

Precision Digital Multimeter

Order no. **EL6.D** and **EL6.DUI**

5¾-digit precision digital multimeter

The basic version of the digital multimeter can already measure currents up to 40 A and voltages up to 1000 V. An optional simultaneous recording of current and voltage AC/DC saves the user a second digital multimeter. Optionally available measuring amplifiers allow high-current measurements up to 125 A, which considerably extends the range of application of the unit. An integrated diode test, capacitance measurements as well as temperature and frequency measurements and the graphic display of the current and stored measured values, make the multimeter an all-rounder.

The graph can be zoomed by 2-finger gesture. The use of new TRMS converter components with significantly improved linearity and bandwidth achieves outstanding measurement accuracy with a crest factor of 5.

The new 5¾-digit digital multimeter thus enables the acquisition of non-sinusoidal signals with a previously unattained level of accuracy. Span measurements with an accuracy of $\pm 0.08\%$ and a resolution of $1\ \mu\text{V}$ represent the *elneos six*'s claim to highest accuracy. A fast 24-bit converter guarantees the outstanding resolution.



Dual measurement: The digital multimeter in fullscreen view with dual measurement, power display and simultaneous graphic display of measured values incl. zoom function.



Limiter: Each measurand can be monitored by definable limits using tones and digital outputs. The digital outputs can be used directly for example to indicate different states by means of the erfi RGB indication light.



Data logger: The recording possibilities are especially valuable in combination with the new 8-inch display. Various gestures can be used to zoom curves quickly and dynamically in all directions.



Two digital multimeters in the half-screen: All controls of both digital multimeters can be operated simultaneously and independently of each other. The optional dual measurement allows each digital multimeter to measure current and voltage in the AC and DC range simultaneously.



Quattro screen: The unit remains operable in each of the split screens. The graphical display of measured values can also be used and operated in parallel with other devices such as DC power supplies or AC sources in the smallest screen (Quattro screen).

Technical data and features (order data preferred types p. 88-89 | device p. 98)

Voltage measurement

DC: 0 to 1000V; $1\ \mu\text{V}$; $\pm 0,08\%$ + 5 dgt.
 AC: 0 to 750V (peak 1060 V);
 $1\ \mu\text{V}$; $\pm 0,5\%$ +10 dgt., Bandwidth 20 Hz bis 2 kHz

Current measurement

DC: up to 32 A continuous (to 40 A for short periods), 100 nA; $\pm 0,15\%$ + 5 dgt.
 AC: bis 32 A continuous (to 40 A for short periods), 100 nA; $\pm 0,8\%$ +10 dgt., Bandw. 20 Hz to 2 kHz
 Optional high current measurement up to 55 A or 125 A. (see order number on p. 98)

Resistance measurement

0 up to 40 M Ω , 1 m Ω ; $\pm 0,5\%$ +10 dgt.

Capacity measurement

0 - 400 nF / 4 / 40 / 400 / 4000 μF ;
 $1\ \text{pF}$; $\pm 1,0\%$ + 10 dgt.

Diode test: display of forward voltage

Continuity test: acoustic support

Display: 5¾-digit, display range 400,000 dots

Digital output

Within or in case of exceeding or falling below the limits, any output active high / low can be triggered on the display and by remote control.

Input

Start of measurement by trigger pulse of the input.

Optional: Simultaneous acquisition of current and voltage (AC/DC) (EL6.DUI).

Frequency measurement

0 to 100 kHz, 1 Hz; $\pm 0,1\%$ +10 dgt
 High resolution: lower measuring speed

Temperature measurement

-200 to +600 $^{\circ}\text{C}$, dep. on sensor, resolution 0,1 $^{\circ}\text{C}$
Accuracy: Class B acc. to EN 60751; Pt 100 sensor or Pt 1000 sensor can be connected (autom. detection)

Measuring speed

DC: Fast (10 Hz), Middle (5 Hz), Slow (1 Hz)
 AC: Slow (1 Hz)

True RMS function (true effective value measurement)
 TRMS converter with optimised linearity and bandwidth

Crest factor: 5 for non-sinusoidal signals for error-optimised measurements with non-sinusoidal signals.

Measured value display

Graphical and tabular display of up to 5 measurement curves or value series simultaneously. Graphs can be operated with zoom and tables with scroll function.

High-speed data logger

5-channel operation for simultaneous synchronous storage of up to 100,000 measured values per channel (max. 500,000 measured values); the high-speed mode enables measured value acquisition with up to 100 Hz.

For all measured variables: AUTO-RANGE

Option high-current measurement: current measurements up to 55 A or 125 A by means of measuring amplifier (EL6.ZG007.PDMM55 or EL6.ZG007.PDMM125).