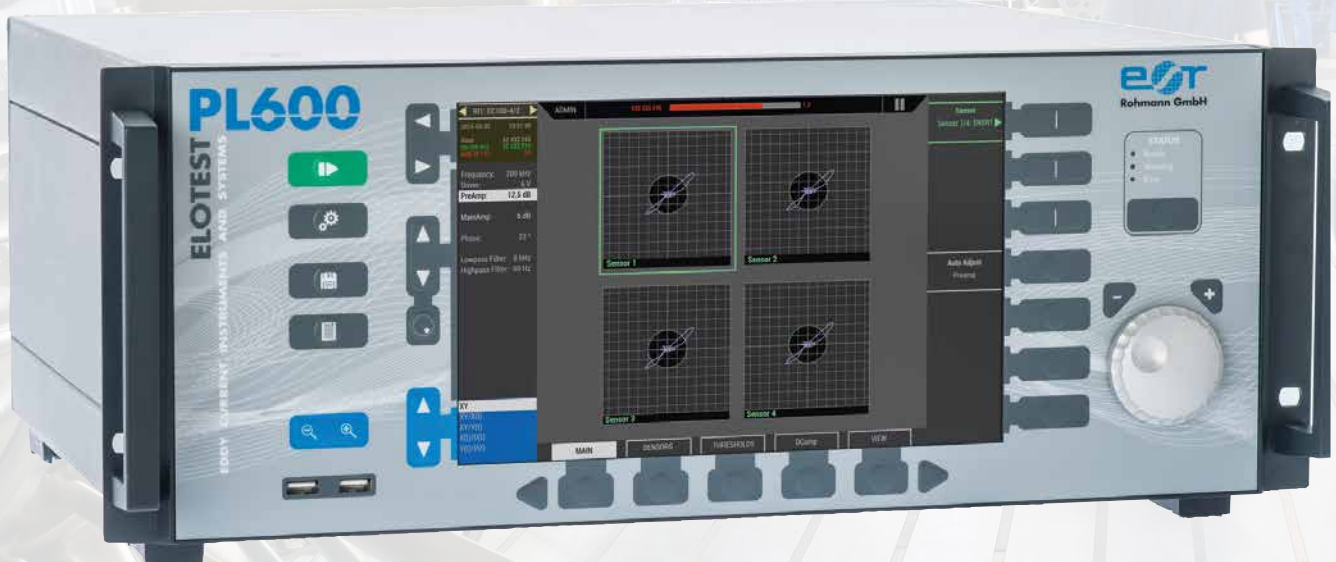


# ELOTEST PL600

Pioneering eddy current testing



The ELOTEST PL600 is a digital eddy current test instrument which leaves no wish unfulfilled. A flexible software system allows components to be inserted which are customised for each application, so that the operation can be carried out quickly and reliably. A licensing system allows you to match the performance of the device to the task and makes it a safe investment at an affordable entry price. A solid concept for replacement parts and service reduces operating and maintenance costs and enables maximum availability.

- ▶ Maximum stability with unsurpassed signal purity for best results with classical eddy current and harmonic analysis
- ▶ Suitable for all types of eddy current testing: Crack, heat treatment, material mix-up and grinding burn testing
- ▶ Maximum test reliability through comprehensive system and sensor monitoring
- ▶ Application-specific user interfaces for simplest operation
- ▶ Full integration through extensive I/O functions with fieldbus connection
- ▶ Modular design allows flexible expansion with easy maintenance
- ▶ Frequency range from 10 Hz to 12 MHz

### Basic Unit

- ▶ 16 slots for functional modules
- ▶ Available module types:
- ▶ Test channel module CHM600 (one included in the basic price)
- ▶ Fieldbus I/O module with fast quadrature inputs (optional)
- ▶ 24 V I/O module with fast quadrature inputs (optional)
- ▶ 8-channel analogue I/O module (option)
- ▶ Many of the plug-in cards for the ELOTEST PL500 are compatible

### Screen shot

- ▶ Widescreen colour TFT display in IPS technology, 1280 x 800 pixels, 256 mm (10.1") diagonal
- ▶ HDMI output for external Full HD monitors (via USB also with touch screen operation)

### Test channel module CHM600

#### Test frequency range

- ▶ 10 Hz - 12 MHz
- ▶ Driver output +/- 10 Vs; max 1000 mA
- ▶ Measurement and control of the sensor current
- ▶ Voltage/current controlled operation
- ▶ Continuous monitoring of transmitter coils for wire breakage and interturn short circuiting

#### Sensor input stages

- ▶ Two input channels per module
- ▶ Differential inputs with 90 dB common mode rejection
- ▶ Continuous monitoring of receiver coils for wire breakage
- ▶ Low-noise, digitally adjustable preamplifier with multiplex capability
- ▶ 2 x 18-bit ADC with 5 MSps conversion rate
- ▶ Fully digital demodulation and FPGA-based signal processing at 250 kSps Sample Rate

#### Digital signal processing

- ▶ High-performance signal processing chain in FPGA with
  - ▶ Digital sine wave generator 10 Hz - 12 MHz
  - ▶ Two independent levels of digital demodulation
  - ▶ Digital signal processing chain with
    - ▶ Distance compensation without auxiliary channel (option „Advanced“)
    - ▶ Signal Filter HP/LP independently adjustable 1 Hz - 100 kHz in 29 logarithmic increments per decade
    - ▶ Phase adjustment 0-359.5° in 0.5° increments
    - ▶ Various real time evaluation thresholds depending on application and licensing

#### Sensor connection

- ▶ 26-pin HD sub connector for connection of all sensor types, compatible with the ELOTEST PL500 series
- ▶ Connection for active sensor arrays with up to 64 sensors per channel
- ▶ Connection for external sensor multiplexer for up to 64 sensors per channel
- ▶ Intelligent TriggerAll input for processing a wide variety of trigger signals

### Integrated I/O processor

- ▶ Central, high-speed I/O processor integrated in the basic unit
- ▶ Shift register, end suppression, FIFO functionality, configurable I/O functions
- ▶ Access to the outside world via I/O boards (fieldbuses, 24V-I/O) or via programmable channel-related I/O ports

### Possible basic functions per channel that require a basic license:

- ▶ 1-frequency defect detection
- ▶ 1-Frequency FastSort
- ▶ 1-frequency Q-Sort
- ▶ 1-frequency MeanSort

### Possible additional functions per channel for which an Advanced license is required:

- ▶ Harmonic analysis 3rd, 5th and 7th harmonics
- ▶ Crack testing with distance compensation
- ▶ Multi-frequency defect detection
- ▶ 4-frequency FastSort
- ▶ Multi-frequency Q-Sort
- ▶ Multi-frequency MeanSort
- ▶ Internal sensor Multiplex (2 sensors)
- ▶ External Sensor Multiplex (up to 64 sensors)
- ▶ Parameter Multiplex (up to 64 parameter sets)
- ▶ frequency mix function
- ▶ Tolerance band Gate

### For an extra charge - available I/O modules:

- ▶ I/O-600, Profibus module
- ▶ I/O-602, Universal I/O Module
- ▶ I/O-604, EtherCat module
- ▶ I/O-605, Devicenet module
- ▶ I/O-606, Profinet module
- ▶ I/O-608, Analog I/O Module
- ▶ I/O-609, RS422 module

### Remote control capability/ PC software

- ▶ Remote control via Full HD touch panel with virtual front panel (up to 100 m)
- ▶ Remote control and remote maintenance via TCP/IP and supplied PC client (Windows, Linux, MAC)
- ▶ Remote control via customised software with an open TCP/IP protocol

### General instrument information:

Housing data:	Dimensions:	Weight:
Housing	Width: 448.8 mm (19")	10.5 kg
Protection class IP30	Depth: 375 mm + 35mm	(basic instrument with test channel)
	Height: 177 mm (4HE)	