PeakTech 2715 Loop Tester User Manual

Contents

PeakTech 2715 Loop Tester

Note: Read this manual carefully before use and make this manual available to subsequent users.

Safety instructions

This device complies with EU Directives 2014/30 / EU (Electromagnetic Compatibility) and 2014/35 / EU (Low Voltage) as defined in Addendum 2014/32 / EU (CE Mark).
Overvoltage category III 600V; Pollution degree 2.

CAT I:	
	Devices with low transient overvoltages or without direct connection to the mains (battery operated) or devices with safety extra-low voltage.
CAT II:	
	For devices with detachable plug connection to the power supply / socket, such as household appliances, power strips, portable tools, etc.
CAT III:	
	Permanently installed switches, circuit breakers, sockets or contactors or other distribution devices.
CAT IV:	
	Devices and equipment of low-voltage installation, e.g. Main switch at the current input, surge arrester, electricity meter and ripple control receiver.

- Do not expect maximum input values.
- Check the device before use and do not use the device if it is damaged.
- If there are warning symbols displayed, immediately disconnect the device from the mains and check the circuit.
- The type of test can trigger residual current protection mechanisms. At the end of the test, the tested circuit of the installation can therefore be no longer supplied with power. Accordingly, before using the device, make sure that the power failure does not cause damage to persons or equipment (medical devices, computers, industrial equipment, etc.).
- The tester was not designed to be a voltage tester (No Voltage Tester, NVT). Therefore, only use a device that has been developed for this purpose.
- This device is equipped with batteries. Observe the national disposal regulations at the end of this manual.
- Always carry out measurements on electrical systems in compliance with all safety regulations and local legislation.
- Always observe the CAT overvoltage category of your meter and use it only in the appropriate systems to prevent accidents and damage.
- If a meter shows abnormal behavior, do not take further measurements and send the meter to the manufacturer for inspection.
- Service only by qualified personnel – only the manufacturer may carry out repairs on this device.
- Never make technical changes to a meter.
- Observe all safety rules when dealing with electrical systems and appliances.
- Measuring instruments shouldn't be used by children

Safety symbols:

	Caution refer to this manual before using the meter.
	Dangerous voltages.
	The tester is protected by double insulation or reinforced insulation.

Operating Instruction

- Link the test line
- Check the wires state:
- Before pushing the "Test" button, certificate the 3 led status

Status LED	P-E	P-N	P<-N	Action
Correct wiring	●	●	○	Start measurement
Not connected	○	○	○	Check connection
Ground missing	○	○/●	○	Check connection
Phase/Neutral reversal	○/●	○/●	●	Reverse connection

Legend: ● On, ○Off, ○/● On or Off

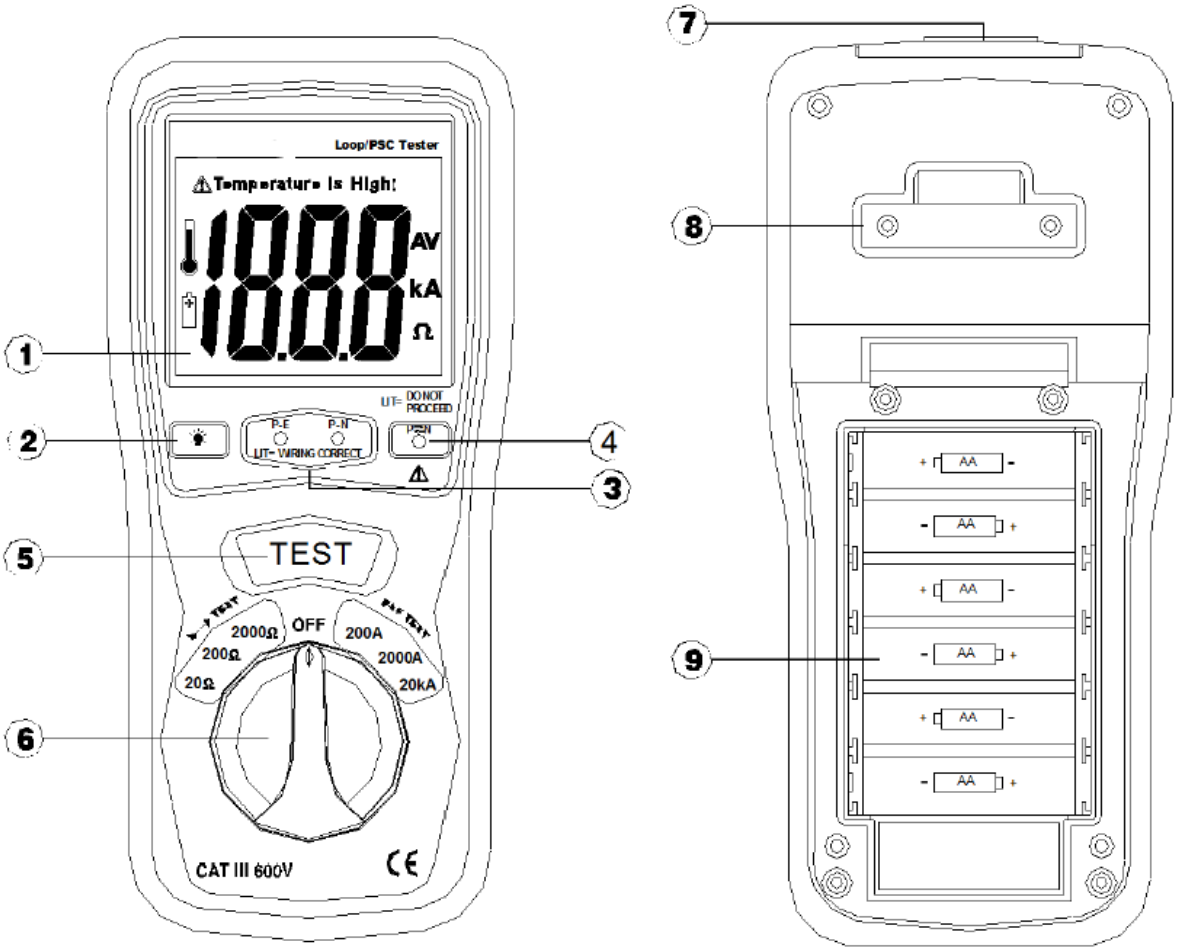
If the indicating light status is not like the above, do not test and check the wires again.
Voltage test:
When the tester is linked to the power, LCD will update the voltage (P-E) per second. If the voltage is unusual or

not the expected value, don’t test! The tester should only be used in AC230v (50Hz) systems.

Loop test:
Turn the tester to 20,200 or 2000Ωrange. Push the test button, LCD will display the value and unit. The tester sends a BZ when the test is finished.
To get better values turn the tester to the lowest range as possible. If LCD flashes “ ” , disconnect the tester and switch it off, let the tester cool down.

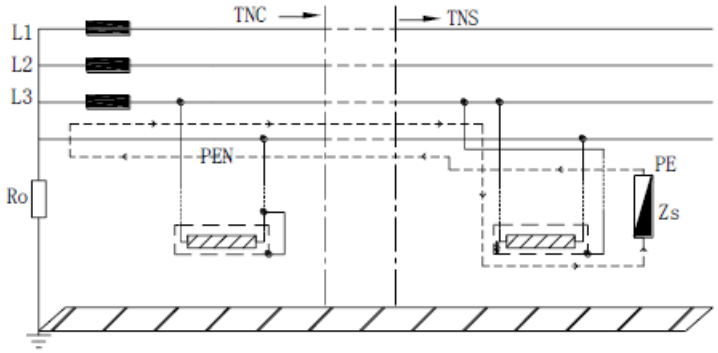
Prospective short current test:
Turn the tester to 200A, 2000Aor 20kA range. Push the test button, LCD will display the value and unit. The tester sends BZ out when the test is finished.
To get better values set the tester to the lowest range as possible. If LCD flashes “ ”, disconnect the tester and switch it off, let the tester cool down.

Parts and Controls



1. Digital Display
2. Backlight Button
3. P-E, P-N, Lights
4. P-N REVERSE Light
5. Test Button
6. Rotary Function switch
7. POWER Jack
8. Pothook
9. Battery Cover

Measure loop impedance and prospective short current



If there is an RCD or fuse in the circuit,it should test loop impedance. According to IEC 60364, every loop should meet the formula:

- Ra: loop impedance
- 50: max of touch voltage
- Ia: the current than can make the protection device break down the circuit in 5 seconds. When the protection device is RCD, Ia is rated residual current IΔn.

IΔn	10	30	100	300	500	1000	mA
Ia(50v)	5000	1667	500	167	100	50	Ω
Ia(25v)	2500	833	250	83	50	25	Ω

- According to IEC 60364, every loop should meet the formula: When the protection device is Fuse, Uo=230v, Ia, and Zsmax:

Rated Current	Break time (5s)		Break time (0.4s)	
	Ia(A)	Zs(Ω)	Ia(A)	Zs(Ω)
6	28	8.2	47	4.9
10	46	5	82	2.8
16	65	3.6	110	2.1
20	85	2.7	147	1.56
25	110	2.1	183	1.25
32	150	1.53	275	0.83
40	190	1.21	320	0.72
50	250	0.92	470	0.49
63	320	0.71	550	0.42
80	425	0.54	840	0.27
100	580	0.39	1020	0.22

- The prospective short current must be bigger than Ia.

Features

Lines test: 3 LED indicates lines state. When reversed, the third LED light.
Overheat protection: When the temperature of the resister is too high, the tester will switch off and lock.LCD will display “Temperature is High” and this symbol will flash“ ”
Overload protect: When the volt of P-E is up to 250v, the tester will stop testing to protect the tester and the LCD will flash “250v”.

- the operating voltage.
- Test mode: When the key “Test” is pressed, a tester will display the result for 5 sec. then display the voltage.
- Operating Temperature: 0°C to 40°C (32°F to 104°F) and Humidity below 80% RH
- Storage Temperature: -10°C to 60°C (14°F to 140°F) and Humidity below 70% RH
- Power source: 6 x 1.5V Size “AA” battery or Equivalent (DC9V)
- Dimensions: 200(L) x 92(W) x 50(H) mm
- Weight: Approx. 700g includes battery

Electrical Specifications

Accuracies are specified as follows: ± (…% of reading +…digits) at 23°C ± 5°C,below 80% RH.
Loop resistance

Range	Resolution	Test times	Full scale accuracy
20Ω	0.01Ω	25A/20ms	± 2% of F.S ± 5d
200Ω	0.1Ω	2.3A/40ms	± 2% of F.S ± 5%
2000Ω	1Ω	15mA/280ms	± 2% of F.S ± 5d

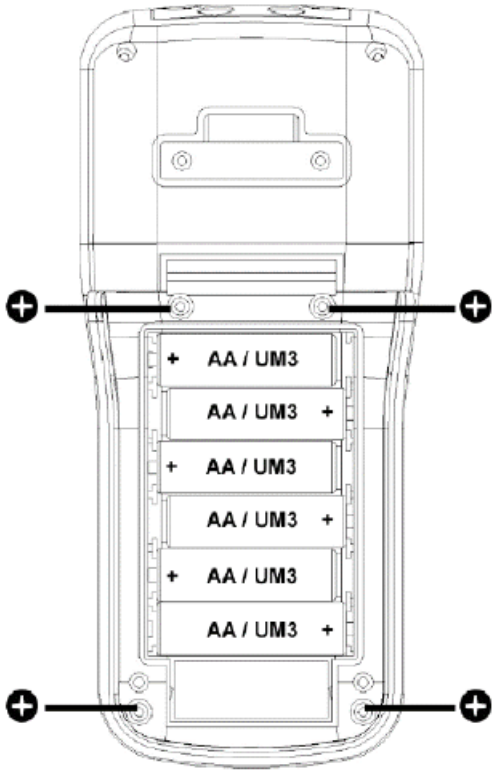
Prospective short current

Range	Resolution	Test times	Full scale accuracy
200A	0.1A	2.3A/40ms	± 2% of F.S ± 5d
2KA	1A	25A/20ms	± 2% of F.S ± 5d
20KA	10A	25A/20ms	± 2% of F.S ± 5d

AC Voltage (50HZ)

Range	Full scale accuracy
50~250V	± 2% of F.S ± 5d

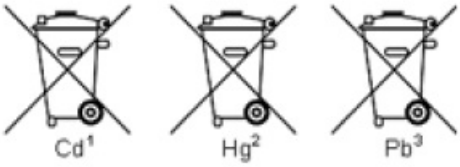
Battery Replacement



1. When the low battery symbol ” ” appears on the LCD, the six 1.5V ‘AA’ batteries must be replaced.
2. Turn the device off and remove the test leads.
3. Unsnap the tilt stand from the rear of the tester.
4. Remove the four Phillips head screws holding the battery cover.
5. Remove the battery compartment cover.
6. Replace the batteries observing polarity.
7. Affix the rear cover and secure the screws.
8. Reattach the tilt stand.

Notification about the Battery Regulation

The delivery of many devices includes batteries, which for example serve to operate the remote control. There also could be batteries or accumulators built into the device itself. In connection with the sale of these batteries or accumulators, we are obliged under the Battery Regulations to notify our customers of the following: Please dispose of old batteries at a council collection point or return them to a local shop at no cost. The disposal in domestic refuse is strictly forbidden according to the Battery Regulations. You can return used batteries obtained from us at no charge at the address on the last side in this manual or by posting with sufficient stamps. Contaminated batteries shall be marked with a symbol consisting of a crossed-out refuse bin and the chemical symbol (Cd, Hg or Pb) of the heavy metal which is responsible for the classification as pollutant:



1. “Cd” means cadmium.
2. “Hg” means mercury.
3. “Pb” stands for lead.

Documents / Resources

	PeakTech 2715 Loop Tester [pdf] User Manual 2715 Loop Tester, 2715, Loop Tester, Tester

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