

# Fluke 6200-2/6500-2 Portable Appliance Testers

## Technical Data



Perform more tests  
each day

The low weight, small size,  
one-touch solution.

The Fluke 6200-2 and 6500-2 PAT testers are low weight, small size, one-touch solutions with redesigned auto-test capabilities to help you increase the number of portable appliance tests completed each day. The 6200-2 and 6500-2 are designed to enable you to work faster without compromising safety—yours or your customer's.

### Fluke simplifies portable appliance testing

- Dedicated key for each test for 'one-touch' testing
- Pre-set pass/fail levels to save time
- Large backlit display for easy reading
- Single mains socket for appliance connection
- Separate IEC socket for easy mains/extension lead testing
- Detachable test leads for quick field replacement
- Integral carrying handle
- USB port for printing

The Fluke 6500-2 delivers all of this capability, plus:

- Integral QWERTY keyboard for rapid data entry
- USB flash drive capability for storage and transfer to PC
- Large backlit graphic display
- Pre-set, auto-test sequences for user convenience
- Integral site, location and description codes for faster data processing
- Memory review facility for more on-site control



FLUKE 6500-2 UK  
PORTABLE APPLIANCE TESTER

OPERATIONAL ERROR MEASUREMENT RANGES

EARTH BOND 250mA AC	Reg. 2 2001 - 1.980 ΩA ± 0.01 Ω ± 200mA
INSULATION	Reg. 2 2001 - 1.980 ΩA ± 4% ΩA ± 20A
TOUCH CURRENT	Reg. 2 2001 - 2.0MΩ ΩA ± 50V ΩA ± 1mA
SUBSTITUTE LEAKAGE	700ΩΩ ± 10mA ± 1.00mA
LOAD CURRENT	500 Ω ± 20mA ± 10.00mA ΩA ± 100V ΩA ± 3.50mA
LEAKAGE CURRENT	0.0A ± 10.0A
ICD	Reg. 2 2001 - 10.00mA
POWER	0.0VA ± 0.00VA
SUPPLY	0.0VA ± 0.00VA

CONFORMS TO:  
DIN VDE 0811  
AS EN 61010  
DIN VDE 0411  
EN 61010-2-010  
DIN VDE 0411

NOT SUITABLE FOR MEASUREMENTS  
WITHIN ELECTRICAL INSTALLATIONS  
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# Test specifications

The accuracy specification for the display range is defined as  $\pm(\% \text{reading} + \text{digit counts})$  at 23 °C  $\pm 5$  °C,  $\leq 75$  % RH. Between 0 °C and 18 °C and between 28 °C and 40 °C, accuracy specifications may degrade by 0.1 x (accuracy specification) per °C.

The measurement range meets the service operating errors specified in EN61557-1: 1997, EN61557-2: 1997, EN61557-4: 1997, EN61557-6: 1997, DIN VDE0404-2.

<b>Power-on test</b>	The test indicates reversed L-N, missing PE, and measures the mains voltage and frequency. <b>Display range:</b> 90 V to 264 V <b>Accuracy at 50 Hz:</b> $\pm (2\% + 3 \text{ counts})$ <b>Resolution:</b> 0.1 V (1 V - model 6200) <b>Input impedance</b> $> 1 \text{ M}\Omega // 2.2 \text{ nF}$ <b>Maximum input mains voltage:</b> 264 V
<b>Earth bond test (<math>R_{pe}</math>)</b>	<b>Display range:</b> 0 to 19.99 $\Omega$ <b>Accuracy (after Bond Test zeroing):</b> $\pm (2.5\% + 4 \text{ counts})$ <b>Resolution:</b> 0.01 $\Omega$ <b>Test current:</b> 200 mA AC -0 % +40% into 1.99 $\Omega$ 25 A AC $\pm 20\%$ into 25 m $\Omega$ at 230 V <b>Open circuit voltage:</b> $> 4 \text{ V AC}, < 24 \text{ V AC}$ <b>Bond test zeroing:</b> Can subtract up to 1.99 $\Omega$
<b>Insulation test (<math>R_{iso}</math>)</b>	<b>Display range:</b> 0 to 299 M $\Omega$ <b>Accuracy:</b> $\pm (5\% + 2 \text{ counts})$ from 0.1 to 300 M $\Omega$ <b>Resolution:</b> 0.01 M $\Omega$ (0 to 19.99 M $\Omega$ ) 0.1 M $\Omega$ (20 to 199.9 M $\Omega$ ) 1 M $\Omega$ (200 to 299 M $\Omega$ ) <b>Test voltage:</b> 500 V dc -0 % +25 % at 500 k $\Omega$ load or (6500-2 only) 250 V dc -0 % +25 % at 250 k $\Omega$ load <b>Test current:</b> $> 1 \text{ mA}$ at 500 k $\Omega$ load, $< 15 \text{ mA}$ at 0 $\Omega$ <b>Auto discharge time:</b> $< 0.5 \text{ s}$ for 1 $\mu\text{F}$ <b>Max. capacitive load:</b> Operational up to 1 $\mu\text{F}$
<b>Touch current test</b>	<b>Display range:</b> 0 to 1.99 mA AC <b>Accuracy:</b> $\pm (4\% + 2 \text{ counts})$ <b>Resolution:</b> 0.01 mA <b>Internal resistance (via probe):</b> 2 k $\Omega$ <b>Measuring method:</b> Probe The appliance under test is energized at mains potential.
<b>Substitute leakage current test</b>	<b>Display range:</b> 0 to 19.99 mA AC <b>Accuracy:</b> $\pm (2.5\% + 3 \text{ counts})$ <b>Resolution:</b> 0.01 mA <b>Test voltage:</b> 100 V AC $\pm 20\%$
<b>Load/Leakage Test: Load current</b>	<b>UK</b> <b>Display range:</b> 0 to 13 A <b>Accuracy:</b> $\pm (4\% + 2 \text{ counts})$ <b>Resolution:</b> 0.1 A The appliance under test is energized at mains potential. <b>AU</b> <b>Display range:</b> 0 A to 10 A <b>Accuracy:</b> $\pm (4\% + 2 \text{ counts})$ <b>Resolution:</b> 0.1 A The appliance under test is energized at mains potential.
<b>Load/Leakage test: Load power</b>	<b>Display range:</b> 230 V mains <b>UK</b> 0.0 VA to 3.2 kVA <b>AU</b> 0.0 VA to 2.4 kVA <b>Accuracy:</b> $\pm (5\% + 3 \text{ counts})$ <b>Resolution:</b> 1 VA (0 to 999 VA), 0.1 kVA ( $> 1.0 \text{ kVA}$ ) The appliance under test is energized at mains potential.
<b>Load/Leakage test: Leakage current</b>	<b>Display range:</b> 0 to 19.99 mA <b>Accuracy:</b> $\pm (4\% + 4 \text{ counts})$ <b>Resolution:</b> 0.01 mA The appliance under test is energized at mains potential.
<b>PELV test</b>	<b>Accuracy at 50 Hz:</b> $\pm (2\% + 3 \text{ counts})$ <b>Overload protection:</b> 300 V rms <b>Warning threshold:</b> 25 V rms

<b>RCD Test: Trip Current (6500-2 only)</b>	Operational error	±10 %
	Nominal	30 mA
	Accuracy	±5 %
<b>RCD Test: Trip Time (6500-2 only)</b>	Standard requirement	61557 Part 6; tolerance of rated test current 0 % to +10 %
	Operational error	±10 %
	RCD type	AC General-Purpose 30 mA
	Display range	310 ms
	Resolution	0.1 ms
	Accuracy	3 ms
	Trip time limit at 100 % (30 mA)	300 ms
Trip time limit at 500 % (150 mA)	40 ms	

### Environmental specifications

<b>Operating temperature</b>	0 to 40 °C
<b>Relative humidity</b>	Non condensing < 10 °C 95 % from 10 to 30 °C 75 % from 30 to 40 °C

### Safety specifications

<b>Safety rating</b>	Complies with EN61010-1 3rd edition CAT II, 300 V, pol 2 German version only: DIN VDE0404-1 and DIN VDE0404-2 IEC/EN 61557, part 1, 2, 4, 6, 10 CAT II, 300 V, pol 2
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### Mechanical and general specifications

<b>Size (LxWxH)</b>	200 mm x 275 mm x 114 mm
<b>Weight</b>	3.13 kg
<b>Power supply</b>	230 V +10 % -15 %, 50 Hz ±2 Hz or (6500-2 only: 110V +10 % -15 %, 50 Hz ±2 Hz)
<b>Power consumption (Tester)</b>	13 W typical (idle) 60 W max. during 25A Bond Test
<b>Storage</b>	Temperature: -10 °C to 60 °C Corrosion: 70 °C @ 95 % RH for 5 days max.
<b>Operating altitude</b>	0 up to 2000 m
<b>Sealing</b>	IP-40 (enclosure), IP-20 (connectors)
<b>EMC</b>	Complies with EN61326-1, Portable
<b>EMI immunity</b>	3 V/m



Kit configuration and contents vary by region.

## Ordering information

The Fluke 6200-2 comes with the following:

- 6200-2 PAT
- User's manual on CD
- Quick reference guide
- Hard Carrying Case
- Test Lead
- Test Probe
- Crocodile Clip
- Mains Cord

The Fluke 6500-2 comes with the following:

- 6500-2 PAT
- User's manual on CD
- Quick reference guide
- Hard Carrying Case
- Test Lead
- Test Probe
- Crocodile Clip
- Mains Cord
- USB Stick
- USB Cable

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