

TECHNICAL DATA

# Fluke 1663 Multifunction Tester with TruTest™ Data Management Software Kit



## Key features

- 1663 Multifunction Tester
- TruTest™ Data Management Software

## Product overview: Fluke 1663 Multifunction Tester with TruTest™ Data Management Software Kit

Fluke 1663 Multifunction Installation Tester is the ideal choice for hard working professionals

The 1663 installation tester delivers the full-featured functionality and advanced measurement capabilities that professional installers need. It is compact and lightweight (less than 1.3 kg) and comes with a padded carrying and waist strap for convenient handling. Operation is intuitive and easily mastered by all levels of workers so you can put it to work immediately for quick and efficient testing to all local regulations. Additional features like On/Off switchable auto-start for RCD and loop test, as well as a self-test, saves time and gives you more confidence in your results.

Test EV charging station RCD type A-EV or RDC-DD DC protection devices

Perform tests on EV charging station DC protection devices using the RCD type B (smooth DC currents) VAR mode, which generates the test currents for RCD type A-EV or RDC-DD acc. to IEC 62955 (6/60/200 mA and ramp <2 to 6 mA ramp). This allows the quick and easy testing of additional 6 mA DC monitors on charging points and can be used in conjunction with the Fluke FEV100 or FEV300.

## Software compatible

The Fluke 1663 is compatible with TruTest™, a Fluke software designed to eliminate the hassle associated with traditional electrical system data management and reporting. Whether you are testing fixed wire installations, or appliances in an office, verifying repairs in a workshop, or performing annual inspections, proper data management is critical for producing easy-to-understand reports for clients. TruTest™ Software allows you to quickly and easily import measurement results directly from your test instruments, manage files transferred from instruments, or manually enter data as needed.

## Other useful capabilities:

- Test EV charging station RCD type A-EV or RDC-DD DC protection devices
- Checks wiring polarity to detect broken N wires
- Measures insulation resistance and loop and line resistance
- Includes Z-max memory for loop tests to support easy evaluation of the highest loop test value
- Provides unique zero adapter for fast, reliable and accurate test lead and mains cord compensation
- Measures motor windings with continuity test
- Calculates prospective earth fault current (PEFC/IK) and prospective short-circuit current (PSC/IK)
- Measures RCD switching time and tripping level (ramp test)
- Measures trip time and current for RCD type A & AC in one test
- Measures RCD variable current
- Provides automatic RCD test sequence
- Includes a phase sequence indicator
- Safety rated CAT III 500V, CAT IV 300V


## Specifications: Fluke 1663 Multifunction Tester with TruTest™ Data Management Software Kit

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AC voltage measurement	
Range	500 V
Resolution	0.1 V
Accuracy 45 Hz – 66 Hz	0.8% + 3
Input impedance	360 kΩ
Overload protection	660 V rms
Continuity testing (RLO)	
Range (autoranging)	20 Ω / 200 Ω / 2000 Ω
Resolution	0.01 Ω / 0.1 Ω / 1 Ω
Open Circuit Voltage	>4 V
Insulation resistance measurement (RISO)	
Test voltages	50-100-250-500-1000 V
Accuracy of test voltage (at rated test current)	+10%, -0%

Test voltage	50 V 100 V 250 V 500 V 1000 V
Insulation resistance range	20 M $\Omega$ / 50 M $\Omega$ 20 M $\Omega$ / 100 M $\Omega$ 20 M $\Omega$ / 200 M $\Omega$ 20 M $\Omega$ / 200 M $\Omega$ / 500 M $\Omega$ 20 M $\Omega$ / 200 M $\Omega$ / 1000 M $\Omega$
Resolution	0.01 M $\Omega$ / 0.1 M $\Omega$ 0.01 M $\Omega$ / 0.1 M $\Omega$ 0.01 M $\Omega$ / 0.1 M $\Omega$ 0.01 M $\Omega$ / 0.1 M $\Omega$ / 1 M $\Omega$ 0.01 M $\Omega$ / 0.1 M $\Omega$ / 1 M $\Omega$
Test current	1 mA @ 50 k $\Omega$ 1 mA @ 100 k $\Omega$ 1 mA @ 250 k $\Omega$ 1 mA @ 500 k $\Omega$ 1 mA @ 1 M $\Omega$
<b>Loop and line impedance (ZI)</b>	
Range	10 $\Omega$ (Hi current m $\Omega$ mode)/20 $\Omega$ /200 $\Omega$ /2000 $\Omega$
Resolution	0.001 $\Omega$ / 0.01 $\Omega$ / 0.1 $\Omega$ /1 $\Omega$
<b>Prospective earth fault current, PSC test</b>	
Range	1000 A / 10 kA (50 kA)
Resolution	1 A / 0.1 kA
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.
<b>RCD testing, RCD types tested</b>	
RCD Type	AC <sup>1</sup> G <sup>2</sup> ,S <sup>3</sup>
Model 1663	A4, AC <sup>1</sup> , G <sup>2</sup> ,S <sup>3</sup>
Model 1664 FC	A, AC, B5, S
Notes	<sup>1</sup> Responds to AC <sup>2</sup> General, no delay <sup>3</sup> Time delay <sup>4</sup> Responds to pulsed signal ☑ Responds to smooth DC signal

Tripping speed test ( $\Delta T$ )		
Current settings <sup>1</sup>	10-30-100-300-500-1000 mA – VAR 10-30-100 mA	
Multiplier	x ½, x 1 x 5 VAR Mode Type B - 6, 60, 200 mA	
Measurement range	RCD Type G	310 ms 50 ms
	RCD Type S	510 ms 160 ms
	EV / RDC-DD	6 mA - 10s 60 mA - 0.3s 200 mA - 0.1s
Notes	<sup>1</sup> 1000 mA type AC only 700 mA maximum type A in VAR mode The VAR Mode at RCD type B (smooth DC currents) generates the test currents acc. to IEC 62955 for RCD type A-EV or RDC-DD (6/60/200 mA and ramp <2 to 6 mA).	
RCD/FI-Tripping Current Measurement/Ramp Test ( $I\Delta N$ )		
Current range	30% to 110% of RCD rated current <sup>1</sup> <2 mA to 6 mA smooth DC <sup>3</sup>	
Step size	10% of $I\Delta N$ <sup>2</sup> Linear rising within 30 s	
Dwell time	RCD Type G	300 ms/step
	RCD Type S	500 ms/step
Measurement accuracy	±5%	
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	
Notes	<sup>1</sup> 30% to 150% for Type A $I\Delta N > 10$ mA 30% to 210% for Type A $I\Delta N = 10$ mA 20% to 210% for Type B <sup>2</sup> 5% for Type B <sup>3</sup> For RCD type A-EV/RDC-DD acc. to IEC 62955	
Earth Resistance Test (RE)		
Range	200 $\Omega$ / 2000 $\Omega$	
Resolution	0.1 $\Omega$ / 1 $\Omega$	

Frequency	128 Hz
Output Voltage	25 V
<b>Phase Sequence Indication</b>	
Icon	 Phase Sequence indicator is active.
<b>General Specifications</b>	
Size (L x W x H)	10 x 25 x 12.5 cm
Weight (incl. batteries)	1.3 Kg
Battery size, quantity	Type AA, 6 ea.
Sealing	IP-40
Safety	Complies with EN/IEC 61010-1 and EN/IEC 61010-2-034
Overvoltage	CAT III / 500V; CAT IV 300V
Performance	EN61557-1 to EN61557-7 and EN61557-10

Function	Demo	Lite	Advanced
Database structure (Local standalone or server based)	Local	Local	Local
Portable Appliance Tester (PAT) module	•	•	•
Portable Appliance Testers supported	Fluke 6500, Fluke 6500-2, Beha-Amprobe GT-600, Beha-Amprobe GT-650, Beha-Amprobe GT-800, Beha-Amprobe GT-900		
Maximum addable clients	1	2	Unlimited
Maximum addable sites/client	2	5	Unlimited
Maximum addable locations/client	5	50	Unlimited
Maximum addable appliances/client	20	1000	Unlimited
Solar Multifunction Tester	•	•	•
Solar Multifunction tester support	SMFT-1000		
Maximum addable clients	1	10	Unlimited
Maximum addable sites/client	2	5	Unlimited
Maximum addable strings	5	50	Unlimited
Maximum addable modules (per string)	50	50	Unlimited
Installation Testers (INST) module	•	•	•
Installation Testers supported	Fluke 1653, Fluke 1653B, Fluke 1654B, Fluke 1662, Fluke 1663, Fluke 1664 FC, Beha-Amprobe ProInstall-100, Beha-Amprobe ProInstall-200		
Maximum addable clients	1	2	Unlimited
Maximum addable sites/client	2	5	Unlimited



Maximum addable locations/client	5	25	Unlimited
Maximum addable appliances/client	50	200	Unlimited
Include demo database	•	•	•
Create clients	•	•	•
Rename clients		•	•
Delete clients	•	•	•
Create nodes	•	•	•
Move nodes	•	•	•
Rename nodes		•	•
Delete nodes	•	•	•
Edit client information		•	•
Edit site information		•	•
Edit location information		•	•
Edit test information		•	•
Edit distribution board information		•	•
Edit circuit information		•	•
Edit inverter information		•	•
Edit combiner box information		•	•
Edit string information		•	•
Edit module information		•	•
Add test step		•	•
Delete test step		•	•
Edit test step		•	•
Add remarks		•	•
Add attachment (file) to remark			•
Edit remark		•	•
Delete remark		•	•
Read data from instrument	•	•	•
Read data from file	•	•	•
Read data conflict management	•	•	•
Read data assign tree structure	•	•	•
Load data to instrument			• *Compatible tool required



Use search	•	•	•
Show reports	With watermark	•	•
Show certificates	With watermark	•	•
Save (PDF, XML,...) /Print reports		•	•
Save (PDF, XML,...)/Print certificates		•	•
Add engineers	Demo engineer	•	•
Edit engineers		•	•
Delete engineers		•	•
Print engineers		•	•
Add test instruments	Demo instrument	•	•
Edit test instruments		•	•
Delete test instruments		•	•
Print test instruments		•	•
Edit my company info	Demo company	•	•
Edit company logo	Demo logo		•
Edit certification logo	Demo logo		•
View Auto Test Codes	•	•	•
Select favorites Auto Test Codes		•	•
Print favorites Auto Test Codes		•	•
Print All Auto Test Codes		•	•
Create customized Auto Test Codes			•
Edit customized Auto Test Codes			•
Copy customized Auto Test Codes			•
Delete customized Auto Test Codes			•
Print Customized Auto Test Codes			•
Create backup		•	•
Restore backup		•	•
Maximum users	1 Demo user	2	Unlimited
Add users		•	•
Edit users		•	•
User roles		•	•
Edit user roles		•	•
Print users list		•	•

Edit limits		•	•
Available languages	DE, EN, ES, FI, FR, IT, NL, PL, TR		
Supported Installation certificates	DIN VDE 0701-0702, ÖVE/ÖNORM E 8701, SNR 462638, NEN3140, International template		
Change language	•	•	•
Change country	•	•	•
Change report language			•
Expire duration	60 days (calculated from installation date)	Unlimited	
Free updates		5 years (calculated from enter serial code date)	
Expiration popup notice	Daily	Every 30 days after 5 year free update period	
Activation date with days left until expiration	•	•	•

System requirements	
Type	Requirement
Operating System	Microsoft Windows 10/11, 64-bit and 32 bit (recommended)
	Microsoft Windows 8/8.1, 64-bit and 32-bit
	Microsoft Windows 7 with Service Pack 1, 64-bit and 32-bit
System Memory	Minimum 4 GB RAM (64-bit) or 2 GB RAM (32-bit)
Hard disk space	Minimum 2 GB available hard disk space
Display resolution	Minimum screen resolution 1366 x 768
Communication interfaces	USB



## Ordering information



### Fluke 1663 FTT Kit

Fluke 1663 Multifunction Tester with TruTest™ Data Management Software Kit

Includes:

- 1663 Multifunction Installation Tester
- 6x AA (IEC LR6) cell batteries
- C1600 hard carrying case
- Zero adapter
- Heavy duty mains cord
- STD standard test lead set
- Padded carrying and waist strap
- Quick reference guide
- TP165X remote control probe and lead
- IR189USB cable
- TruTest™ Data Management Software

### Fluke 1663 SCH FTT Kit

Fluke 1663 Multifunction Tester with TruTest™ Data Management Software Kit

Includes:

- 1663 Multifunction Installation Tester
- 6x AA (IEC LR6) cell batteries
- C1600 hard carrying case
- Zero adapter
- Heavy duty mains cord
- STD standard test lead set

- Padded carrying and waist strap
  - Quick reference guide
  - TP165X remote control probe and lead
  - IR189USB cable
  - TruTest™ Data Management Software
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### **Fluke 1663 ITDK FTT Kit**

Fluke 1663 Multifunction Tester with TruTest™ Data Management Software Kit

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Includes:

- 1663 Multifunction Installation Tester
  - 6x AA (IEC LR6) cell batteries
  - C1600 hard carrying case
  - Zero adapter
  - Heavy duty mains cord
  - STD standard test lead set
  - Padded carrying and waist strap
  - Quick reference guide
  - TP165X remote control probe and lead
  - IR189USB cable
  - TruTest™ Data Management Software
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### **Fluke 1663 CH FTT Kit**

Fluke 1663 Multifunction Tester with TruTest™ Data Management Software Kit

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Includes:

- 1663 Multifunction Installation Tester
  - 6x AA (IEC LR6) cell batteries
  - C1600 hard carrying case
  - Zero adapter
  - Heavy duty mains cord
  - STD standard test lead set
  - Padded carrying and waist strap
  - Quick reference guide
  - TP165X remote control probe and lead
  - IR189USB cable
  - TruTest™ Data Management Software
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