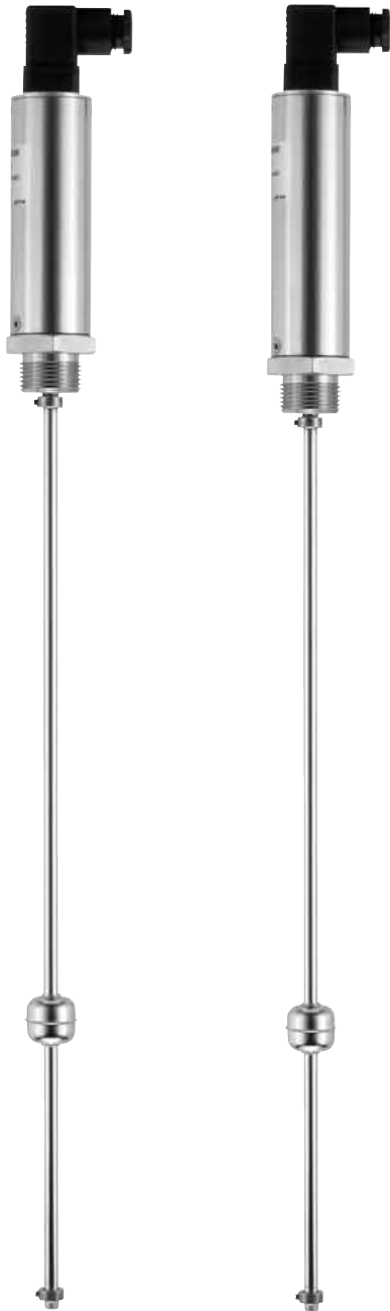


MODEL MS700/800

MAGNETOSTRICTIVE LEVEL MEASUREMENT



Features

- High Accuracy: $\pm 1\text{mm}$ 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 $\pm 1\text{mm}$, 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).

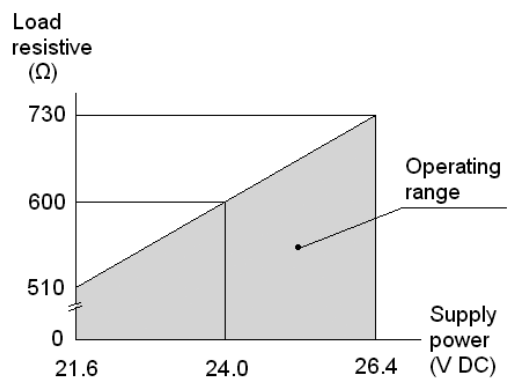
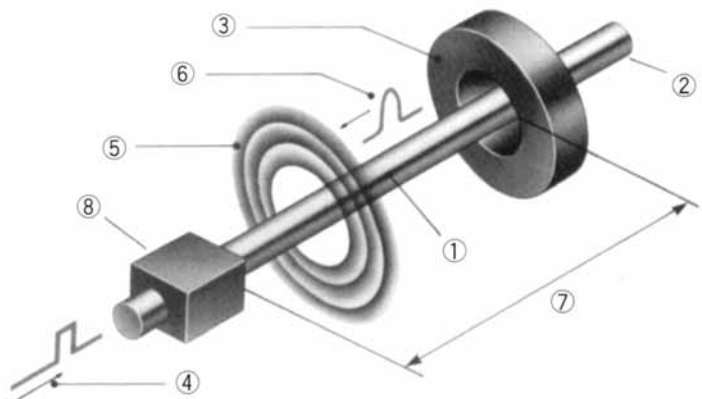
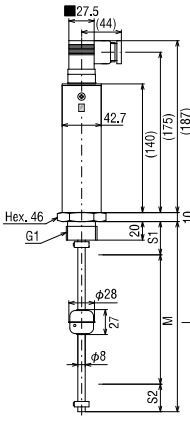
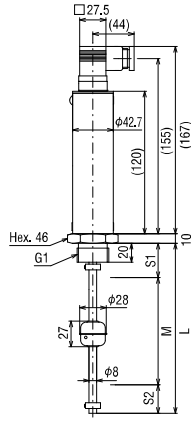


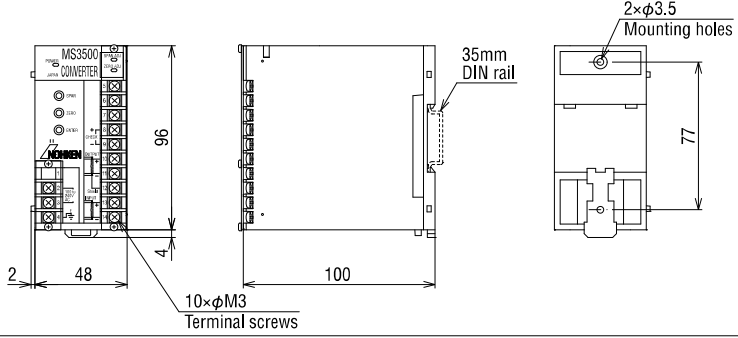
fig. 1

Specifications

Sensor

Model	MS700S	MS800S
Description	Separation	Integral
Drawing		
Mounting	G1"	
Supply Power	Supplied from MS3500	24V DC $\pm 10\%$ 50mA Max.
Output Signal	4 to 20mA DC	
Load Resistive	See fig. 1	
Operating Temperature	Housing: -10 to 50°C Wetted part: -10 to 80°C	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	$\pm 1\text{mm}$	
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

Model	MS3500
Drawing	
Supply Power	100 to 240V AC $\pm 10\%$, 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	$\pm 1\text{mm}$
Material	PC/PET
Protection	Non Drip-proof
Mounting	DIN rail 35 or 2xM3 screw mounting