

Measuring Head MH-100



The purpose:

Measuring Head MH-100 is designed for Non-destructive Inspection (**MRT- Magnetic Rope Testing**) of Wire Ropes. **MH-100** is part of the LRM-XXI Diagnostic System.

Measuring Range:

- Standard solution: nominal diameters from **50mm** up to **80mm**.
- Dedicated solution: the measuring range of the MH-100 model can be shifted about $\pm 10\%$ at the customer's request.

NOTE:

Dedicated Measuring Head solution for MRT inspection of the locked coil construction of wire rope and umbilical armour is required.

Operation with LRM-XXI diagnostic system:

- Guiding system: slides (preferred for strands wire ropes) or wheels. One adjustable set of guiding system for the entire test range.
- Recorder types: **LRM®XXI** or **LRM®XXI-B**.
- Encoder types: detachable solution types **LRM®RI-1** or **LRM®RI-2** (ability to operate in time mode, without encoder).
- Connection cables: All types of **LRM®CA** connection cables with lengths from 0.5m to 60m.

Operating temperature range:

- From -25°C up to 55°C .



DELTA TEST TECHNOLOGIES L.L.C.

110, Oak Rim CT, #23, Los Gatos, California, 95032, USA
www.deltatest.us E-mail: info@deltatest.us

Built-In Sensors:

- **LF (Local Fault)** based on **MFL Method (Magnetic Flux Leakage)**: — Magnetic flux to analog signal converter based on copper coils.
- Dedicated to detecting short/long wire discontinuities, corrosion pitting, strands loosening, fatigue changes in wire material.
- Dedicated **LF Sensor Inserts (LF-I)** - 2 types sets.
- Speed compensation of LF signals is implemented - Amplitude of LF sensor indication is not dependent on inspection speed in range from 0,05m/s up to 10m/s.
- Accuracy of LF indications according to EN12927:2019 and ASTM E1571-11 standards.

- **LMA (Loose of Metallic Area)**: — Magnetic field to analog signal converter based on hall effect elements.
- Dedicated to detecting changes in metallic cross-sections area caused by mechanical abrasion or corrosion. It also detects shape deformation and fatigue-related material changes, wire breaks with longer distance between broken ends.
- Accuracy of LF indications according to ASTM E1571-11 standard.
- The amplitude of the LMA indication is independent of the inspection speed.

NOTE: The application of LF and LMA sensors allows to meet the discard criteria according to ISO 4309:2017 (Annex C) as well as EN 12927:2019 where the LMA sensor is not required.

Design:

- IP Ratings for all components is minimum IP67 (The MH underwater operational solution available upon request).
- Strong magnetic field due to NdFeB permanent magnets.
- Durable against mechanical damage, external and chemical factors due to composite housing construction of stainless steel and nylon.
- Simple design, no protruding parts, very easy to clean from grease with available chemicals.
- Dedicated attachment points for rigging.
- Transported in heavy-duty, waterproof plastic cases with wheels.

Dimensions & Weights:

- Dimensions (with guiding system): — Length: 560mm.
- Height: 250mm.
- Width: 218mm.

- Weight: — Net weight: 37,8kg.
- Gross weight: 40,85kg.

NOTE:

At the customer's request, the dimensions of the MH can be customized to meet the requirements of conducting MRT inspections in areas with limited space or access.