Viva: Portable Grade Sorting Solution

Customized Fixture-Based Sensors



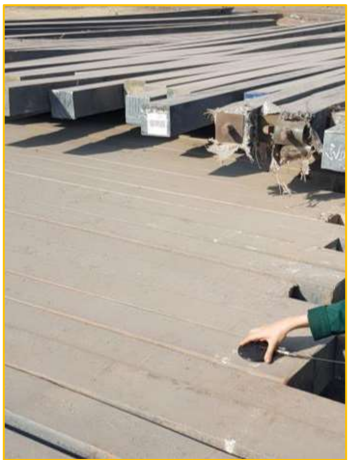


Viva is a compact, portable eddy current device engineered for on-site grade verification and microstructural evaluation of critical components such as billets, bolts, Tubes, shafts, and machined parts. Built for industrial use, Viva enables operators to quickly check material and assess heat treatment conditions without destructive testing. Viva empowers manufacturers with a reliable, real-time solution for avoiding grade mix-ups and ensuring material integrity—right at the point of use.

In addition to standard probes, EDDYWISE offers a variety of customized sensors designed for different part geometries, including:

- *T-Probes for inspecting fasteners and automotive components*
- *Pancake Probes for surface-level alloy identification*
- *Customized Fixture-Based Sensors for stable, repeatable measurements on complex or cylindrical parts*

Crankshaft Inspection



Square Billet Inspection

Key Features:

- *Accurate material identification for both ferrous (FE) and non-ferrous (NFE) alloys*
- *Can be customized for heat treatment evaluation, including hardness variation and case depth trends*
- *Portable, rugged, and ideal for warehouse checks, quality audits, and raw material checks*

Viva Specifications

Eddy Current Specifications

Sensor Types: Absolute and Differential in either bridge or reflection configuration. The instrument is fully compatible with EDDYWISE probes.
Sensor Connectors: *12 Pins LEMO, 1 pin LEMO (Absolute)*
Frequency Range: *10 Hz to 10 MHz*
Gain: *0 dB to 90 dB in 0.1 or 1 dB increment*
Rotation: *0° to 359.9° in 0.1° or 1° increment*
Sweep: *Variable from 0.005 s to 10 s per division*
Filters:
- *Low-pass: 0 Hz to 1000 Hz*
- *High-pass: off or 2 Hz to 1000 Hz*
- *Continuous null (Low-Freq. HP filter): 0.2 Hz, 0.5 Hz, 1.0 Hz*

Probe Drive: *HIGH (20 V) into 100 Ω.*
Display Erase: *0.1 s to 60 s*
Available Alarm Types: *3 simultaneous alarms, choices include Box (Rectangle), ellipse, sector (pie), sweep (time-based), CONDUCTICITY (per order), and COATING THICKNESS (per order)*
A/D Resolution: *16 Bits*
Number of Channels: *One Channel (1 Differential or 1 Absolute)*
Signal Resolution: *10ksps*

Grade Sorting Applications

Fastener inspection, Automative components, heat treatment validation, warehouse and dispatch control, maintenance and repair operation (MRO), Incoming material Inspection

Hardness, Conductivity, and Coating Thickness Measurement

Hardness: *Dependent on conductivity range, probe frequency and range of calibration*
Digital Conductivity: *0.9% to 110% IACS or 0.5 to 64 MS/m. Accuracies are dependent on conductivity range, probe frequency, and range of calibration.*
Nonconductive Coating Thickness: *Both ferrous and non-ferrous base material. Accuracies are dependent on conductivity range, probe frequency, and range of calibration.*

Scanners

Scanner Compatibility: 120 rpm to 3000 rpm

Probe Monitoring

Break and Disconnect Monitoring: Yes
Short Circuit Monitoring: Yes
Smart Sensor: Yes

Hardware

Screen: *8" diagonal color display (176.6 mm x 99.36 mm x 203.8 mm)*
Display Type: *Full VGA (800 x 480 pixels), color, TFT*
Grid and Display Tools: Yes
Data Storage: *Micro SD*
Power requirements: *100-240 VAC / 50 Hz to 60 Hz*
Battery Type: *Lithium-ion rechargeable battery with BMS – 14.4V*
Battery Life: *up to 12 hours for standard operation*
Dimension (Width × Height × Depth): *272 mm × 185 mm × 88 mm*
Weight: *approx. 3 kg, including Lithium-ion battery*

Software

User Interface:
- *Touchscreen operation using icons*
- *Multitasking real-time operating system*
- *Archiving of testing parameters for later retrieval*
- *Recording and viewing saved files and data*
- *Data transfer using standard LAN*
- *Password protected supervisor level for adjusting basic testing*
- *Two real-time readings measuring signal characteristics*

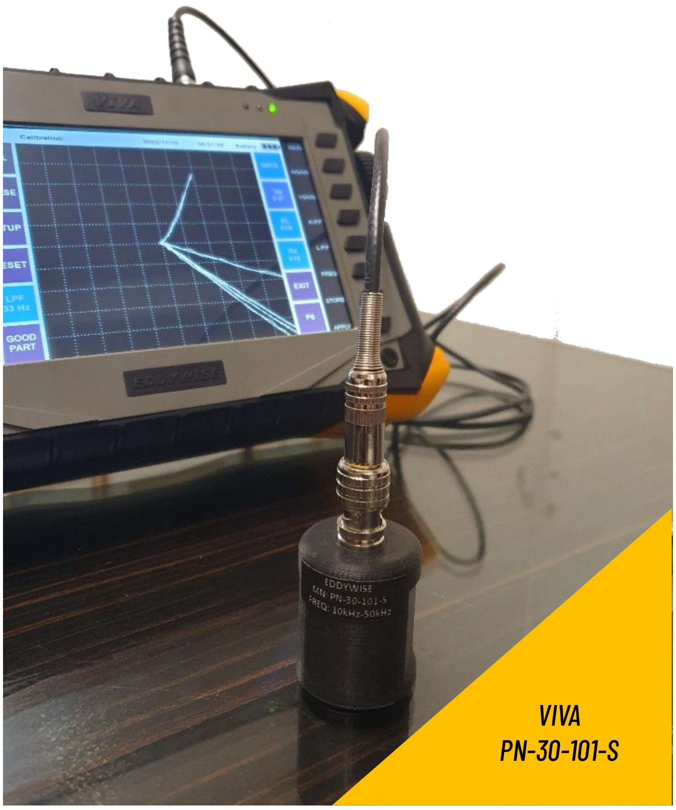
Language: *English*

Input and Outputs

Inputs: *2 15-Pins TTL, One encoder, 12 pins LEMO, 1 pin LEMO.*
Network: *1× Ethernet (TCP/IP)*
External Display: *1×HDMI interface for external monitor*
USB: *1 USB connector*

Environmental Conditions

Operating temperature: *-10°C to 50°C (14°F to 122°F)*
Storage temperature: *0°C to 50°C (32°F to 122°F) [with batteries] and -20°C to 70°C (-4°F to 158°F) [without batteries]*
IP rating: *Designed to meet the requirements of IP64.*



Viva General Accessories Specifications

Pencil Probes

Types: *0°*: PN-03-00f-S, *30°-90°*: PN-03-39f-S, 45°: PN-03-45f-S, 90°: PN-03-90f-S, 90°*-bent*: PN-03-91f-S
where, 03 indicates the nominal diameter of the core, and f is frequency number.
Frequencies: *0: 1kHz - 20kHz 1: 10kHz - 50kHz 2: 20kHz - 100kHz 3: 50kHz - 200kHz 4: 100kHz - 500kHz, 5: 200kHz – 1MHz. Other frequency range can be customized per order.*
Application: *Ideal for small surface defect detection, Access to tight or hard-to-reach areas (e.g., under fasteners, within holes), Suitable for aircraft structure & engine inspection, Enables paint layer assessment around rivets, Effective for stress corrosion cracking detection in stainless and carbon steels, Available in various lengths, angles, and drop configurations, Ergonomic, pencil-style design for precise handling*
Features: *Core: Ferrite, Probe Diameter: 3 mm, Probe Recognition: auto, Connector: LEMO*, *Probe Drive: High*, *Operating Temperature: -10°C to 50°C, IP rating: IP63*
Dimensions: *0°*: 150mmx12mm, *30°-90°*: 150mmx55mm, 45°: 170mmx14mm, 90°: 170mmx23mm, 90°*-bent*: 167mmx26mm

Spring Loaded Probes

Types: *SL-03-10f-S*
where, 03 indicates the nominal diameter of the core, and f is frequency number.
Frequencies: *0: 1kHz - 20kHz 1: 10kHz - 50kHz 2: 20kHz - 100kHz 3: 50kHz - 200kHz 4: 100kHz - 500kHz, 5: 200kHz – 1MHz. Other frequency range can be customized per order.*
Application: *Consistent contact pressure, ideal for spot checking material properties.*
Features: *Core: Ferrite*, *Probe Diameter: 3 mm, Probe Recognition: auto, Connector: LEMO, Probe Drive: High, Tip Angle: Straight, Operating Temperature: -10°C to 50°C, IP rating: IP63.*
Dimensions: 115mm L x 20mm D

T-Probes

Types: *PT-G-T0f-S*
where, G indicates this probe is suitable for grade solutions, and f is frequency number.
Frequencies: *0: 1kHz - 20kHz 1: 10kHz - 50kHz 2: 20kHz - 100kHz 3: 50kHz - 200kHz 4: 100kHz - 500kHz, 5: 200kHz – 1MHz. Other frequency range can be customized per order.*
Application: *Wobble removal, Reformer Tube condition monitoring, Bolt inspection*
Features: *Core: Ferrite, Probe Recognition: auto, Connector: LEMO, Probe Drive: High, Tip Angle: Straight, Operating Temperature: -10°C to 50°C, IP rating: IP63*
Dimensions: 115mmx 45mm

Sliding Probes

Types: *PS-03-1Sf-xyz*
where, 03 indicates the nominal diameter of the core, and f is frequency number. xyz is customized diameter coverage.
Frequencies: *0: 1kHz - 20kHz 1: 10kHz - 50kHz 2: 20kHz - 100kHz 3: 50kHz - 200kHz 4: 100kHz - 500kHz, 5: 200kHz – 1MHz. Other frequency range can be customized per order.*
Application: *Optimized for large curved surfaces such as pipes, tanks, and rollers*
Features: *Core: Ferrite*, *Probe Diameter: 3 mm, Recognition: auto, Connector: LEMO, Probe Drive: High, Tip Angle: Straight, Temperature: -10°C to 50°C, IP rating: IP63*
Dimensions: 100 mm x 40 mm x 40 mm

Simple Surface Probes

Types: *Absolute probe: PN-ab-10f-S, Differential probe: PD-ab-10f-S*
where, ab indicates the nominal diameter of the core and can be 03: 3mm, 05: 5mm, 10: 10 mm, and 30: 30 mm (only absolute probe), and f is frequency number.
Frequencies: *0: 1kHz - 20kHz 1: 10kHz - 50kHz 2: 20kHz - 100kHz 3: 50kHz - 200kHz 4: 100kHz - 500kHz, 5: 200kHz – 1MHz. Other frequency range can be customized per order.*
Application: *Optimized for large curved surfaces such as pipes, tanks, and rollers*
Features: *Core: Ferrite, Probe Recognition: auto, Connector: LEMO/BNC, Probe Drive: High, Tip Angle: Straight, Operating Temperature: -10°C to 50°C , IP rating: IP63*
Dimensions: 100 mm L x 10 mm D. for Absolute probe with ferrite core 30 mm: 20 mm L x 30 mm D

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