

Lizard NDE Ltd

Field Gradient Imaging - Alternating Current Field Measurement - Electromagnetic Array - Classic Eddy Current

Non-Destructive Testing Systems For Asset Integrity Management

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Lizard® M8 Advanced NDE System

Lizard® NDE Ltd are proud to announce the release the latest update of the Lizard® M8 Advanced NDE System, providing uncompromising performance whether your need is for AC Field Measurement, Electromagnetic Array (EMA), advanced Lizard® Field Gradient Imaging (FGI) or classic Eddy Current inspection regimes.



We believe that inspection of high quality assets deserves the ultimate in defect capture confidence. For that reason we have created the light weight Lizard® M8 system to enable the acquisition and interpretation of surface or very near surface breaking defects using the latest in Alternating Current Field Measurement technology combined with the addition of phase plane impedance information from each sensor element in a single pass. The addition of phase plane impedance results allows the Lizard® to optimise the responses from the AC Field Measurement sensors whilst also providing for increased verification of defect identifications allowing for absolute confidence of results.

Since eddy current impedance has been the bedrock of electromagnetic array technology we believe it should be embraced alongside the modern approaches as a trusted and valuable addition to the data set. By including responses from each sensor element in real time the user can feel at ease that the most comprehensive collection of data has been achieved with every probe sweep.

The Lizard® M8 NDE system is equipped with the latest version of the LISS inspection software for Windows, a power house of electromagnetic control. Easy to operate but with the ability to power highly advanced configurations and complex inspection demands. Whether you are a new user or an experienced operator LISS provides for the most intuitive interface with the ability to operate the inspection as you wish and without restriction.

All new Lizard® M8 systems come equipped with the ability to operate the Lizard® extended probe cable range, allowing for probe cable lengths of up-to 200M from Lizard® M8 to Lizard® probe sensor whether topside only or topside to subsea Lizard® probe. In addition advanced digital communications provides for faultless connection to a host PC regardless of proximity. The latest update of the Lizard M8 features a Lemo 4 pin connection in place of the Jaeger connector featured on previous designs for instant connectivity and set up of Classic Eddy Current sensors available from Lizard and selected third party manufacturers.

Ready to perform roles such as rope access, splash zone, storage tank or laboratory based, the Lizard® M8 NDE system has been designed and produced by inspection engineers to face the realities of on-site inspection campaigns. We believe that the Lizard® is the future of confident electromagnetic array inspection technology, ready to function out of the box with user friendly software featuring context sensitive help files. Lizard® enables the instant use of the system for standard inspection campaigns with the option of advanced features providing the ultimate tools for those difficult and frustrating occasions where other systems could not compete.

Compliant with EN1711, EN473, ASTM E2261-07/E2261/E2261M – 12 inspection work with training courses available world- wide, the Lizard® is now in use for many blue chip clients as the preferred system of choice.

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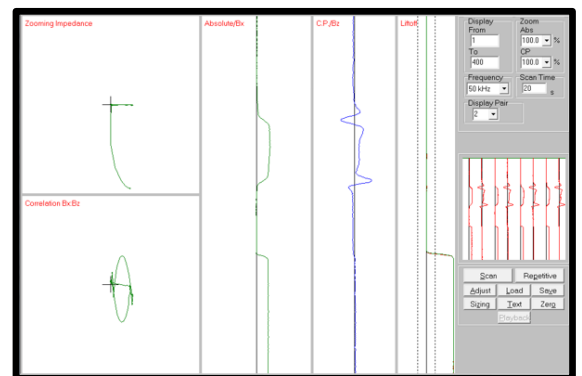
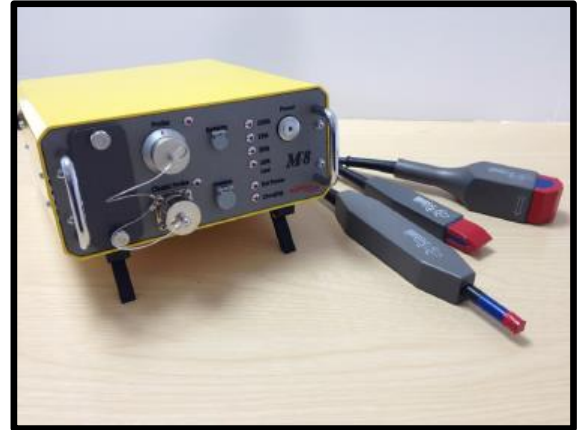
Lizard® M8 System – 2019 Model Specifications

	Lizard® M8
Weight	3.4kgs (with battery)
Enclosure Dimensions	100 x 205 x 250mm - IP 54 enclosure rating
Communications	Upgraded Serial to USB convertor Comms up to 1.2KM (RS232 and RS485)
Battery	8 hours per battery. Internal battery charging facility and LED display front panel indicators for battery charging and life. Battery weight - 510g.
Recharge Time	1 hour
Power	80 VAC to 240 VAC (Smart regulated switch mode power supply- commonly sourced PSU available world-wide)
Inputs	Lemo Lizard® probe connection, Lemo Classic Phase Plane probe connection, RS485 comms, RS232 comms, external power, remote control / encoder port
Probe Cable length	Topside 2.5M, Subsea 5M as standard (cable lengths can be configured at build stage to provide up to 200M cable reach). Up to 200M extension cables available for extended probe range, topside to topside or topside to subsea
Operating Frequency	Software selectable from 1kHz to 1MHz (as per EN1711)
Software	Unique multi-mode LISS (Lizard® Inspection and Sizing Software). Windows compatible (2000 and later including Windows 7 and 8.1). Unrestricted instant scanning. Instant copy/paste of data into Windows environment. Multiple data acquisition modes including AC Field Measurement, Phase plane Impedance, Field Gradient Imaging, 3D imaging, Conductivity and mixed modes of the above. Graphical real-time coating thickness measurement and scanning control tool via 'Lift Off' indicator. Multiple page facility in a single file.

In addition –

- LISS provides an instant standard settings and configuration for immediate operation by the inspection engineer
- Lizard® provides impedance data per sensor (Bx/Bz) in addition to Alternating Current Field Measurement technique
- Unique option using the Lizard Adjustment menu to optimise the sensitivity and rejection of unwanted data noise responses
- High and Low pass Filter enabling the extraction of data from the scan data set such as low time constant thermal drift or background noise
- Alarm functions for automated operation
- Conductivity mode including IACS rating
- Commonly sourced PSU + Smart battery for rapid change out
- Depth Sizing independent of Defect Length
- Crack depth sizing over a wide range of coating thicknesses. Capable of inspection through thin metallic coatings eg. Flame sprayed aluminium or through non-conductive coatings of greater thicknesses
- All sizing data and calculations displayed on screen as numerical and graphical format
- Data display includes replay facility using Scan Playback option for long scan data sets

- Graphical display of processed data for crack detection (Timebase Bx/Bz, Correlation Bx/Bz, Impedance Bx/Bz, FGI Colour Mapping Bx/ Bz, 3D Colour Mapping Bx/Bz)
- Unique Impedance Bx where Bz is absent or diminished on open cracks
- Ability to plot data against distance as well as time
- Automated clock markings to indicate position on scan
- Variable speed scanning options for all scan modes
- Zoom options for scan data and sizing
- Screen marker to identify special features and distance
- Pause feature to allow for temporary pausing of replay data
- Real time adjustment of trace position on screen
- Movable cursors for use during data review
- Free format text input associated with each page of data with programmable drop down options within software for commonly used text
- Large scan file storage and review for continuous data capture greater than 1 hour
- Hardware and software status functions
- Graphical print out of data screens, including data plots, notes, defect results, all instrument settings and alert if any settings are different to default settings
- Multi-mode and multi-array probe support
- Data transfer to enable rapid and flexible reporting format of the operator's choice
- Built in help files and operators manual
- Training and conversion training available world – wide
- Flexible probe independent instrument settings
- Allows off-line review and in depth, sophisticated analysis of scan data as originally collected
- Remote control port to enable Start, Stop, Mark and Zero of data and encoder input facility
- Jaeger port for instant classic eddy current use
- Depth size any portion of defect data at any point within the scan
- No fixed structure for scans, perform any inspection without restrictions
- No system/probe initial files required, swap out probes or systems at leisure
- Low cost arrays
- Length sizing from full data set, no need to rescan
- No 3rd dimension required for Lizard® probe types featuring an FGI coil set, therefore sensors of almost any geometry can be constructed
- No requirement to know coating thickness for sizing result, Lizard® automatically compensates for coating thicknesses within probe tolerances
- Splash enabled for subsea works of up to 200M distance from Lizard® M8 to subsea probe, no modifications required to current build specification to enable Splash accessory package use
- Common Lizard software for topside and subsea inspection regimes, no requirement for retraining



For more information regarding the Lizard® technology please visit www.lizard.co.uk