

# ADT-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



### OVERVIEW

The ADT-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 ADT-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 0.1 $\mu$ A 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
- **Data 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
- **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 ADT-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**

**ADT-220****Multifunction Loop Calibrator****APPLICATIONS**

The ADT-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**

<i>Measurement Accuracy</i>			
	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	0.1 Ω	0.02%RD+0.2 Ω
Switch Test	For the contact with potential, the voltage within the range 3V to 24V.		

<i>Source Accuracy</i>			
	Range	Resolution	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**

<i>Environmental Specifications</i>	
Operating Temperature	-10°C to 50°C
Storage Temperature	-20°C to 60°C
Humidity	<90%, non-condensing

<i>Safety Specifications</i>	
European Compliance	CE Mark

<i>Mechanical Specifications</i>	
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**

ADT-220

<i>Accessories (included)</i>	
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](http://www.additel.com)

<i>Optional Accessories</i>	
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 multifunction calibrator
9906	Carrying case for multifunction calibrator