MODEL MS700/800  MAGNETOSTRICTIVE LEVEL MEASUREMENT

Features
- High Accuracy: ±1mm for SS float
- 4 to 20mA output
- Compact design for small tank

General Description
The small type of MS series, magnetostrictive level measurement, is especially designed for precise measurement in small tank. With its high accuracy of ±1mm, the MS is ideal for continuous level monitoring of storage or blending tank in beverage, pharmaceutical or other application. The separation type of MS700 and integral type of MS800 are available.

Operational Description
The MS series consists of a magnetostrictive wire ① in the stem ② and a permanent magnet inside the float ③. The float is the only moving part which travels vertically on the stem. Once a pulse current ④ is induced from the end of the magnetostrictive wire, a tubular magnetic field emanates ⑤. As the float travels, torsional vibration ⑥ is launched by the interaction between the float magnetic field and the magnetostrictive wire. The float position is determined by measuring the lapse of time ⑦ from the inducing of a pulse current to the return of the torsional vibration to the pick-up (⑧).

![Diagram with load resistive](image)

![Graph](image)
# Specifications

## Sensor

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<th>Model</th>
<th>MS700S</th>
<th>MS800S</th>
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<tr>
<td>Description</td>
<td>Separation</td>
<td>Integral</td>
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<tr>
<td>Drawing</td>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
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- **Mounting**: G1*<sup>+</sup>
- **Supply Power**: Supplied from MS3500
- **Output Signal**: 4 to 20mA DC
- **Load Resistive**: See Fig. 1
- **Operating Temperature**: Housing -10 to 50°C, Wetted part -10 to 80°C
- **Maximum Pressure**: 2 MPa Max. (Except mounting part)
- **Maximum Humidity**: 95%RH Max., 85%RH Max.
- **Minimum Specific Gravity**: 0.8
- **Accuracy**: ±1mm
- **Material**: Housing 304SS, Flange Stem 304SS, Float 316SSL
- **Maximum Length of Stem**: 1000mm
- **Minimum Length of S1**: 36mm (Include plug thickness)
- **Minimum Length of S2**: 30mm
- **Cable Entry**: G1/2
- **Protection**: IP65
- **Recommended Cable**: 3C2V (Coaxial cable), MVVS (3-core shielded cable)

## Controller

<table>
<thead>
<tr>
<th>Model</th>
<th>MS3500</th>
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<tr>
<td>Drawing</td>
<td><img src="image3.png" alt="Diagram" /></td>
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</table>

- **Supply Power**: 100 to 240V AC ±10%, 50/60Hz
- **Power Consumption**: Approx. 5VA Max. (240V AC)
- **Output Signal**: 4 to 20mA DC
- **Load Resistance**: 600 Ω Max.
- **Power Source**: 15V DC
- **Operating Temperature**: -10 to 60°C
- **Maximum Humidity**: 85% RH Max.
- **Accuracy**: ±1mm
- **Material**: PC/PET
- **Protection**: Non Drip-proof
- **Mounting**: DIN rail 35 or 2xM3 screw mounting