Fluke 1664 FC Multifunction Tester with TruTest™ Data Management Software Kit

Key features

- 1664 FC Multifunction Tester
- TruTest™ Data Management Software

Product overview: Fluke 1664 FC Multifunction Tester with TruTest™ Data Management Software Kit

The Fluke 1664 FC Multifunction Installation Tester helps expedite installations

The 1664 FC puts a lot of testing power in your hands to quickly and efficiently test to all local regulations, protect appliances, and share test results in real time over your smartphone.

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 an easy testing of additional 6 mA DC monitors on charging points and can be used in conjunction with the Fluke FEV100 or FEV300.

Protect appliances from accidental damage

The Fluke 1664 FC is the only tester with "Insulation PreTest" that stops the insulation test and provides a visual warning if it detects that an appliance is connected to the system under test. This helps you avoid potentially serious and costly mistakes that can cause damage to your customers' peripheral equipment.

Auto Test reduces test time

Auto Test performs up to seven installation tests in one sequence, ensuring compliance with local installation regulations. This reduces the number of manual connections, thus decreasing the possibility of errors and reducing test time.

Save time and enhance collaboration

Because the 1664 FC is Fluke Connect®-enabled, you can send test results to your smartphone, save them to the cloud, and share measurements in real time with team members through a ShareLive video call. It's the fastest way to let your team see what you see, and to help you get approvals without leaving the field. Fluke Cloud™ storage allows you to retrieve stored results whether you are in the office or in the field to make decisions in real time. You get world-class data protection and can import the data, manage files transferred from instruments, or manually enter data as needed into TruTest™ Software to process and generate certificates quickly and easily. Designed to eliminate the hassle associated with traditional electrical system data management and reporting, TruTest™ Software is an ideal solution for producing easy-to-understand reports for clients.

Other helpful features:

- Compact, lightweight (less than 1.3 kg) with padded neck-strap to free your hands
- Rotary dial knob clearly indicates which function is selected, all in one spot with no complex multi-level menus.
- Offers additional high current loop mode for faster measurements than loop tests with non-trip mode for RCDs
- 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
- Performs fast voltage measurement between L-N, L-PE, and N-PE using the mains cord. No need to change measurement connections
- Measures RCD trip current and trip time in parallel (RCD type AC and A)
- Measures PEFC or PSC and loop impedance in parallel and displays them together on the dual display
- Offers ring testing so you can select the required input sockets with soft keys and not have to exchange test leads
- Uses continuity test currents to measure motor windings
- Detects raised earth voltages > 50 V with Earth Volt Touchpad, indicating potential dangerous situations
- Features large display with backlight, clear symbols, and exceptionally wide viewing angle for easy and safe readings
- Offers extended three-layer memory

Specifications: Fluke 1664 FC 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 MΩ / 50 MΩ 20 MΩ / 100 MΩ 20 MΩ / 200 MΩ 20 MΩ / 200 MΩ / 500 MΩ 20 MΩ / 200 MΩ / 1000 MΩ
Resolution	0.01 MΩ / 0.1 MΩ 0.01 MΩ / 0.1 MΩ 0.01 MΩ / 0.1 MΩ 0.01 MΩ / 0.1 MΩ / 1 MΩ 0.01 MΩ / 0.1 MΩ / 1 MΩ
Test current	1 mA @ 50 kΩ 1 mA @ 100 kΩ 1 mA @ 250 kΩ 1 mA @ 500 kΩ 1 mA @ 1 MΩ
Loop and line impedance (ZI)	
Range	10 Ω (Hi current mΩ mode)/20 Ω/200 Ω/2000 Ω
Resolution	0.001 Ω/ 0.01 Ω/ 0.1 Ω/1 Ω
Prospective earth fault current, PSC test	
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.
RCD testing, RCD types tested	

RCD Type	AC[1]
	G[2], S[3]
Model 1663	A4, AC[1], G[2], S[3]
Model 1664 FC	A, AC, B5, S
Notes	[1]Responds to AC
	[2]General, no delay
	[3]Time delay
	[4]Responds to pulsed signal
	▨Responds to smooth DC signal

Tripping speed test (ΔT)

Current settings[1]	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	[1]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 (IΔN)

Current range	30% to 110% of RCD rated current[1]	
	<2 mA to 6 mA smooth DC[3]	
Step size	10% of IΔN[2]	
	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	¹30% to 150% for Type A IΔN > 10 mA 30% to 210% for Type A IΔN = 10 mA 20% to 210% for Type B ²5% for Type B ³For RCD type A-EV/RDC-DD acc. to IEC 62955

Earth Resistance Test (RE)

Range	200 Ω / 2000 Ω
Resolution	0.1 Ω / 1Ω
Frequency	128 Hz
Output Voltage	25 V

Phase Sequence Indication

Icon	Phase Sequence indicator is active.

General Specifications

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		•	•

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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			•

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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 1664FC FTT Kit

Fluke 1664 FC Multifunction Tester with TruTest™ Data Management Software Kit

Includes:

- 1664 FC 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 1664FC SCH FTT Kit

Fluke 1664 FC Multifunction Tester with TruTest™ Data Management Software Kit

Includes:

- 1664 FC 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 1664FC ITDK FTT Kit

Fluke 1664 FC Multifunction Tester with TruTest™ Data Management Software Kit

Includes:

- 1664 FC 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 1664FC DE FTT Kit

Fluke 1664 FC Multifunction Tester with TruTest™ Data Management Software Kit

Includes:

- 1664 FC 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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