

# Electromagnetic log

## LEM 2-1M



### IS APPLIED

to operate in conditions of water aeration, slough ice, ice and snow sludge. Log measures speed through the water of displacement and hydrofoil vessels



### FEATURES:

- Speed measurement up to 60 kt
- Operation in conditions of water aeration, slough ice, ice and snow sludge
- Three types of induction receivers for different conditions of operation
- Data display on two six-bit LED indicators with 20 mm high digits
- Semiautomatic input of corrections during alignment
- Digital interface for communication with shipborne systems
- Cable routing between the receiver and primary device up to 110 m long

### CERTIFIED BY



the Russian River Register



the Russian Maritime Register of Shipping

The construction design of receivers and digital processing of their signals provide generation of speed data by the log when the ship is sailing in slough ice, ice and snow sludge, and water aeration at the receiver location.

Three basic log modifications are available, which differ in types of induction receivers and their installation onboard the ship.

**LEM2-1MN:** induction receiver is installed in the gate valve flush with the ship's bottom

**LEM2-1MV:** induction receiver is installed in the gate valve with 150 mm projection from the ship's bottom

**LEM2-1MK:** induction receiver is fixed on the stationary part of the hydrofoil vessel wing, providing speed measurement both in hullborne and foilborne positions.

Placing the receiver in the gate valve allows the sensors to be replaced, if required, without docking the ship.

Small diameter of sensors provides efficient mechanical protection.

Repeaters of speed and covered distance installed in enclosed service spaces and on the open deck can be supplied in addition to the log.

Log LEM2-1M is highly reliable, designed for 25 year operation and provides unlimited operation within complete mean resource life of minimum 60000 hours.

System main advantage is its lasting continuous operation without special maintenance.

## SPECIFICATIONS

Speed measurement range	-6 to 60 kt
Maximum instrument error:	
for speeds from -6 to 50 kt	± 0.1 kt
for speeds over 50 kt	± 0.15 kt
Covered distance measurement range	0.0 – 9999.9 n.miles
Computation error	0.1 %
<b>Interfaces:</b>	
• IEC61162-1 (NMEA 0183 version 2.2)	VMVBW, VMVLW
• 200 pulses per n.mile	
• 200 relay contact closures per n.mile	
• Unit-counting code	
<b>Power consumption</b>	
mains 50 Hz 220 V AC	max 20 W
Mains 24/27 V DC	max 20 W
Range of operating temperatures	-15 to +55 °C

