



Installation Tester and DMM Kits

Kit Contents:

| Part Number | Kit Contents |
|--------------------------|--|
| FLUKE-1652C-CLAMPKIT | FLUKE 1652C Installation Tester and Fluke 323 Clamp Meter UK Kit |
| FLUKE-1652C05-CLAMPKIT | FLUKE 1652C Installation Tester and Fluke 323 Clamp Meter EU Kit |
| FLUKE-1653B-CLAMPKIT/D | FLUKE 1653B Installation Tester and Fluke 324 Clamp Meter UK Kit |
| FLUKE-1653B02-CLAMPKIT/D | FLUKE 1653B Installation Tester and Fluke 324 Clamp Meter EU Kit |
| FLUKE-1654B-CLAMPKIT/D | FLUKE 1654B Installation Tester and Fluke 325 Clamp Meter UK Kit |
| FLUKE-1654B02-CLAMPKIT/D | FLUKE 1654B Installation Tester and Fluke 325 Clamp Meter EU Kit |
| FLUKE-117/TL175/SB | Fluke 117 Digital Multimeter, TL175 Test Lead Set and SB Bluetooth Speaker |

See below for individual parts datasheets.

Contact Information:

www.Farnell.co.uk

www.Newark.com

www.Fluke.com

1650 Series Multifunction Installation Testers

FLUKE®

New
RCD Type B Compatibility



Fluke 1654B



Fluke 1653B



Fluke 1652C



BS7671 17th Edition IEE Wiring Regulations IEC 60364.6.61, HD 384

Included Accessories

6 AA Cell batteries
C1600 Hard carrying case
Zero Adapter
Mains test cord
TL165X STD Standard Test Lead Set
TL165/UK Fused Test Lead Set (UK only)
Padded carrying strap
Quick reference guide
TP165X Remote control probe and lead
Users manual on CD-ROM

Ordering Information

Fluke 1652C Multifunction Installation Tester
Fluke 1653B Multifunction Installation Tester
Fluke 1654B Multifunction Installation Tester

Check the Fluke website for the various software modules

11641-eng Rev. 01

Extra functionality, faster testing, and as rugged as ever

Safer, easier installation testing. The new 1650 Series builds on the rugged reputation of the earlier 1650 Series, only it's re-designed to meet your need for more productive test tools. With new features like the fast, high current loop test (including a non-trip test) and a variable RCD trip current setting, accuracy is even better and the test cycle even faster. And with the addition of a unique zero adapter accessory for accurate mains test lead compensation, the 1650 Series continues to set the standard in installation testers. The 1650 Series testers verify the safety of electrical installations in domestic, commercial and industrial applications. They can ensure that fixed wiring is safe and correctly installed to meet the requirements of IEC 60364, HD 384 and BS 7671 17th Edition wiring regulations.

1654B - The complete tester for advanced users

This is the instrument that has it all, in a word: it's complete. From all the test functions you need to in-built memory for documenting results. This makes it the complete solution for professionals,

especially contractors, everyone who would want to have the best tool available and always understands (or know) how to use.

1653B - The ideal tester for professional trouble-shooters

This is the instrument that is indeed ideal for professional users due to its additional functionality. It is also ideal since even though it has high-end features, it is still easy to use – even after longer periods of non-use; because operating it is intuitive and not forgotten easily.

1652C - The everyday tester, for every electrical installer

This is the instrument that can be used every single day (day in, day out), and covers all the basic needs. It is the preferred tester for every front-line electrician/installer.

Features

| Measurement Function | 1652C | 1653B | 1654B |
|--|-----------|-----------|-----------|
| Voltage & Frequency | • | • | • |
| Wiring polarity checker | • | • | • |
| Insulation Resistance | • | • | • |
| Continuity & Resistance | • | • | • |
| Loop & Line Resistance | • | • | • |
| Loop & Line Resistance—mΩ resolution | | | • |
| Prospective Earth Fault Current (PEFC/IK) | • | • | • |
| Prospective Short-Circuit current (PSC/IK) | • | • | • |
| RCD switching time | • | • | • |
| RCD tripping level | ramp test | ramp test | ramp test |
| RCD variable current | • | • | • |
| Automatic RCD test sequence | • | • | • |
| Test pulse current sensitive RCDs (Type A) | • | • | • |
| Test smooth dc sensitive RCDs (Type B) | • | • | • |
| Earth Resistance | | • | • |
| Phase Sequence Indicator | • | • | • |
| Other Features | | | |
| Self-test | • | • | • |
| Illuminated Display | • | • | • |
| Memory, Interface | | | |
| Memory | | • | • |
| Extended Memory | | | • |
| Computer Interface | | • | • |
| Time and date (When used with FlukeView software) | | • | • |
| Software | | • | • |
| Included Accessories | | | |
| Hard case | • | • | • |
| Remote control probe | • | • | • |
| Zero Adapter | • | • | • |

Recommended Accessories



TLK290
Test Probe Kit



MTC1363 (UK)
Mains Test Cord



MTC77 (Europe)
Mains Test Cord



ES165X 1653B
& 1654B
Earth Spike Test Kit



FVF-SC2

1650 Series Multifunction Installation Testers

FLUKE®

Extra functionality, faster testing, and as rugged as ever

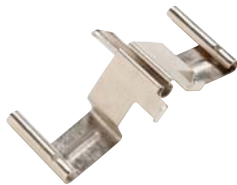
Specifications

(Check the Fluke web for detailed specifications)



Slim probe design

Thanks to its slim probe with integral test button, you can safely make one-handed measurements on hard to reach points, while keeping your eyes on the panel. This remote probe is powered by the tester so always operable (does not require additional batteries!).



Zero Adaptersign

For easy, always reliable and accurate compensation for test leads and mains cords. This adapter can be used for all different kind of mains plugs as well as test accessories like probes, alligator clips etc.



Complete kit

All 1650 models are equipped with detachable leads that can be replaced in case of damage or loss. A durable hard case will protect your instrument in tough field conditions.

| AC Voltage Measurement | | | | |
|------------------------|------------|---------------------------|-----------------|---------------------|
| Range | Resolution | Accuracy 50 Hz - 60 Hz | Input Impedance | Overload Protection |
| 500 V | 0.1 V | ± (0.8% + 3 digits) | 3.3 MΩ | 660 Vrms |

| Continuity Testing | | | | |
|---------------------|------------|--------------|----------------------|-------------------|
| Range (autoranging) | Resolution | Test Current | Open Circuit Voltage | Accuracy |
| 20 Ω | 00.1 Ω | > 200 mA | > 4 V | ± (1.5%+3 digits) |
| 200 Ω | 0.1 Ω | | | |
| 2000 Ω | 1 Ω | | | |

| Insulation Resistance Measurement | | | | | |
|---|--------------|-----------------------------|---------------------------|---------------|-----------------------------|
| Model | Test Voltage | Insulation Resistance Range | Resolution | Test Current | Accuracy |
| 1653B / 1654B | 50 V | 10 kΩ to 50 MΩ | 0.01 MΩ | 1 mA @ 50 kΩ | ± (3%+ 3 digits) |
| 1653B / 1654B | 100 V | 20 kΩ to 100 MΩ | 0.01 MΩ 0.1 MΩ | 1 mA @ 100 kΩ | ± (3%+ 3 digits) |
| 1653B / 1654B 1653B / 1654B | 250 V | 20 kΩ to 200 MΩ | 0.01 MΩ 0.1 MΩ | 1 mA @ 250 kΩ | ± (1.5%+ 3 digits) |
| 1653B / 1654B 1652C 1653B / 1654B | 500 V | 20 MΩ 200 MΩ 500 MΩ | 0.01 MΩ 0.1 MΩ 1 MΩ | 1 mA @ 500 kΩ | ± (1.5%+ 3 digits) + 10% |
| 1653B / 1654B 1652C | 1000 V | 20 MΩ 200 MΩ 1000 MΩ | 0.1 MΩ 1 MΩ | 1 mA @ 1 MΩ | ± (1.5%+ 3 digits) + 10% |

| Loop Impedance Measurement | | |
|----------------------------|------------|---|
| Range | Resolution | Accuracy ^[1] |
| 10 Ω | 0.001 Ω | Hi Current mΩ mode: ± (2 % + 15 digits) No Trip mode: ± (3 % + 6 digits) |
| 20 Ω | 0.01 Ω | Hi Current mode: ± (2 % + 4 digits) No Trip mode: ± (3 %) |
| 200 Ω | 0.1 Ω | Hi Current mode: ± (2 %) |
| 2000 Ω | 1 Ω | ±6 % ^[2] |

Notes
 [1] Valid for resistance of neutral circuit <20 Ω and up to a system phase angle of 30°. Test leads must be zeroed before testing.
 [2] Valid for mains voltage >200 V.

| PFC, PSC Test | |
|----------------------|--|
| Range | 1000A / 10kA(50kA) |
| Resolution and Units | 1A / 0.1kA |
| Accuracy | Determined by accuracy of loop resistance and mains voltage measurements |

Computation
 Prospective Earth Fault Current (PEFC) or Prospective Short Circuit Current (PSC) determined by dividing measured mains voltage by measured loop (L-PE) resistance or line (L-N) resistance, respectively.

| RCD Testing | | | | |
|-------------------------|------------------|-------------|-------------|-------------|
| RCD Type ^[6] | | Model 1652C | Model 1653B | Model 1654B |
| AC ^[1] | G ^[2] | • | • | • |
| AC | S ^[3] | • | • | • |
| A ^[4] | G | • | • | • |
| A | S | • | • | • |
| B ^[5] | G | | | • |
| B | S | | | • |

Notes
 [1] AC - Responds to ac
 [2] G - General, no delay
 [3] S - Time delay
 [4] A - Responds to pulsed signal
 [5] B - Responds to smooth dc
 [6] RCD test inhibited for V >265 ac
 RCD tests permitted only if the selected current, multiplied by earthing resistance, is <50 V.

| Tripping Time Test (ΔT) | | | |
|-------------------------------------|------------|-----------------------|--------------------------|
| Current Settings | Multiplier | Test Current Accuracy | Trip Time Accuracy |
| 10, 30, 100, 300, 500, 1000 mA, VAR | x 1/2 | + 0% - 10% | ± (1% Reading + 1 digit) |
| 10, 30, 100 mA | X 5 | + 10% - 0% | ± (1% Reading + 1 digit) |

| Tripping Current (Ramp) Test | | | | |
|---|------------------------------|-------------|-----------|----------------------|
| Current Range | Step Size | Dwell Time | | Measurement Accuracy |
| | | Type G | Type S | |
| 30 % to 110 % of RCD rated current ^[1] | 10 % of I Δ N ^[2] | 300 ms/step | 0 ms/step | ±5 % |

Notes
 [1] 30 % to 150 % for Type A Δ N >10 mA
 30 % to 210 % for Type A Δ N =10 mA
 20 % to 210 % for Type B
 Specified trip current ranges (EN 61008-1):
 50 % to 100 % for Type AC
 35 % to 140 % for Type A (>10 mA)
 35 % to 200 % for Type A (≤10 mA)
 50 % to 200 % for Type B
 [2] 5% for Type B

| Earth Resistance Test (RE) – Fluke 1654B and 1653B only | | |
|---|------------|----------------------|
| Range | Resolution | Accuracy |
| 200 Ω | 0.1 Ω | ± (2% + 5 digits) |
| 2000 Ω | 1 Ω | ± (3.5% + 10 digits) |

Battery type: Alkaline supplied, usable with 1.2 V NiCD or NiMH rechargeable batteries

Size (HxWxD):
 100 mm x 250 mm x 125 mm

Weight: 1.3 kg
Three Years Warranty

1650 Series/6000 Series Accessories

FLUKE®

Accessories for Fluke 1650 Series Installation Testers



ES165X Earth Spike Test Kit (Fluke 1653B and 1654B)

Earth Spike Test kit contents:

- Auxiliary earth probes
- Test connection leads and crocodile clips
- Purpose-made carry case



FVF-SC2 Fluke ViewForms Software

To address the increasing demands for reporting and documentation, Fluke presents FlukeView Forms documenting software. Download the data from the Fluke 1653B and create an easy report. The Fluke ViewForms Software also supports other Fluke tools.



TLK 290 Test Probe Kit

- Kit includes three flexible socket probes and a large alligator clip
- To be used on three phase sockets
- Probes have flexible width test points that fit securely in 4 to 8 mm sockets
- CAT III 1000 V, 8 A



MTC1363

MTC77

Mains Test Cord for 1650B series

MTC1363
MTC77

UK plug
Schuko plug

Accessories for Fluke 6500 Series Portable Appliance Testers



PASS560R Appliance Pass Labels

Quantity 500



APP1000/APP2000 Bar Code Appliance Number Labels

APP1000: Labels numbered 0001-1000

APP2000: Labels numbers 1001-2000

Label number >2000 on request



BDST3/BDST4 Snap Tags

BDST3: Cable Tie

BDST4: Clip On

Quantity 20. Without labels.



EXTL100-02 (UK plug)

EXTL100-02 (Schuko plug)

EXTL100 Extension Lead Test Adaptor

Adaptor for testing extension leads. Allows the earth test lead to be connected to the extension leads to perform insulation and earth bond tests.



SPSscan15 Barcode Scanner

Easy to use, low current, intelligent barcode reader. SPSscan15 can be used to scan barcodes attached to curved surfaces or where actual contact with the barcode surface is difficult.



SP1000 Mini Printer

Without using any additional software the SP1000 can be used to directly printout stored test records on to thermal paper. The printer is compact and easily transported and is ideal for test professionals who need to issue an immediate written account of work carried out. The printer is powered by a rechargeable battery and comes complete with mains charger and RS232 Printer Lead.

SP1000 Paper

Replacement thermal paper for the SP1000 Mini Printer

Fluke DMS software for 1650/6000 Series



The Fluke DMS (Data Management Software) is an efficient program for administration and reporting of installation tests in compliance with EN 60364, DIN VDE 0100/0105, BS7671 17th edition wiring regulation and appliance tests in compliance with DIN VDE 0701/0702, ÖVE E 8701.

DMS 0100/INST Software for Installation Tester Fluke 1653B and 1654B

Supporting reports for Austria, Germany, UK, Switzerland, Netherlands

DMS 0702/PAT Software for Portable Appliance Tester Fluke 6500

Supporting reports for Austria, Germany, UK, Netherlands

DMS COMPL PROF Software for the Fluke 1654B, 1653B and Fluke 6500

Supporting reports for Austria, Germany, UK, Switzerland, Netherlands

320 Series True-rms Clamp Meters

Fluke rugged. Fluke precise. Fluke reliable.

The Fluke 323, 324 and 325 Clamp Meters are designed to perform in the toughest environments and provide noise-free, reliable results users can trust to confidently diagnose problems. True-rms measurements and optimized ergonomics make the 320 Series Clamp Meters the best general troubleshooting tools for commercial and residential electricians.

New



Technical Data

Measurement capability

- 400 A ac current measurement (ac and dc current; 325 only)
- 600 V ac and dc voltage measurement
- True-rms ac voltage and current for accurate measurements on non-linear signals
- Resistance measurement to up to 40 kΩ with continuity detection
- Temperature and capacitance measurement (324 and 325 only)
- Frequency measurement (325 only)

Features

- Slim, ergonomic design
- Large, easy to read backlight display (324 and 325 only)
- CAT IV 300 V/CAT III 600 V safety rating
- Hold button
- Two-year warranty
- Soft carrying case

Specifications

| | | 323 | 324 | 325 |
|----------------------------|-------------------|---|--|---|
| AC current | Range | 400.0 A | 40.00 A/400.0 A | 40.00 A/400.0 A |
| | Accuracy | 2 % ± 5 digits (45 Hz to 65 Hz) 2.5 % ± 5 digits (65 Hz to 400 Hz) | 1.5 % ± 5 digits (45 Hz to 400 Hz) Note: Add 2 % for position sensitivity | 2 % ± 5 digits (45 Hz to 65 Hz) 2.5 % ± 5 digits (65 Hz to 400 Hz) |
| DC current | Range | — | — | 40.00 A/400.0 A |
| | Accuracy | — | — | 2 % ± 5 digits |
| AC voltage | Range | 600.0 V | 600.0 V | 600.0 V |
| | Accuracy | 1.5 % ± 5 digits | 1.5 % ± 5 digits | 1.5 % ± 5 digits |
| DC voltage | Range | 600.0 V | 600.0 V | 600.0 V |
| | Accuracy | 1.0 % ± 5 digits | 1.0 % ± 5 digits | 1.0 % ± 5 digits |
| Resistance | Range | 400.0 Ω/4000 Ω | 400.0 Ω/4000 Ω | 400.0 Ω/4000 Ω/40.00 kΩ |
| | Accuracy | 1 % ± 5 digits | 1 % ± 5 digits | 1 % ± 5 digits |
| Continuity | | ≤ 70 Ω | ≤ 30 Ω | ≤ 30 Ω |
| Capacitance | | — | 100.0 μF to 1000 μF | 100.0 μF to 1000 μF |
| Frequency | | — | — | 5.0 Hz to 500.0 Hz |
| AC response | | True-rms | True-rms | True-rms |
| Backlight | | — | Yes | Yes |
| Data hold | | Yes | Yes | Yes |
| Contact temperature | | — | -10.0 °C to 400.0 °C (14.0 °F to 752.0 °F) | -10.0 °C to 400.0 °C (14.0 °F to 752.0 °F) |
| Min/Max | | — | — | Yes |
| Size | H x W x D (mm) | 207 x 75 x 34 | 207 x 75 x 34 | 207 x 75 x 34 |
| | Max wire diameter | 30 mm (600 MCM) | 30 mm (600 MCM) | 30 mm (600 MCM) |
| | Weight | 265 g | 208 g | 283 g |
| Category rating | | CAT III 600 V CAT IV 300 V | CAT III 600 V CAT IV 300 V | CAT III 600 V CAT IV 300 V |
| Warranty | | Two-year | Two-year | Two-year |

Ordering information

323 True-rms Clamp Meter

324 True-rms Clamp Meter

325 True-rms Clamp Meter

Included with all models

Clamp meter, test leads, soft case, and users manual.

Fluke. Keeping your world up and running.®

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