User Manual

TRIPLETT

VCT1000

Voltage and Current Tester with Phase Rotation Indication and Non-Contact AC Voltage Detection

CE

Introduction

Congratulations on your purchase of the Triplett VCT1000 Voltage and Current Tester with Phase Rotation Indication and Non-Contact AC Voltage Detection.
This meter is feature packed and includes:

- 2000 count EBTN (Enhanced Black Twisted Nematic) display for easy viewing in any lighting condition
- 200A AC open jaw design fits into tight spaces where a standard clamp can't close
- LED AC/DC Voltage Indicators: 12, 24, 50, 120, 230, 400, 690, 1000V
- DC Polarity LEDs
- Rotary Field Indicator checks for correct 3-phase wire sequence (L1, L2, L3) and rotation direction (R, L)
- Built-in Non-Contact Voltage Detector with LED
- Continuity Test with audible and visual indicators

Safety Information

 Caution! Refer to the explanation in this Manual

 Double Insulation or Reinforced insulation

CE Compliance

This device must not be handled by children. It contains hazardous objects as well as small parts that can be swallowed. Do not leave batteries and packing material unattended; they can be dangerous for children. If unused for an extended period of time, remove the batteries from this device Expired

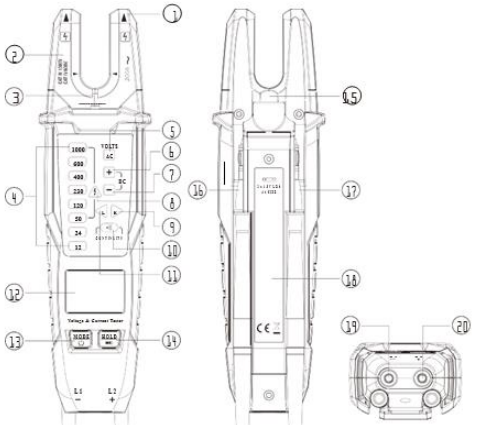
or damaged batteries can cause cauterization on contact with the skin; use suitable hand gloves in such cases. Ensure that the batteries are not short-circuited. Do not throw batteries into the fire.

⚠ WARNINGS

- Read understand and follow safety rules and operating instructions in the manual before using this tester.
- The tester's safety features may not protect the user if not used in accordance with the manufacturer's instructions.
- Check on a known live source within the rated AC voltage range of the tester before use to ensure it is in working order.
- Insulation type and thickness, distance from the voltage source, shielded wires, and other factors may affect reliable operation. Use other methods to verify live voltage, if there is any uncertainty.
- Do not use if the tester appears damaged or if it is not operating properly. If in doubt, replace the tester.
- Do not use on voltages that are higher than as marked on the tester.
- Use caution with voltages above 30 volts AC as a shock hazard may exist.
- Comply with all applicable safety codes. Use approved personal protective equipment when working near live electrical circuits

Meter Description

1. Non-Contact Voltage (NCV) Detector Sensor
2. Open Jaw Clamp
3. Non-Contact Voltage (NCV) Indication LED
4. LED Indicators for Voltage Display
5. LED Indicator for AC Voltage
6. LED Indicator for Positive (+) DC Voltage
7. LED Indicator for Negative (-) DC Voltage
8. LED Indicator for Warning Voltage
9. LED Indicator for Right Rotation Direction
10. LED Indicator for Continuity
11. LED Indicator for Left Rotation Direction
12. LCD Display
13. POWER and MODE Button
14. Flashlight and HOLD Button
15. Flashlight
16. Red Test Probe + (L2)
17. Black Test Probe - (L1)
18. Battery Cover
19. Black Test Lead Input (-)
20. Red Test Lead Input (+)



LCD Description

1. Auto Power OFF (APO) ON Indicator
2. Auto Range Mode
3. Alternating Current (AC A Symbol)
4. Negative Sign (-)
5. Direct Current (DC A Symbol)
6. Measurement Display (Current, % and Frequency)
7. Percent Symbol (Duty Cycle)
8. Hz Symbol (Frequency)
9. Amperes (Amps) Symbol
10. Continuity Symbol
11. Ohms Symbol (Resistance)
12. Voltage Symbol (Volts)
13. Measurement Display (Volts, Continuity, Ohms)
14. Direct Voltage Symbol (DC V)
15. Negative Sign (-)

16. Alternating Voltage Symbol (AC V)
17. Right Phase Indicating Symbol (R)
18. Live Voltage Present Symbol (30V)
19. Left Phase Indicating Symbol (L)
20. Low Battery Indicator
21. DATA HOLD Symbol

Operation

Test Preparation

***NOTE:** Prior to every test, please ensure that the instrument is in perfect condition:

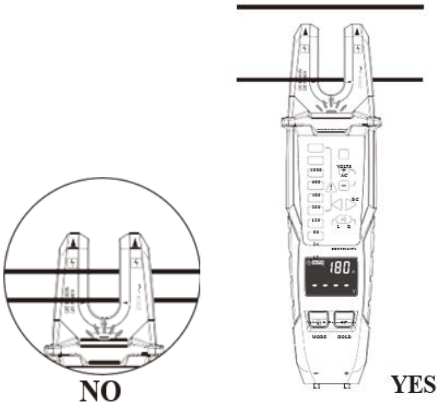
- For example, keep an eye out for a broken housing or leaking batteries.
- Always carry out a function test before using the voltage tester, see below.
- Check that the instrument is functioning properly (for example at a known voltage source) before and after every test.
- If the safety of the user cannot be guaranteed, switch off the instrument and secure it to prevent unintentional usage.

Power ON/OFF

- In the OFF state, press the Power/Mode Button to turn ON
- In the Power ON state, press and hold the Power/Mode Button to shut down/power OFF

AC Current Measurements

- Put a single conductor/wire in between the opening of the open jaw clamp and the LCD will display the current measurement value.
- Place the wire in the correct position of the open jaw current clamp otherwise the measurement will be inaccurate.
- The LCD will display the reading.



Voltage Measurements

Connect both test probes with power source.

The voltage is displayed via LEDs below the measured voltage value will light up, the different indicating signals of the voltage detector (including the ELV limit indication) are not to be used for measuring purposes, the voltage is also shown on the LCD display.

For AC voltage, the “AC” is illuminated; For positive voltage, the “+” is illuminated; For negative voltage, the “-” is illuminated.

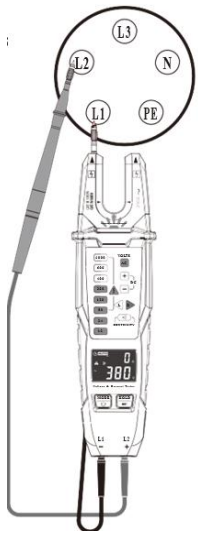
In the case of DC voltage, the polarity of the indicated voltage relates to the voltage tester probe tip.

Once the safety extra-low voltage (50VAC/120VDC) is reached or exceeded, the “ ” is illuminated, in the event of no battery power or main circuit failure.

Once voltage is applied to the measuring instrument, press the HOLD Button, the LCD and LEDs display shows the recorded reading; To delete the recorded value, press the HOLD Button once again.

Phase Sequence, Rotation (Rotary Field) Measurements

NOTE: Effective for voltages greater than 80Vrms.



- The voltage testers are equipped with a double-pole rotary field indicator.
- The rotary phase indication is always active, the symbols “R” or “L” are always displayed, however the rotary direction can only be determined within a thee-phase system, here the instrument indicates the voltage between two external conductors.
- Connect the instrument Red Test Lead (L2+) with the supposed phase L2 and the Black test lead (L1-) with the supposed phase L1, the voltage and the rotary field direction are displayed.
- “R”signifies that the supposed phase L1 is the actual phase L1 and the supposed phase L2 is the actual phase L2, “L” signifies that the supposed phase L1 is the actual phase L2 and the supposed phase L2 is the actual phaseL1.
- The test result table is as follows:

Black Test Pen (L1-)	Red Test Pen (L2+)	Test Results
L1	L2	R
L2	L3	R
L3	L1	R
L1	L3	L
L2	L1	L
L3	L2	L
L1/L2/L3	N/PE	No Result
N/PE	L1/L2/L3	No Result

Resistance Test

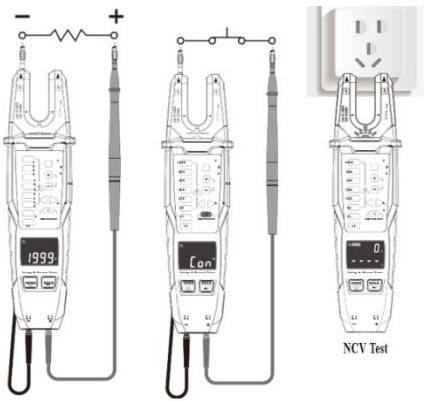
- The Tester measures low ohm resistances between 1Ω and 1999Ω at a resolution of 1Ω.
- **Note** for Resistance test to make sure the UUT (Unit under test) is <u>not live.</u>

Continuity Test

- **Note** for Continuity test to make sure the UUT (Unit under test) is <u>not live.</u>
- The continuity test is only possible when batteries are installed and in good condition, a signal sound is audible for continuity and the LED for continuity LED is illuminated.

NCV Test

- NCV cannot measure voltage, it can only sense whether there is voltage.
- NCV induced voltage is not less than 100V., it can only sense AC voltage.



Cleaning

Prior to cleaning, remove voltage test from all measurement circuits.

If the instruments are dirty after daily usage, it is advisable to clean them by using a damp cloth and a mild household detergent.

Never use acid detergents or dissolvents for cleaning.

After cleaning, do not use the voltage tester for a period of approx.

Battery Replacement

When the battery symbol appears on the screen, replace the battery.

Completely disconnect voltage tester from the measurement circuit.

Remove discharged screw, battery cover and batteries.

Replace by new batteries, two type “AA” by respecting correct polarity.

Close the battery cover and re-screw the screw.

Specifications

	VCT1000
Display	EBTN (2000 count)
AC/DC Voltage Range	6 to 1000V
Accuracy	±3%
Resolution	1V
LED Voltage Indicators	12, 24, 50, 120, 230, 400, 690, 1000V AC/DC
AC Bandwidth	40 to 400Hz
AC Current	200A
ACA Accuracy	±3.5%
AC Bandwidth	45 to 65Hz
Resistance	0 to 1999Ω
Continuity	0 to 400kΩ
Rotary Field Indication	Phase Sequence and Direction
Bandwidth	50/60Hz
NCV Detector	100 to 1000V
Power	(2) AA batteries
Safety Category	CAT IV-600V
Dimensions	9.1 x 2.5 x 1.7" (230 x 64 x 43mm)
Weight	12oz (340.2g)

Warranty

Triplett / Jewell Instruments extends the following warranty to the original purchaser of these goods for use. Triplett warrants to the original purchaser for use that the products sold by it will be free from defects in workmanship and material for a period of (1) one year from the date of purchase. This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way or purchased from unauthorized distributors so as, in our sole judgment, to injure their stability or reliability, or which have been subject to misuse, abuse, misapplication, negligence, accident or which have had the serial numbers altered, defaced, or removed. Accessories, including batteries are not covered by this warranty

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