PRÜFTECHNIK
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EDDYCHEK 610

The pioneering eddy current testing system for reliable quality and process control

- **Tubes, bars & wire – all applications**
- **Graphical user interface**
- **Fully digital signal processing**
- **Modular structure – expandable**
- **Up to 10 channels at 6 test positions**

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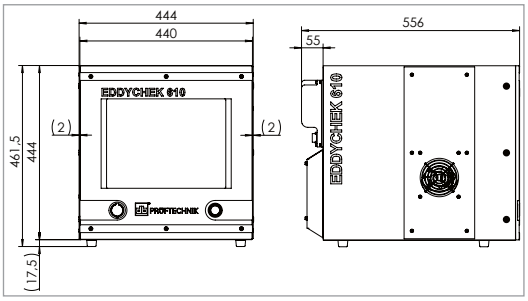
Reliable semi-finished product testing

EDDYCHEK 610 – Technical data

General	
	Reliable, economical, powerful eddy current testing system for use in production with fully digital signal processing: each channel with its own oscillator and its own patented* digital demodulator. (*US patent 8,841,902)
Applications	
Field of application	Final testing and quality assurance in the production of tubing, pipe, bar, wire, strip, cable sheathing, extruded sections (roll forming, tube mills, drawing machines)
	Process control (e.g. cut lengths and coil-to-coil)
	Any conductive material, e.g. nonferrous, ferrous metals (ferritic austenitic, duplex)
Testing modes and speeds	Inline: Continuous production with cut-off (e.g. welding lines) max. 20 m/s
	Wire: Continuous production with/without cut-off (e.g. drawing lines, hot rolling mills, level winder) max. 250 m/s
	Offline: Testing of cut lengths, max. 10 pieces per sec.
	Speed measurement with encoder up to 40 kHz
	Speed measurement with light barrier
Marker resolution	1 mm at v < 1 m/s
	10 mm at v < 10 m/s
	100 mm at v < 100 m/s
Testing procedure	Multichannel, multifrequency testing (differential system)
	Bandwidth approx. 15 kHz
	Up to 10 channels at up to 6 testing positions: combination of rotating, differential and absolute channels
Parameters	
Frequency and filtering	Test frequencies: 175 discrete frequencies 1 kHz – 1 MHz
	Filter frequencies: HP 0.008 Hz – 20 kHz; LP 0.015 Hz – 40 kHz
	Each channel with its own oscillator and its own patented* digital demodulator (no multiplexing!)
	Speed-coupled, automatic high-pass filter (optional)
Phase rotation	0 – 359° in steps of 1°
Gain	-12 dB to 120 dB in 0.1 dB steps for absolute, differential and rotating channels
Coil monitoring	Monitoring of the transmitter and receiver coils
	Automatic reading of the coil information when using Smart Sensors
End signal suppression	Control of testing signals at start/end of cut lengths
Data processing	
Signal processing and defect evaluation	Signal evaluation with various mask types and 3 alarm thresholds
	– Circular masks
	– Mirrored sector masks, 2 pairs/channel with remaining sector
	– Y-mask
	1 or 2 XY displays with any channel selection
	1 or 2 RT displays with any channel selection. The signal can be stopped, zoomed and scrolled back to earlier test pieces without data loss.
	Classification of the test pieces in up to 3 sorting classes according to flaw type, flaw density and number of flaws
Test results	Compilation on 2 levels: per job and part/batch
	Saving of job-related test results as an XML file (single alarms, RT values, XY data)
Interface to an SQL database (optional)	For storing line parameters, test parameters and test results

Software	
Signal evaluation	Multitasking RTOS, non-volatile
User interface	Touchscreen operation using icons
	Archiving of test parameters for later retrieval
	Sample test mode: Testing of individual lengths for quality control checks and parameter verification
	Graphical user interface and context-sensitive help in local language
	Password-protected supervisor level for adjusting basic test parameters and locking access to parameters with user-level rights
Reporting software	EDDYTREND II: Viewing and analyzing of test signals; identifying quality trends
Data transfer	Standard LAN: Ethernet (TCP/IP), 1 Gbit/s
Hardware	
Screen and housing	15" color display, 1024 x 768 pixels
	Environmental protection IP 52 against dust and dripping water
	Shielded housing and internal power supply filter to prevent interference according to VDE 0843, EN 50081-2 (CE), IEC 801.1-4, EN 50082-2
	Standards fulfilled according to EMC: DIN EN 61326-1; VDE 0843-20-1:2013-07; (IEC 61326-1:2012); EN 61326-1:2013; DIN EN 61326-2-2; VDE 0843-20-2-2:2013-08; (IEC 61326-2-2:2012); EN 61326-2-2:2013
	Dimensions (HxWxD): 461.5 x 444 x 556 mm (18.2" x 17.5" x 21.9"), 10 height units
	Weight: Max. 40 kg (88 lb), depending on number of channels
Input	Touchscreen (operable with gloves)
	External keyboard and mouse (optional) via USB
Storage	SSD 128 GB
Operating conditions	Temperature range: -10 °C – 40 °C (14 °F – 113 °F)
	Internal heat exchanger with temperature-controlled fans
Input and output interfaces	
	16 inputs, potential-free 24 V
	16 outputs, potential-free 24 V, 1 A/output, 2 A in total per system
	Max. 10 delayed or undelayed potential-free marker outputs; max. 3 sorting outputs
	1 system error output
	1 line encoder input, 2-track
	3 USB 2.0 connectors
	1 HDMI interface and 1 VGA interface for external monitor (both optional)
	Network: Ethernet (TCP/IP)
Power supply	
	100 – 240 V; 47 – 63 Hz
	Power consumption: Max. 400 VA
Dimensions	



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