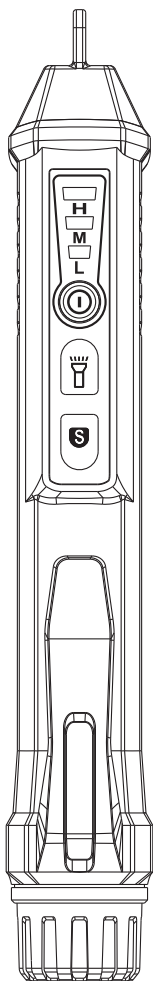




EKF



TECHNICAL MANUAL

Non-contact voltage
tester 1AC EKF Expert

1 DESCRIPTION

The non-contact voltage tester 1AC EKF Expert (hereinafter referred to as the tester or the device) is designed to detect AC voltage in electrical circuits, and phase and neutral wires.

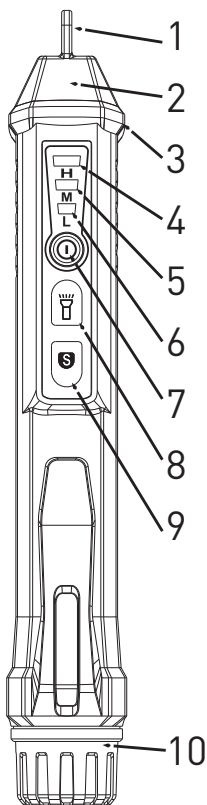
2 TECHNICAL DATA

The main technical data are listed in Table 1.

Table 1

Characteristics		Value
AC voltage detection range	High sensitivity («S» LED is ON)	~ 12 - 1000 V
	Low sensitivity («S» LED is OFF)	~ 48 - 1000 V
Frequency, Hz		50; 60
Alarm		Light and buzzer
Flashlight		Available
Auto power off		Available
Low battery indicator		Available
Phase and neutral wire detection		Based on signal strength, strong signal means live wire
Signal strength indication		Sound shifting from slow to fast LED to indicate low, medium or high sensitivity
Safety category complied with IEC 61010-1		CAT III 1000 V
Operating temperature, °C		0 ... 40
Max. relative humidity, %		80
Storage temperature, °C		-10 ... 50
Altitude above sea level, m		<2000
Power supply		2 x 1,5V batteries AAA
Dimensions, mm		156x20x20
Weight (excl. batteries), g		45

3 VOLTAGE TESTER ELEMENTS




- 1) NCV-sensor probe
- 2) Voltage LED
- 3) Flashlight
- 4) High-strength signal LED (H)
- 5) Medium-strength signal LED (M)
- 6) Low-strength signal LED (L)
- 7) Power LED button
- 8) Flashlight button
- 9) Sensitivity range LED button
- 10) Battery cover

4 DELIVERY SCOPE

Delivery scope includes as follows:

- Non-contact voltage tester - 1 pc.
- 1,5V battery AAA - 2 pcs.
- Technical manual – 1 pc.

5 SAFETY REQUIREMENTS

 **WARNING!** To avoid the risk of electric shock or injury:

- Follow the instructions herein carefully! Failure to follow the instructions hereof may result in the device malfunctioning.
- Do not use the voltage tester if the power LED is off.
- To ensure the tester proper functioning, test it on a normally live circuit before use.
- No sound or light indication during the test does not mean the circuit is not live! Sound and light signals actuate under sufficient strength of the electrostatic field. If the field voltage is too low, the tester may fail to detect it. The voltage detection is affected by the factors as follows: cable insulation thickness, distance to the voltage source, socket outlet design, etc.
- Apply the device only within the specified range. Take extra care when testing circuits with voltage over 30 V.
- Do not operate tester with visual mechanical damage! Before use, make sure the probe is not cracked or broken.
- For maintenance, follow national safety rules for operation of electrical Installations.

6 VOLTAGE TESTER OPERATION

Tester power ON/OFF

- 1) Power ON: press and hold the power button for 1 second – the power button lights up and the device switches to the test mode.
- 2) Power OFF: press and hold the power button for 1 second – the power LED and the device switch off.

Flashlight ON/OFF

Flashlight ON: press the flashlight button.

Flashlight OFF: press the flashlight button. If the flashlight is not switched off manually, it switches off automatically in 5 minutes.

Selecting the AC voltage detection (sensitivity) range

The default range is approx. 48-1000 V.

Press the «S» (range) button to switch the sensitivity range. The range LED lights up and the device can detect the AC voltage range of 12-1000 V.

Press the range button again – the indicator turns off and the tester detects the voltage range of 48-1000V.

Notes

- High sensitivity: 12–1000 V – «S» LED is ON.
- Low sensitivity: 48–1000 V – «S» LED is OFF.

AC voltage tester

The non-contact voltage tester has a probe fitted to a live wire. When AC voltage is detected on the wire, the signal strength LED starts flashing and the correspondent LED (high, medium, low) indicates the signal strength. Moreover, when an AC signal is found, the device beeps differently, from slow to fast. The Low-strength signal LED lights up when a low strength AC voltage is detected. The Medium- and Low-strength signal LEDs light up when a higher strength signal is detected. When the highest strength signal is detected, all three signal strength LEDs light up.

Detection of phase and neutral wires

- 1) Under normal conditions, phase and neutral conductors can be identified by the strength of signals detected.
- 2) To identify phase and neutral wires, first, try to separate them from each other as far as possible. Touch the probe to each wire. To test the socket outlet, touch the probe to the socket. If the wire is live, the sound and light signal will be strong. If the wire is neutral, the signal will be weak or absent.

Auto power off


If not operated for 5 minutes, the device switches off automatically.

Low battery indicator

If the available battery power is less than 2,6 V – the power LED flashes 3 times, beeps and switches off automatically. Replace the battery.

Battery replacement

- 1) Unscrew the battery cover
- 2) Remove the failed battery and replace it with a new one. Observe polarity of the battery.
- 3) Screw the cover back on.

 **WARNING!** To avoid the risk of electric shock, do not use the device without the battery cover closed.

7 TRANSPORTATION AND STORAGE

The NCV testers can be transported by any means of enclosed transport that ensures protection of packed products from mechanical and atmospheric impacts. The NCV testers shall be stored in the original package indoors at the ambient temperature from -10°C to $+40^{\circ}\text{C}$ and relative humidity of max. 80%.

8 DISPOSAL

Life-expired and failed products shall be disposed of in compliance with the national and local laws and regulations in force.

To dispose of the product, send it to an authorized company for recycling in compliance with the national and local laws and regulations in force.

DO NOT dispose of used batteries with household waste! Please take failed batteries to the designated collection points.

9 MANUFACTURER'S WARRANTY

The manufacturer guarantees the non-contact voltage tester 1AC EKF Expert complies with the declared characteristics, provided that the consumer follows the operation, transportation and storage conditions.

Warranty period:

12 months from the date of sale specified in the sales receipt.

Shelf life of the NCV tester:

2 years from the date of manufacture specified on the product package or housing.

Shelf life of the battery kit:

12 months from the date of manufacture specified on the product package or housing.

Service life: 10 years.

Importer and EKF trademark service representative:

EKF ELECTRICAL SOLUTION – FZCO, Dubai Silicon Oasis, DDP, Building A2, Dubai, United Arab Emirates.

Importer and EKF trademark service representative on the territory of the Russian Federation:

000 «Electroresheniya», Otravnaya st., 2b bld. 9, 5th floor, 127273, Moscow, Russia. Tel.: +7 (495) 788-88-15.

Importer and EKF trademark service representative on the territory of the Republic of Kazakhstan:

TOO «Energoresheniya Kazakhstan», Kazakhstan, Almaty, Bostandyk district, Turgut Ozal st., 247, apt 4.

10 CERTIFICATE OF ACCEPTANCE

The non-contact voltage tester 1AC EKF Expert has been approved for operation.

Date of manufacture: for information, refer to the product package.

Quality control stamp



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