

# Fluke BT500 Series Battery Analyzers



Fluke BT521

Fluke BT510



## More battery tests. Less time.

Fluke's BT500 Series Battery Analyzers cover a broad range of battery test functions ranging from DC voltage and resistance tests to full condition testing using an automated string function testing and the test probe integrated infrared temperature measurement system. 500 Series Battery Analyzers are designed for measurements on stationary batteries of all types.

- The world's fastest battery measurements – reduce time of a typical battery measurement by 50% from 8 seconds to 4 seconds
- Unique Industry leading CAT III 600 V safety rating
- **Key measurements:** Battery resistance, DC and AC voltage, DC and AC current, ripple voltage, frequency and battery temp
- **Sequence measurement mode:** Automatic or manual sequence testing of battery strings with automatic measurement storage including voltage, resistance and temperature (with BTL21 intelligent test probe)
- **Optimized user interface:** Quick, guided setup ensures you're capturing the right data every time.
- **Intelligent test probe set (BT520 and BT521):** Integrated LCD display, infrared temperature measurement (BT521 only), verbal audio feedback and captures voltage readings and temperature logging automatically or via integrated save button
- Three-year warranty

Functions	Range	Resolution	Accuracy	BT510	BT520*	BT521*
Battery resistance <sup>1</sup>	3 mΩ	0.001 mΩ	1% + 8	●	●	●
	30 mΩ	0.01 mΩ	0.8% + 6	●	●	●
	300 mΩ	0.1 mΩ	0.8% + 6	●	●	●
	3000 mΩ	1 mΩ	0.8% + 6	●	●	●
V DC	6 V	0.001 V	0.09% + 5	●	●	●
	60 V	0.01 V	0.09% + 5	●	●	●
	600 V	0.1 V	0.09% + 5	●	●	●
	1000 V	1 V	0.09% + 5	●	●	●
V AC (45 Hz to 500 Hz with 800 Hz filter)	600 V	0.1 V	2% + 10	●	●	●
Frequency (displayed with Vac and Aac) <sup>2</sup>	500 Hz	0.1 Hz	0.5% + 8	●	●	●
AC voltage ripple (20 KHz Max)	600 mV	0.1 mV	3% + 20	●	●	●
	6000 mV	1 mV	3% + 10	●	●	●
A DC/A AC (with accessory Fluke i410)	400 A	1 A	3.5% + 2			●
Temperature	0° C to 60° C (32° F to 140° F)	1° C	2° C			●
Meter mode	999 records for each measurement position with time stamp					
Sequence mode	Up to 100 profiles and 100 profile templates (Each profile stores up to 450 batteries) with time stamp					

\*BT520ANG and BT521ANG for angled probe models

### Specifications

Size (HxWxD) and Weight	220 × 103 × 58 mm (8.66 × 4.05 × 2.28 in), 850 g (1.87 lb)
Screen dimensions	77 × 56 mm (3.03 × 2.2 in)
Interface	USB mini
Operating temperature	0° C to 40° C (32° F to 104° F)
Lithium-ion battery charging temperature	0° C to 40° C (32° F to 104° F)
Operating humidity	Non-condensing (10° C), ≤80% RH (at 10° C to 30° C (50° F to 86° F)), ≤75% RH (at 30° C to 40° C (86° F to 104° F))
Ingress Protection (IEC 60529)	IP40
Radio	FCC ID: T68-FWCS, IC: 6627A-FWCS
Vibration requirements	MIL-PRF-28800F: Class 2
Drop test requirements	1 m
Temperature coefficients	Add 0.1 × specified accuracy for each degree C above 28° C (82° F) or below 18° C (64° F)
Safety compliance (IEC 61010-2-032)	CAT III 600 V

<sup>1</sup> The measurement is based on AC injection method. The injected source signal is <100 mA, 1 kHz.

<sup>2</sup> Trigger level V AC: 10 mV, A AC: 10 A

### Recommended Accessories



**BP500**  
Lithium-ion Battery  
3000mAh



**i410**  
AC/DC Current Clamp



**FLUKE-BTL520ANG**  
Angled Battery Analyzer  
Test Probe



**BTL10**  
Basic Battery Analyzer  
Test Leads



**BTL20**  
Interactive Battery  
Analyzer Test Probe



**BTL21**  
Intelligent Test Probe



BT521 Intelligent Test Probes with integrated display

### Included Accessories

4-Wire Test Pin (set), BTL10 Basic Test Lead (set), TL175 TwistGuard™ Test Leads with Adapter, L300 Attachable LED Flashlight (2) (BT520 and BT521 only), BTL20 Intelligent Test Probe Set with Extender (no Temperature Sensor)(BT520 only), BTL21 Intelligent Test Probe Set with Extender and Temperature Sensor (BT521 only), i410 AC/DC Current Clamp (BT521 only), BP500 Lithium-ion Battery, BC500 AC Charger, Mini-USB Cable, Shoulder Strap, Belt Strap, Magnetic Hanging Strap, FlukeView™ Battery Management Software, Soft Carrying Case, Spare Fuses (2), Battery Tags (BT520 and BT521 only).

### Ordering Information

<b>FLK-BT510</b>	Basic Battery Analyzer
<b>FLK-BT520</b>	Battery Analyzer
<b>FLK-BT521</b>	Advanced Battery Analyzer
<b>FLK-BT520 ANG</b>	Battery Analyzer with Angled Probes
<b>FLK-BT521 ANG</b>	Battery Analyzer with Angled Probes

Contact your local distributor for price and availability.  
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