

# **FNIRSI DSO-TC3 SigGen 3-in-1 Transistor Tester Handheld Digital Oscilloscope**



Model: DSO-TC3

Manufacturer: FNIRSI

EAN: 5905156102316

Product Code: 875540

## **R1,715**

### **FNIRSI DSO-TC3 3-in-1 SigGen Handheld Digital Oscilloscope and Transistor Tester**

The FNIRSI DSO-TC3 is a handheld digital oscilloscope, transistor tester, and signal generator all in one device, designed for quick diagnostics, maintenance, and field work. It features an oscilloscope with a sampling rate of 10 MS/s and a bandwidth of 500 kHz, a smart electronic component tester, and a signal generator with 6 waveform types. All of this is housed in a compact, rugged enclosure measuring 79×103×31 mm, featuring a large color screen and a built-in 1500 mAh battery.

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## **A clear screen that won't let you down in the field**

The 2.4-inch Full Color HD TFT display ensures excellent visibility even in bright environments and direct sunlight. The color display of waveforms, component symbols, and parameters makes results immediately understandable—no squinting or guesswork required.

## **Digital Oscilloscope—Fast and Precise Measurements**

Oscilloscope mode enables real-time signal analysis with a sampling rate of 10 MS/s, a bandwidth of 500 kHz, and a maximum input voltage of up to 400 V (when using a 10:1 probe). The voltage range with a 1:1 probe is 80 Vpp ( $\pm 40$  V), and with a 10:1 probe, it is as high as 800 Vpp ( $\pm 400$  V). Vertical sensitivity is adjustable from 10 mV to 10 V, and the time base ranges from 1  $\mu$ s to 10 s. Automatic trigger mode, normal and single-shot modes, and the AUTO button allow you to instantly capture a stable waveform—even without experience operating oscilloscopes. The device displays automatic measurements: maximum, minimum, average, RMS, peak-to-peak, frequency, period, and duty cycle. A built-in calibrated 1 kHz square wave facilitates probe compensation.

## **Intelligent Transistor and Passive Component Tester**

The FNIRSI DSO-TC3 automatically recognizes and measures NPN and PNP transistors, N- and P-channel MOSFETs (including IGBTs), JFETs, thyristors (SCRs), triacs, diodes, Zener diodes (up to 32 V), diode pairs, as well as resistors (0.01  $\Omega$  – 50 M $\Omega$ ), capacitors (25 pF – 100 mF), and inductors (10  $\mu$ H – 1000 mH). The device automatically detects component terminals and displays their parameters, which significantly speeds up diagnostics and eliminates the risk of errors. The tester also measures parameters such as hFE, base-emitter voltage, collector current, gate capacitance, and drain resistance.

## **Signal Generator - 6 waveforms for testing and simulation**

The built-in DDS generator allows for the generation of sine waves, square waves, pulses, triangle waves, ramps, and DC signals. Frequency adjustable from 1 Hz to 100 kHz, amplitude from 0 to 3.3 V, and duty cycle from 0 to 100%. It's the ideal solution for testing circuits, learning electronics, simulating signals, and quickly verifying circuit operation—without the need to connect additional equipment.

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## **Toolbox: Additional Features for Demanding Users**

The Tools mode offers a range of functions that go beyond basic measurements. The device allows for circuit continuity testing, input voltage measurement in the range of 0–40 V, PWM output, Zener diode testing (0–32 V), temperature readings from DS18B20 sensors (0–85°C), and temperature and humidity readings from DHT11 sensors (0–60°C, 5–95%). Additionally, the built-in infrared decoder automatically analyzes NEC protocol codes, displaying the user code and data code along with the IR signal waveform. A device calibration function is also available.

## **One click and you're done—maximum convenience**

The device's operation is designed for speed. One-button mode switching, a logical menu, a HOLD button to freeze the waveform, and intuitive D-pad control mean that measuring, testing, or generating a signal takes literally a moment. Intelligent overvoltage protection safeguards the device from accidental damage. It's a tool that works with you, not against you.

## **Foldable stand—hands-free operation**

The integrated, foldable stand, adjustable up to 90°, allows you to position the device securely on a table or service bench. Its compact design makes the device small and easy to carry. This allows you to work with both hands while keeping a constant view of the results—without the need for makeshift supports or the risk of the device tipping over.

## **Rugged housing, built for real-world conditions**

The durable ABS plastic housing provides enhanced resistance to drops. The non-slip design and highly responsive touch buttons ensure that the FNIRSI DSO-TC3 withstands heavy use. This device is designed for use in workshops, laboratories, and in the field—ready for the daily challenges of repairs, diagnostics, and electronics education.

## **High-Capacity Battery and Modern Charging**

The built-in HQ 1500 mAh lithium-polymer battery provides up to 4 hours of operation on a single charge—enough for 240 minutes of intensive diagnostics. The USB Type-C (5 V) port allows for fast

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and convenient charging from a power bank, charger, or computer, making the device fully portable, eco-friendly, and always ready for use.

Included:

- FNIRSI DSO-TC3 oscilloscope
- Measuring probe
- 3 test clips
- USB-C cable
- User manual

|                            |                                 |
|----------------------------|---------------------------------|
| Manufacturer               | FNIRSI                          |
| Model                      | DSO-TC3                         |
| Display                    | 2.4-inch Full Color HD TFT      |
| Dimensions                 | 79 × 103 × 31 mm                |
| Battery                    | 1,500 mAh 3.7 V lithium-polymer |
| Operating time             | up to 4 hours                   |
| Charging                   | USB Type-C, 5 V / 1 A (5 W)     |
| Stand                      | foldable, adjustable up to 90°  |
| Housing Material           | ABS                             |
| Sampling Rate              | 10 MS/s                         |
| Bandwidth                  | 500 kHz                         |
| Input Impedance            | 1 MΩ                            |
| Coupling                   | AC / DC                         |
| Voltage Range (1:1 Probe)  | 80 Vpp (±40 V)                  |
| Voltage range (10:1 probe) | 800 Vpp (±400 V)                |
| Vertical sensitivity       | 10 mV – 10 V                    |
| Time base                  | 1 μs – 10 s                     |
| Trigger modes              | Auto / Normal / Single          |

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|                                              |                                                            |
|----------------------------------------------|------------------------------------------------------------|
| <b>Trigger edge</b>                          | Rising / Falling                                           |
| <b>Waveform hold</b>                         | Yes                                                        |
| <b>Automatic measurements</b>                | Vmax, Vmin, Vave, Vrms, Vpp, frequency, period, duty cycle |
| <b>Calibration signal</b>                    | 1 kHz square wave                                          |
| <b>Transistors</b>                           | NPN, PNP ( $\beta$ 10–600)                                 |
| <b>MOSFET</b>                                | N-channel, P-channel, IGBT                                 |
| <b>JFET</b>                                  | yes                                                        |
| <b>Thyristors</b>                            | SCR, TRIAC (trigger voltage 5 V, gate current 6 mA)        |
| <b>Diodes</b>                                | standard, dual (forward voltage 4.5 V)                     |
| <b>Zener diodes</b>                          | 0.01–4.5 V (sockets 1-2-3) / 0.01–32 V (sockets K-A-A)     |
| <b>Capacitors</b>                            | 25 pF – 100 mF                                             |
| <b>Resistors</b>                             | 0.01 $\Omega$ – 50 M $\Omega$                              |
| <b>Inductors</b>                             | 10 $\mu$ H – 1000 mH                                       |
| <b>Batteries</b>                             | 0.1–4.5 V (voltage and polarity measurement)               |
| <b>Waveforms</b>                             | sine, square, pulse, triangle, ramp, DC                    |
| <b>Frequency range</b>                       | 1 Hz – 100 kHz                                             |
| <b>Amplitude</b>                             | 0–3.3 V                                                    |
| <b>Duty cycle</b>                            | 0–100%                                                     |
| <b>Circuit continuity test</b>               | Yes                                                        |
| <b>Input voltage measurement</b>             | 0–40 V                                                     |
| <b>PWM output</b>                            | Yes                                                        |
| <b>DS18B20 temperature sensor</b>            | 0–85°C                                                     |
| <b>DHT11 temperature and humidity sensor</b> | 0–60°C / 5–95%                                             |
| <b>Infrared decoder</b>                      | NEC protocol (user code and data)                          |

GPSR Link: [https://psr-assets.innpro.pl/car\\_accessories/sg\\_car\\_accessories\\_diagnostic\\_tools.pdf](https://psr-assets.innpro.pl/car_accessories/sg_car_accessories_diagnostic_tools.pdf), Net weight: 138, Box length: 13,00, Box width: 11,50, Box height: 7,00, Gross weight: 390, Last delivery: 16.09.2026, PPWR: <https://ppwr.innpro.pl/fnirsi>

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