# Additel 220
# Multifunction Loop Calibrator

■ **Measure and source loop current, mV, and V**

■ **Measure and source simultaneously**

■ **Loop Continuity Test capability**

■ **24V loop supply with simultaneous current measurement**

■ **3 year warranty**



CE

## OVERVIEW

The 220 is a highly integrated loop calibrator featuring several patented technologies. The calibrator is an ultra-compact, rugged, and best of all, easy to use hand-held device that will source, simulate and measure loop current, mV/V, Loop Continuity Test, and also perform switch testing. Its smart phone-like menu and interface makes it simple and easy to use. The 220 is ideal for calibrating, maintaining, and troubleshooting various loop devices in the field.

## FEATURES

■ **Measuring and sourcing loop current, mV and V**
Measures loop current up to 30mA with 0.1µA resolution
Measures voltage signals up to 60 V, and mV signals up to 300 mV
Sources/sink loop current, mV and V
24V loop power supply with simultaneous current measurement
Simultaneous dual reading capability
Capture switch

■ **Data statistics and analysis**
Display max, min, peak-to-peak, average, and percentage simultaneously
Convert data to a real physical value through re-scaling function

■ **On-demand logging**
High-capacity storage with up to twenty thousand records
On-line view, index, analyze, auto-curve, and list the data

■ **Various sources and converting mode**
Support linear, flow, valve, and 25% stepping source
Auto-source of ramping and stepping
Gauge span examination

■ **"As Cal" on-site calibration tools**
Four on-site calibration tools preset: loop indicator, sensor/transmitter, signal isolator/converter, and limit alarm/switch

■ **Support 2W transmitter connection**

■ **Multi lingual interface**
English,Simplified Chinese

■ **Convenient tools**
Calculator, thermocouple converter, HOLD screen lock

■ **Display rate**
4 readings/second

■ **Easy to use**
Smartphone-like menu and interface make the operation simpler and easier
Ultra-compact, size 3.9" x 7.6" x 2.0" (100mm x 192mm x 52mm), and weight 1.6 lb (0.7 kg)
One hand operation

■ **Snapshot**
Save and manage up to 100 snapshots

■ **Display**
3.5 inch TFT color screen
4, 5, or 6 digits adjustable display

■ **Rugged**
Rugged design for harsh environments.
Passed a 1-meter drop test
Three years warranty for the 220, and one year for the battery pack

■ **Misuse protection and Electrical isolation**
Up to 30V voltage on any two sockets and up to 1A current on current sockets will not damage the calibrator. The calibrator will return to normal condition as soon as the voltage or current is removed.
Measuring, sourcing and loop power circuits are electrically isolated each other.

■ **Rechargeable battery**
Rechargeable Li-ion battery for 15 hours uninterrupted use.
Battery life will be reduced when 24V is applied.
The rechargeable battery is replaceable.

■ **NIST Traceable Calibration with data**

■ **Firmware upgrade**
Support firmware upgrade when available

■ **Warranty:** 3 years

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# Multifunction Loop Calibrator

## APPLICATIONS

The 220 loop calibrator is a process tool for measuring, sourcing and simulating mA, mV and V, captures switch values and provides 24V loop power. It is a high performance solution for calibration, repair and maintenance of various loops devices, Loop Continuity Test, and switch capture.

## SPECIFICATIONS

### ■ Electrical Specifications

#### Measurement Accuracy

| | Range | Resolution | Accuracy |
|---|---|---|---|
| Voltage DC | -300.000 to 300.000 mV | 1µV | 0.01%RD+15µV |
| | -60.0000 to 60.0000 V | 0.1mV | 0.01%RD+3mV |
| Current DC | -30.0000 to 30.0000 mA | 0.1µA | 0.01%RD+1.5µA |
| Loop Continuity | 0 to 2000.0 ohm | 0.1Ω | 0.02%RD+0.2Ω |
| Switch Test | For the contact with potential, the voltage within the range 3V to 24V. | | |

#### Source Accuracy

| | | | |
|---|---|---|---|
| Voltage DC | -10.00 to 200.00 mV | 0.01mV | 0.02%RD+10.5µV |
| | 0 to 12.000 V | 1mV | 0.02%RD+0.6mV |
| Current DC | 0 to 22.000 mA | 1µA | 0.02%RD+1.1µA |
| DC24V | N/A | N/A | 0.5V |

### ■ General Specifications

#### Environmental Specifications

| | |
|---|---|
| Operating Temperature | -10°C to 50°C |
| Storage Temperature | -20°C to 60°C |
| Humidity | <90%, non-condensing |

#### Safety Specifications

| | |
|---|---|
| European Compliance | CE Mark |

#### Mechanical Specifications

| | |
|---|---|
| Display | 3.5 inch TFT color screen |
| Electrical Connection | Ø4mm sockets and flat mini-jack thermocouple socket |
| RS232 Interface | Standard RS232-DB9 socket |
| Size | 3.9" x 7.6" x 2.0" (100mm x 192mm x 52mm) |
| Weight | 1.6 lb (0.7 kg) |
| Power Supply | Polymer Li-ion rechargeable battery,or 10V DC adaptor |
| Battery | Rechargeable Li-ion battery (included) |
| Battery Life | 15 hours uninterrupted use Battery life will be reduced when 24V is applied |
| Battery Charge | 110V/220V external power adapter (included) |

## ORDERING INFORMATION

### ■ Model Number
ADT220

| Accessories (included) | |
|---|---|
| 110V/220V external power adapter | 1 pc |
| Chargeable Li-ion battery | 1 pc |
| Test leads | 2 sets(4 pcs) |
| Short circuit cable | 1 sets(2 pcs) |
| Manual | 1 pc |
| NIST traceable calibration certificate | 1 pc |

* Additel/Land software could be downloaded for free at www.additel.com

| Optional Accessories | |
|---|---|
| Model number | Description |
| 9050 | USB to RS232 (DB-9 Male) Adapter |
| 9712 | Spare chargeable Li-ion battery for multifunction calibrator |
| 9816 | 110V/220V external power adapter for ADT22X and ADT672 calibrator |
| 9906 | Carrying case for multifunction calibrator |