input
- Type K thermocouples
- -200 °C to +1,370 °C measurement range
- 0.1 °C/0.1 °F resolution
- Auto-ranging
- 60 VDC/24 VACrms input protection
- Auto power off
- REL/HOLD/MAX/MIN functions
- Includes: manual, battery, and one (1) Type K bead sensor
- Options: Refer to page 10 for temperature probes & kits

Specs (@25°C)
Input Ranges (Accuracy):
K type: 200 to 1370 °C (±0.3%+1 °C)
           200 to 2498 °F (±0.3%+2 °F)

C-308

Mini Dual Input, Dual Display

- Type K thermocouples
- -200 °C to +1,370 °C measurement range
- 0.1 °C/0.1 °F resolution
- Auto-ranging
- 60 VDC/24 VACrms input protection
- Auto power off
- REL/HOLD/MAX/MIN functions
- Includes: manual, battery, and two (2) Type K bead sensors
- Options: Refer to page 10 for temperature probes & kits

Specs (@25°C)
Input Ranges (Accuracy):
K type: 200 to 1370 °C (±0.3%+1 °C)
           200 to 2498 °F (±0.3%+2 °F)

Temperature

C-358

LED Infrared Thermometer

- Infrared LED thermometer
- -18 °C to +315 °C/0 °F to 600 °F measurement range
- 0.5 °C/1 °F resolution
- °C/°F select switch
- Auto power off
- Display HOLD function
- Includes: battery and manual

Specs (@25°C)
Range (Accuracy):
-18 to 315 °C	(±2.5% or ±2.5 °C)
0 to 600 °F	(±2.5% or ±4.5 °F)
Resolution:	0.5 °C
	1 °F
Distance to Spot:	5:1
Response:	500 ms
Emissivity:	0.95 (preset)

TM-939

IR Thermometer

- 2 instruments in 1 - infrared thermometer & Type K/J/T/E/R thermocouple thermometer
- Infrared thermometer (non-contact temperature measurement) -20 °C to 650 °C (-4 °F to 1112 °F)
- 51 mm x 32 mm large LCD display, 15 mm (0.6") digit size
- °C/°F, DATA HOLD, memory (MAX/MIN), RELative measurement, emissivity adjustment (IR thermometer)
- Red laser light, less than 1 mW, meets EN60825
- Emissivity adjust range of 0.20 to 1.00
- 0.1 degree or 1 degree resolution
- Push-button offset adjustment
- Exclusive built-in software linearity correction function
- RS232 PC serial interface
- Auto shut-off
- Low battery indicator
- 0 °C to 50 °C operating temperature (32 °F to 122 °F)
- Includes: manual, options available
- Options:
RS232 Cable (LUPCB-01)
Case (LCA-05A)
Windows Software (LSW-U801-WIN)

Refer to page 5 for temperature probes & kits

LTM-917

Economy Series Precision Thermometer

- Type K, J, R, E, and T thermocouple
- RTD measurement*
- Pt-100 Ohm
- 0.01 °C/0.1 °F degree resolution
- 1370 °C maximum measurement range (Type K)
- Compatible with 4-wire Pt-100 Ohm probe
- Large LCD with unit display
- °C/°F select button
- 0.01/0.1 degree resolution select switch
- Front panel Sensor Select button provides easy probe change
- Maximum and minimum value memories
- DATA HOLD/REL functions
- Low battery indicator
- Probes and other options available
- Options:
Case (LCA-05A)

Make precision temperature measurements with Type J, K, R, E and T thermocouples, and Pt-100 Ohm probes for the ultimate precision. The 0.01 degree resolution is available for all input probe types. The Pt-100 probe input is compatible with 0.00385 alpha coefficient, and meets DIN IEC 751.

*Requires LTP-100 Temperature Probe; see Page 5
Refer to Page 5 for temperature probes & kits

LTP-100

Economy Series Pt-100 Temperature Probe

- Pt-100 Ohm
- Compatible with 0.00385 alpha coefficient; meets DIN IEC 751
- -50 to 400 °C/-58 to 752 °F measurement range
- Accuracy of $(0.15 + (0.002 \times T))$ °C; T = measuring temperature
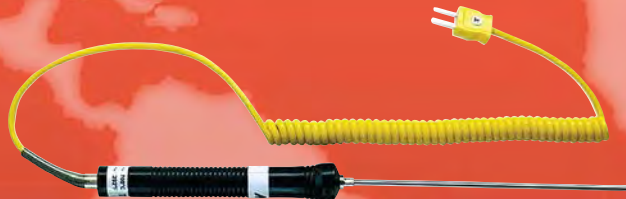- DIN plug, 4-pins/4-wires
- This probe only works with the LTM-917

TP-Kit

Contains one each of TP-K01 through TP-K06 temperature probes

TP-K01 - Bead Probe
-50 °C to 200 °C; -58 °F to +392 °F

A variety of temperature probe configurations are available for use with Martel Test Tools temperature meters. All are Type K, and feature ±2.2 °C/±0.75% or ±3.9 °F/±0.75% accuracy.

TP-K02 - Immersion Probe
-50 °C to 700 °C; -58 °F to +1,292 °F

TP-K03 - Surface Probe
-50 °C to 400 °C; -58 °F to +752 °F

TP-K04 - Piercing Probe
-50 °C to 600 °C; -58 °F to +1,122 °F

TP-K05 - Surface Probe
-50 °C to 400 °C; -58 °F to +752 °F

TP-K06 - Air & Gas Probe
-50 °C to 800 °C; -58 °F to +1,504 °F

Multimeters

C-110
Multimeter

- **ACV/DCV, ACA/DCA, Ohms, Hertz, low current diode test, and continuity**
- **Auto-ranging**
- **33/4 " digit display**
- **High speed bar graph**
- **Auto power off**
- **Low battery indicator**
- **REL/MAX/MIN functions**
- **Built-in tilt stand**
- **IEC 1010; 600 V CAT II**
- **Includes: battery, manual, test leads, and fuse (0.5 A)**

Specs (@25°C)
Display Count: 4000
Input Ranges (Accuracy):

DCV:	400 mV to 600 V	(±0.5%rdg+2 counts)
ACV:	400 mV to 600 V	(±1%rdg+4 counts)
DCA:	400 µA to 10 A	(±1%rdg+2 counts)
ACA:	400 µA to 10 A	(±1.3%rdg+5 counts)
Ohms:	400 to 40 MOhms	(±0.8%rdg+2 counts)
Hz:	4 kHz to 40 MHz	(±0.1%rdg+1 counts)

C-120
RS232 Multimeter

- **AC/DC V, AC/DC A, Ohms, Hertz/VA-Hz, capacitance, RPM, temp., diode test, continuity**
- **3 3/4 " -digit display/high speed bar graph**
- **Auto power off**
- **Low battery indicator**
- **REL/MAX/MIN functions**
- **1 ms PEAK (Max-Min) function**
- **RS232 PC serial interface**
- **LED backlight**
- **IEC 1010; 1,000 V CAT III**
- **Includes: battery, manual, test leads, and holster**
- **Options:**
  SE-120 (RS232 cable & software)

Specs (@25°C)
Input Ranges (Accuracy):

DCV:	400 mV to 1,000 V (±0.3%rdg+2 counts)
ACV:	400 mV to 750 V (±0.5%rdg+5 counts)
DCA:	400 µA to 20 A (±0.8%rdg+2 counts)
ACA:	400 µA to 20 A (±1%rdg+5 counts)
Ohms:	400 to 40 MOhms (±0.3%rdg+2 counts)
Hz:	4 kHz to 40 MHz (VA-Hz) (±0.05%rdg+1 counts)
RPM:	40 K to 40 M RPM (±0.05%rdg+1 counts)
⇥⊢	4 nF to 40 mF (±1.9%rdg+20 counts)
Temp:	-50 to 1000 °C, -58 to 1832 °F (±1%rdg+2 °C/4 °F)
⇥⊣	0 to 2 V
Cont.:	≤40 Ohms activates tone

Clamp Meter

C-222
Mini AC/DC Clamp

- **600 Amp DC/AC range; 0.1 A resolution**
- **600 Volts DC/AC range; 0.1 V resolution**
- **1000 Ohm range with audible indicator; 0.1 Ohm resolution**
- **4-digit, large numeral display**
- **PEAK HOLD, DATA HOLD functions**
- **Touch-to-zero functions**
- **Measure up to 1" (25mm) cable diameters**
- **CE approved; 600 V Category II**

Specs (@25°C)
Input Ranges (Accuracy):

DCV:	600 V (±1%rdg+2 counts)
ACV:	200 V to 600 V (±1.5%rdg+5 counts)
DCA:	600 A (±2%rdg+5 counts)
ACA:	200 A to 600 A (±2%rdg+5 counts)
Ohms:	200 Ohms (±1.9%rdg+3 counts)
Cont.:	≤40 Ohms activates tone

C-122

True RMS Multimeter/Data Logger

- **Same features as C-120, plus:**
- **32,000 record data logger**
- **RS232 PC serial interface**
- **LED backlight**
- **IEC 1010; 1,000 V CAT III**
- **Includes: battery, manual, test leads, holster, Type K bead sensor, RS-232 cable, and SE-120 data logging software**

Specs (@25°C)

Input Ranges (Accuracy):

DCV:	400 mV to 1,000 V (±0.3%rdg+2 counts)
ACV:	400 mV to 750 V (±0.5%rdg+5 counts)
DCA:	400 µA to 20 A (±0.8%rdg+2 counts)
ACA:	400 µA to 20 A (±1%rdg+5 counts)
Ohms:	400 to 40 MOhms (±0.3%rdg+2 counts)
Hz:	4 kHz to 40 MHz (VA-Hz) (±0.05%rdg+1 counts)
RPM:	40 K to 40 M RPM (±0.05%rdg+1 counts)
⊣⊢	4 nF to 40 mF (±1.9%rdg+20 counts)
Temp:	-50 to 1000 °C, -58 to 1832 °F (±1%rdg+2 °C/4 °F)
⊣⊢	0 to 2 V
Cont:	≤40 Ohms activates tone

LPM-9100

Manometer

- **Dual & differential input**
- **Sensor is built inside the housing**
- **Single lugs for pipe connection.**
- **8 display units (mbar, psi, Kg/cm2, mm Hg, inch Hg, meter H2O, inch H2O, Atmosphere) select by push button on the front panel**
- **Auto shut off saves battery life**
- **ZERO button on the front panel, easy to offset the zero value**
- **Super large LCD display with contrast adjustment for best viewing angle**
- **Records maximum & minimum readings with recall**
- **DATA HOLD function for storing the desired value on the display**
- **Built-in low battery indicator**
- **RS232 PC serial interface**
- **Options: Windows Software (LSW-U801-WIN)**
  For use with air or other non-corrosive and non-ionized gases and liquids.

Specs (@25°C)

Input Range (Accuracy) Resolution:

±2000 mBar (±2 % FS)	1 mBar
±29 PSI (±1 % FS)	0.02 PSI
±2.040 kg/cm2 (±1 % FS)	0.001 kg/cm2
±1500 mmHg (±1 % FS)	1 mmHg
±59.05 inHg (±1 % FS)	0.05 inHg
±20.40 mH2O (±1 % FS)	0.01 mH2O
±802.0 inH2O (±1 % FS)	0.5 inH2O
±1.974 atm (±1 % FS)	0.001 atm

LPM-9100H

Economy Series Manometer

- **Same as the 9100 above with:**
- **MAX/MIN/MEMORY functions**
- **Options:**
  Case (LCA-05A)

Sound Level Meters

C-320

Sound Level

- 30-130 dB levels in three ranges
- Dynamic range 50 dB
- 0.1 dB resolution
- Frequency range 31.5 Hz to 8 kHz
- Accuracy ±1.5 dB (ref 94 dB @ 1 kHz)
- 4-digit display
- AC and DC output
- MAX/MIN function
- IEC651 Type II
- Includes: battery, manual, carrying case, calibration screwdriver, and windscreen

Specs (@25°C)

Input Ranges (Accuracy):

Lo:	30 to 80 dB (±1.5 dB)
Mid:	50 to 100 dB (±1.5 dB)
Hi:	80 to 130 dB (±1.5 dB)
Weighting:	A and C
Dyn. Range:	50 dB
Freq. Range:	31.5 Hz to 8 kHz

C-322

Sound Level /Data Logger

- 30-130 dB level in three ranges
- Auto-ranging (30-130 dB)
- Dynamic range 50 dB
- 0.1 dB resolution
- Frequency range 31.5 Hz to 8 kHz
- Accuracy ±1.5 dB (ref 94 dB @ 1 kHz)
- 32,000 record data logger
- 4-digit backlit display
- Clock and bar graph displays
- Auto power off
- AC and DC output
- MAX/MIN function
- IEC651 Type II
- Includes: battery, manual, carrying case, calibration screwdriver, windscreen, RS232 cable, and Windows data logging software

Specs (@25°C)

Input Ranges (Accuracy):

Lo:	30 to 80 dB (±1.5 dB)
Mid:	50 to 100 dB (±1.5 dB)
Hi:	80 to 130 dB (±1.5 dB)
Weighting:	A and C
Dyn. Range:	50 dB
Freq. Range:	31.5 Hz to 8 kHz

C-325

Mini Sound Level

- 30-130 dB level in three ranges
- Dynamic range 50 dB
- 0.1 dB resolution
- Frequency range 31.5 Hz to 8 kHz
- Accuracy ±1.5 dB (ref 94 dB @ 1 kHz)
- 4-digit display
- AC output
- MAX/MIN function
- IEC651 Type II
- Includes: battery, manual, calibration screwdriver, and windscreen
- Options:
  Case (LCA-05A)

Specs (@25°C)

Input Ranges (Accuracy):

Lo:	30 to 80 dB (±1.5 dB)
Mid:	50 to 100 dB (±1.5 dB)
Hi:	80 to 130 dB (±1.5 dB)
Weighting:	A and C
Dyn. Range:	50 dB
Freq. Range:	31.5 Hz to 8 kHz

LSC-942

Sound Level Calibrator

- Standard 94 dB/1 kHz and 114 dB/1 kHz sound calibrator
- Ideal for field calibration of C-320, C-322, and C-325 Sound Level Meters
- Very simple to use
- Includes: batteries, manual, carrying case, adjustment screwdriver, and 0.5″ mic adapter

Anemometers

LAM-4206

Anemometer

- Air flow: CMM (m3/min) and CFM (ft3/min)
- Air velocity: m/s. ft/min, km/hr, knots, MPH
- °C/°F air temperature
- Air flow modes: instant, 2/3 V, max, average
- Low-friction ball vane wheels for high accuracy in high & low velocity conditions
- Large LCD with dual display
- DATA HOLD function
- Auto shut-off
- Thermistor sensor for fast response temperature measurement
- Low battery indicator
- RS232 PC serial interface
- Separate probe included
- Strong, light weight ABS plastic housing case

Specs (@25°C)

Ranges (Max resolution):

80 to 4930 ft./min	(1.0)
0.4 to 25.00 m/s	(0.01)
1.4 to 90.0 km/h	(0.1)
0.9 to 56 MPH	(0.1)
0.8 to 49 knots	(0.1)
32.0 to 122.0 °F	(0.1°)
0.0 to 50.0 °C	(0.1°)
0 to 999,900 CFM	(0.001)
0 to 999,900 CMM	(0.001)

Accuracy:

±2.0% reading; ±1.5 °F (±0.8 °C)

LAM-402

Anemometer Probe & Adaptor

- Converts your multimeter to an anemometer
- Switch-selectable air flow ranges
- Works with the C-110, C-120, & C-122
- Conventional twisted vane arms on probe
- Low friction ball bearing design

Specs (@25°C)

Measurement Units (output):

m/s	(1 mV per 1 m/s)
km/h	(1 mV per 1 km/h)
ft/min	(1 mV per 100 ft/min)
knots	(1 mV per 1 knot)

LLX-102

Light Meter

- Sensor uses exclusive photodiode & color correction filter
- Meets C. I. E. Photopic
- Both Lux & Foot-candle measurements
- Analog output for connection to external recorder
- High accuracy
- Separate LIGHT SENSOR allows light measurement at an optimum position
- Fast & Slow response time selector
- LCD display allows clear read-out even at high ambient light levels
- Pocket size
- Low battery indicator

Specs (@25°C)

Light Ranges:

Footcandles (Fc)	200, 2000, 5000
Lux (lx)	2000, 20,000, 50,000

Resolution:

Fc	0.1 Fc
Lx	1.0 lx

Accuracy: ±5 %

Light Meters

C-337

Light Meter

- 5-digit display
- Foot-candle/Lux function selectable
- Auto-ranging
- Automatic power off (30 minutes)
- HOLD function
- Range display
- Human eye spectral response compensated
- Automatic zero on power-on
- Includes: manual and battery

Specs (@25°C)

Light Range:

fc:	0.000 to 4000
lx:	0.00 to 40,000

Tachometers

DT-2235B

Contact Tachometer

- **5 to 100,000 RPM measurement range**
- **RPM resolution < 1000 RPM**
- **Last value, max. value, and min. value   storage/recall**
- **Highly visible LCD display gives exact RPM reading**
- **Strong, light weight ABS plastic housing**
- **Includes: cone tip, flat tip, and spare wheel for linear surface speed measurements, four (4) AA batteries, and carrying case**

Specs (@25°C)

RPM Range:	0.5 to 20,000
Ft/min range:	0.2 to 6560
M/min Range:	0.05 to 1999.9
Accuracy:	±(0.05% reading + 1 count
Resolution:	0.1 rpm

DT-2234BL

Laser Photo Tachometer

- **5-digit display, 10 mm (0.4") LCD, with function annunciation**
- **10 to 99,999 RPM measurement range**
- **Resolution of 0.1 RPM (<1,000 RPM); 1RPM (≥ 1,000 RPM)**
- **Accuracy of ± (0.05% + 1 digit)**
- **Detecting distance of 2" to 6.5'(50 mm to 2 m) typical**
- **Class 2 laser diode, <1 mW, 645 nm wavelength (red)**
- **0 to 50 °C temperature (32 °F to 122 °F)**
- **Memory with recall function, last value, maximum and minimum values**
- **Includes: manual, reflecting tape marks 23" (600 mm), and carrying case**

Make non-contact RPM measurements of rotating objects. Just apply a piece of reflective tape to the object, and aim the unit at the rotating object to take your reading from up to 6.5' away. Measurements are updated once per second.

Specs (@25°C)

RPM Range:	10 to 99,999
Accuracy:	±(0.05% reading + 1 count)
Resolution:	0.1 rpm

LDT-1236L

Combination Photo/Contact Tachometer

- **Combines Photo Tachometer & Contact Tachometer**
- **Long measurement range – up to 2 meters**
- **0.5 to 100,000 RPM measurement range**
- **0.1 RPM resolution at < 1000 RPM**
- **0.05% accuracy**
- **Highly visible LCD display gives exact RPM reading**
- **Memory with recall function of maximum and minimum values**
- **Complete with wheels for linear surface speed or RPM measurement, four AA batteries, 23" (600mm) reflective tape, and carrying case**

Use one instrument to make both contact and non-contact RPM measurements of rotating objects. For non-contact measurements, just apply a piece of reflective tape to the object, and aim the unit at the rotating object to take your reading from up to 6.5' away. Contact measurements can be made of RPM or linear surface speed. Measurements are updated once per second.

Specs (@25°C)

RPM Ranges:	
Photo	10 to 99,999
Contact	0.5 to 19,999
Ft/min range:	0.2 to 6560
M/min Range:	0.05 to 1999.9
Accuracy:	±(0.05% reading + 1 count)
Resolution:	0.1 rpm

C-360

Insulation Tester

- 600 Volt range DC/AC
- Continuity range (≤40 Ohms; >200 mA current)
- Audible indicator for continuity, high voltage presence, and discharge in process
- 400/4000 Ohm auto-ranging
- 4/40/400/4000 MegOhm auto-ranging
- Overload indicator for out of range measurements
- Automatic zeroing nulls test lead resistance
- TEST HOLD function
- CE approved; 600 V Category III/1000 V Category II
- VDE 0413 and IEC 1010 certified

Specs (@25°C)

Display:	4000 digital count
	40 segment analog bar

Input Ranges (Accuracy):

DCV:	600 V (±1%rdg+3 counts)
ACV:	600 V (±1.5%rdg+3 counts)
Ohms:	400 to 4 kOhms (±1%rdg+5 counts)
MOhms:	4/40/400/4000 MOhms;
	250V/500V/1000V
	(±3%rdg+5 counts)
Cont.:	≤40 Ohms activates tone
	200 mA source current

LTC-920

Economy Series Thermocouple Calibrator

- Two-in-one meter – Type K thermometer & Type K thermocouple calibrator
- Wide range: -199 to +1230 °C (-325 to +2246 °F)
- Built-in, high precision, temperature linearity compensation circuit
- °C & °F select & data hold functions for temperature measurement.
- °C & °F button selection for temperature calibration
- Temperature measuring input to meet any standard Type K (NiCr-NiAl) probe
- Fitted with standard Type K mini-plug socket
- Large LCD display
- Operates on 006P DC 9V battery
- RS232 PC serial computer interface
- Uses durable, long-lasting components, including strong, light weight ABS plastic housing
- Options
  Case (LCA-05A)
  RS232 Cable (LUPCB-01)
  Windows Software
    (LSW-U101-01)

The LTC-920 provides two Type K meters in one – a thermometer and a thermocouple calibrator. This single instrument provides high precision temperature measurement and calibration of temperature sensors and processes.

LCC-421

Economy Series Voltage/Current Calibrator

- Adjustable precision 0-24 mA current source
- Adjustable ±199.9 mV DCV source
- Current calibrator drives loads up to 500 Ohms
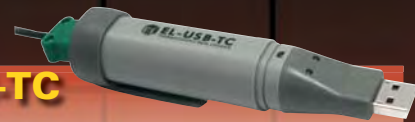- Power or measure 2-wire current loop
- Options: Case (LCA-05A)

The LCC-421 is a precision, portable instrument for calibrating process devices and measuring process signals. The adjustable precision 0 to 24 mA current and ±199.9 mV DC sources provide the signals needed to calibrate a wide variety of devices. The current calibrator will drive loads up to 500 Ohms!

Data Loggers

Common Specifications

- Long-life internal Lithium battery (replaceable)
- USB port and utility software make setup ad data download easy and fast
- Windows® (98, 2000, or XP) Utility software included
- Device status is provided by flashing LEDs
- Variable data logging rates
- User-programmable high and low alarms
- User-programmable start date and time

EL-USB-TC

Thermocouple Data Logger

- Types J, K, or T thermocouples
- Logging rates: 1 s, 10 s, 1 m, 5 m, 30 m, 1 hr, 6 hr, 12 hr
- ±0.5 °C resolution
- ±1 °C accuracy, typical
- Up to 32,000 readings
- 14 to +104 °F (-10 to +40 °C) operating temperature
- Six month battery life typical

EL-USB-1

Temperture Data Logger

- -13 to +176 °F (-25 to +80 °C) measurement range
- Logging rates: 10 s, 1 m, 5 m, 30 m, 1 hr, 6 hr, 12 hr
- ±0.5 °C resolution
- ±1 °C accuracy, typical
- Up to 16,382 readings
- -31 to +176 °F (-35 to +80 °C) operating temperature
- 1 year battery life typical
- IP67 protection

EL-USB-2

Humidity/Temp/Dew Point Data Logger

- 0 to 100 % RH measurement range
- -31 to +176 °F (-35 to +80 °C) measurement range
- Logging rates: 10 s, 1 m, 5 m, 30 m, 1 hr, 6 hr, 12 hr
- ±3.5 %RH accuracy, typical
- ±1 typ.; ±2.5 max; °C accuracy
- ±2 °C dew point; overall error
- Up to 16,382 readings
- -31 to +176 °F (-35 to +80 °C) operating temperature
- IP67 protection
- 1 year battery life typical

EL-USB-3

Voltage Data Logger

- 0 to 30 volts dc measurement range
- Logging rates: 1 s, 10 s, 1 m, 5 m, 30 m, 1 hr, 6 hr, 12 hr
- 50 mV resolution
- ±1.0 % accuracy, typical
- Up to 32,510 readings
- Screw terminations
- -13 to +176 °F (-25 to +80 °C) operating temperature
- 1 year battery life typical
- Supplied with complete set of measurement leads terminating in crocodile clips

EL-USB-4

4-20 mA Current Loop Data Logger

- 4-20 mA dc current loop measurement range
- Logging rates: 1 s, 10 s, 1 m, 5 m, 30 m, 1 hr, 6 hr, 12 hr
- ±0.05 mA resolution
- ±1.0 % ±1 count accuracy, typical
- Up to 32,000 readings
- Screw terminations
- -31 to +176 °F (-35 to +80 °C) operating temperature
- 1 year battery life typical
- Supplied with complete set of measurement leads terminating in crocodile clips

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