

Magnetostrictive Type Level Transmitter (2-Wire)

Model : SMS



Features

- High Accuracy : 0.1%F.S ($\pm 1\text{mm}$)
- 2-Wire Type 4 to 20mA, LCD
- Works in a wide range of liquids

General Description

The SMS series, magnetostrictive level measurement, is especially designed for precision measurement, With its high accuracy of $\pm 0.1\%$ F.S, the SMS is ideal for continuous level monitoring of storage and shipment for oil, petrochemical liquid, pure chemical liquid(Acid, Alkali) beer and other beverages, pharmaceuticals, etc. The position of float is converted into electric signals proportional to the liquids level.

Approval

- Ex d IIC T6, IP65

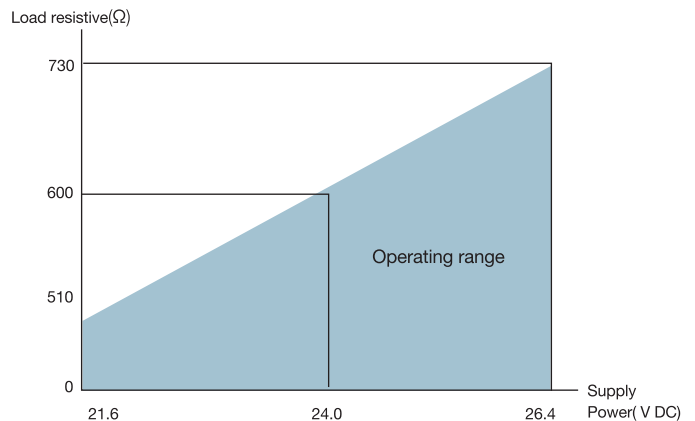
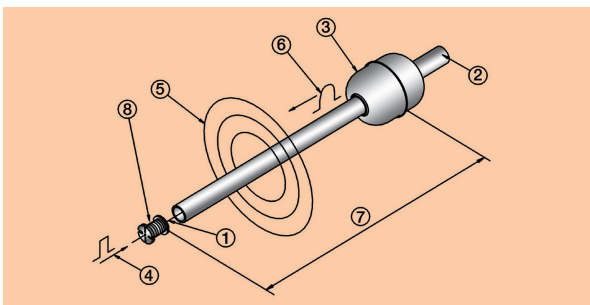
Measurement Principle

Waveguide generate circle magnetic fields outside by interrogation pulse. Magnetic flux density in the waveguide changed by magnet (Float) with perpendicular to the axial magnetic field.

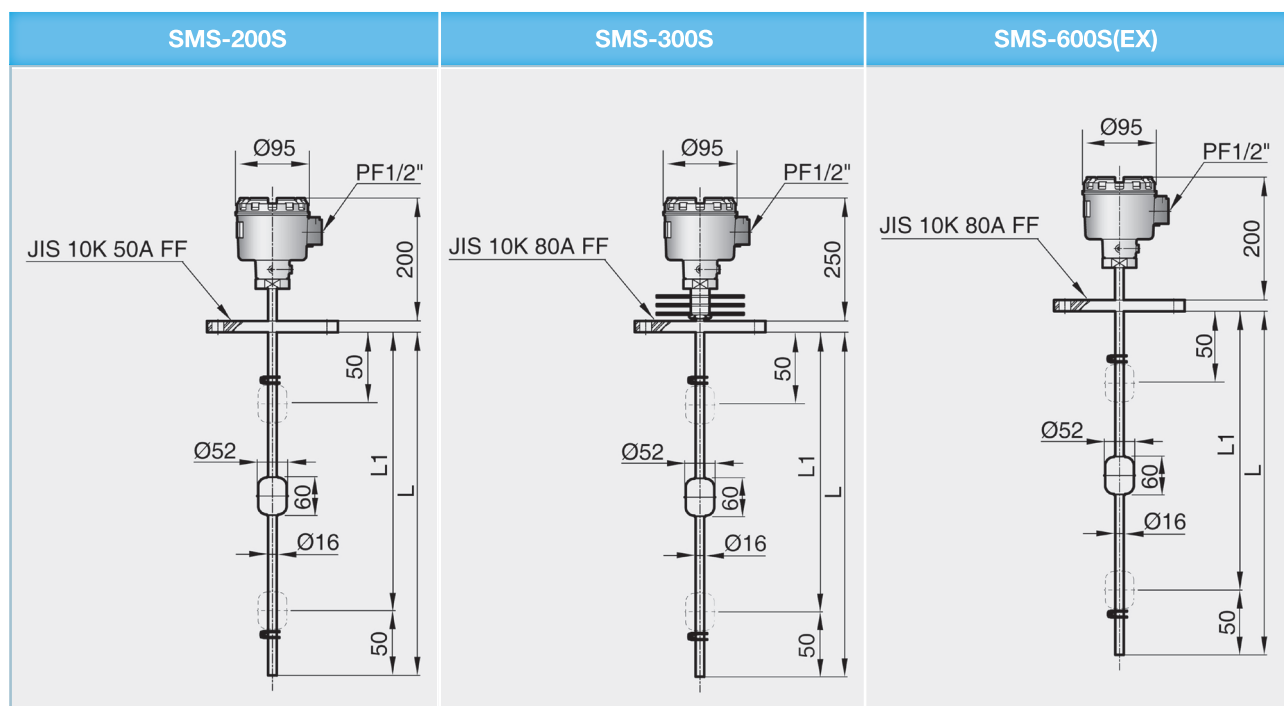
This phenomenon return to minute voltage signal through waveguide. Distance between release part and magnet is in proportion to the time interval between release signal and returned signal. It converts the signal to output.

Features

The SMS 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.



Dimensions



Specifications

Supply Power	15 ~ 30V DC 2Wire (LOOP POWER)	
Output	4 ~ 20mA DC / 0.0~100.0% (DISPLAY)	
Measuring Range	100 ~ 3000mm / Option Max. 4,000mm	
Non-Linearity	±0.05% Below	
Repeatability	0.05% F.S Below	
Resolution	±0.1% Below (0.5mm)	
Accuracy	±0.1% F.S Below (1mm)	
Output Accuracy	±0.05% Below (0.005mA)	
Sampling Rate	100mS	
Operating Temperature	-20°C ~ +60°C / Option Max. 100°C	
Ambient Temperature	-20°C ~ +60°C	
Maximum Pressure	10Kg/cm ²	
Minimum Specific Gravity	0.7	
Viscosity	Max. 1000 cP	
Humidity	95% RH	
Conduit Connection	PF 1/2" (Std.), PF 3/4", PT 1/2", PT 3/4"	
Mounting Size	Flange 2" above, Nipple 2" above	
Material	Housing	ADC12
	Stem	316LSS
Ingress Protection	Weather Proof	
Explosion Proof	Ex d IIC T6, IP65 (Option)	
Compatible with Unit	SLIC-4P, SLIC-4PD	

Ordering Information

■ Magnetostrictive Type Level Transmitter (2-Wire Type)

SMS	200	S	1	A	1	A
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CONDUIT CONNECTION

A = PF 1/2" (Std.)
 B = PT1/2"
 C = PF3/4"
 D = PT3/4"
 OP = etc.

ENCLOSURE

1 = Weather Proof (ADC-12)
 2 = Explosion Proof (Ex d IIC T6, IP65)

MEASURING RANGE

A = 0 ~ 1M
 B = 0 ~ 2M
 C = 0 ~ 3M
 D = 0 ~ 4M (Max.)

MOUNTING SIZE

1 = JIS 10K 50A FF Flange (Std.)
 2 = JIS 10K 80A FF Flange
 3 = JIS 10K 100A FF Flange
 4 = PT 2"
 5 = 2" Sanitary Ferrule Clamp
 6 = ANSI #150 3" RF Flange
 7 = ANSI #150 4" RF Flange
 OP = etc.

WET PARTS MATERIAL & MEASURING LENGTH

S = 316LSS (Std.)

MODEL SELECTION

200 = Standard type
 300 = Heat Resistive type (100°C Max.)
 600 = Explosion proof type

- The mounting size should be specified when you order
- The measuring range should be specified when you order



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■ Specifications subject to change without notice