# USER MANUAL

VT6400 AC VOLTAGE METER



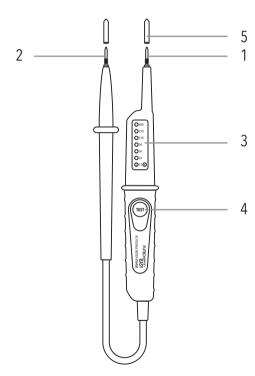
EN ENGLISH

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## **OVERVIEW**



■ DFVICE

- 01 Instrument test probe + (L1)
- 02 Handle test probe (L2)
- 03 LEDs for voltage display
- 04 RCD Test button
- 05

## **SAFETY**

To prevent electrical shock, pay close attention to valid safety and VDE regulations when working with voltages exceeding 120V (60V) DC or 50V (25V) rms AC. Note that the values in brackets apply to limited ranges, such as medicine and agriculture.

Before taking measurements, ensure that both the test leads and the testing instrument are in perfect condition.

When using this instrument, only touch the handles of the probes – avoid touching the probe tips.

Use this instrument only within specified ranges and within low voltage systems up to 400V.

Before use, confirm the perfect function of the instrument (e.g., on a known voltage source).

Discontinue use of the voltage tester if any functions fail or if no functionality is indicated.

Avoid using this instrument under damp conditions.

Optimal display is guaranteed only within a temperature range of  $-10^{\circ}$ C to  $+55^{\circ}$ C, at a relative humidity below 85%.

If the operator's safety cannot be ensured, remove the instrument from service and protect it against further use.

■ The safety can no longer be insured if the instrument

Shows obvious damage.

Does not carry out the desired measurements.

Has been stored for too long under unfavorable conditions.

Has been subjected to mechanical stress during transport.

All relevant statutory regulations must be adhered to when using this instrument.

# **APPROPRIATE USAGE**

This instrument is intended to be used exclusively under conditions and for purposes aligned with its design. It is imperative to adhere to safety references, technical specifications (including environmental conditions), and the stipulations regarding usage in dry environments.

Any modification or alteration to the instrument compromises operational safety. Opening the instrument is permissible only by an authorized service technician, such as for fuse replacement

# **SYMBOLS**

- DC voltage positive potential (DC)
- DC voltage negative potential (DC)
- AC voltage symbol

# USE

#### VOLTAGE TEST

· Connect both test probes with power source.

Upon reaching a voltage exceeding 6V, the voltage tester will activate automatically. The voltage is displayed via LEDs.

The instrument is equipped with an LED row (LEDs for voltage display [03]): ±12, 24, 36, 50,120, 230, 400 for AC and DC.

For AC voltages, both the " $+/\sim$ " and " $-/\sim$ " LEDs will light up.

For DC voltage, the polarity of the voltage displayed refers to the instrument test probe + [01].

For positive voltages "+" LEDs are illuminated For negative voltages "-" LEDs are illuminated

## NOTE

Due to technical reasons the instrument cannot effectuate an automatic switch-on for voltages within the approximate range of 0V to  $\pm 6V$ .

#### LOW IMPDANCE TEST

The following voltage steps (AC or DC) can be indicated:  $\pm 12, 24, 36, 50, 120, 230, 400$  AC/DC.

The duration of the test with a lower internal resistance of the device (load test) depends on the value of the voltage to be measured. To prevent excessive warming of the voltage tester, it is equipped wit a thermal protection.

## RCD TEST

An RCD test on a voltage tester is a procedure to check the proper functioning of a residual current device. This test simulates the operation of the RCD by introducing a small leakage current and verifying if the RCD promptly disconnects the circuit. This is essential to ensure that the RCD effectively responds to current leakage, minimizing the risk of electric shocks.

Rated current: 30mA Operating Voltage: 220V AC

- Connect the tester to an electrical outlet or point that is safeguarded by the RCD.
- Once connected, introduce the test current, and observe the results.

#### ■ MAINTANCE

When using voltage testers in compliance with the instruction manual, no particular maintenance is required. If functional errors occur during normal operating, contact your dealer.

#### CLEANING

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

If the device is dirty after daily usage, it is recommended to clean them with a damp cloth and a mild household detergent. Never use acid-based detergents or dissolvents for cleaning.

After cleaning, do not use the voltage tester for a period of approx. 5 hours.

Potential misprints are reserved. Images used are not strict. All features, functionality and other product specifications are subject to change without notice or obligation.

# **TECHNICAL SPECIFICATIONS**

MODEL	VT6400
LED voltage range	12, 24, 36, 50, 120, 230, 400V AC/DC
LED resolution	±12, 24, 36, 50, 120, 230, 400V AC/DC
Tolerances	-30% to 0% of reading
Voltage detection	Automatic
Polarity detection	Full range
Range detection	Automatic
Response time	<0.1s LED
ACV Frequency range	50/60Hz
Internal basic load	Approx. 10W at 400V
Peak current	1s < 0.2A/ls 5s < 3.5mA
Operating time	ED =30s
Recovery time	10 min
LED on	About 6V AC/DC
Low impedance test	✓
Voltage range	12 400 AC/DC
Low impedance	<25kΩ
Operation time	5s <230V AC/DC 3s <400V AC/DC
Overvoltage protection	400V AC/DC <5s
Temperature range	−10°C up to +55°C
Humidity	max. 85% relative humidity
Overvoltage class	CAT III - 400V

# C E

Futech (Belgium) declares under its own responsibility that this device:

- VT6400 AC Voltage

is in conformity with the standards

- EN 61326-1:2013

- EN 61326-2-2:2013

Under EMC Directive

2014/30/EU

Lier, Belgium, October 12, 2023 Patrick Waûters



# **USER MANUAL**

# other languages:







