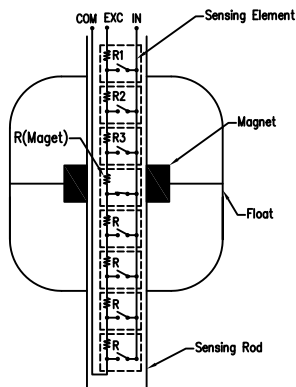


MLT Series Magnetic Float Level Transmitter

Operating Principle

Acez Sensing Magnetic Float Level Transmitters are used to measure liquid level continuously through the usage of a magnetic float and a reed switch & resistance chain installed within the stem. The reed switches are actuated by the moving magnetic float giving a Ω output that is converted into a 4 ~ 20mA current output by a potentiometer based transmitter located within the housing.



Circuit Diagram



Loop Powered Transmitter



The reed switch and resistor chain uses the change in contact of the reed switch due to the movement of the external float to vary the resistance value as shown below:

$$R_{(Total)} = R_1 + R_2 + R_3 + \dots + R_{(Magnet)}$$

When the float moves along the probe due to change in level, the resistance value $R_{(Total)}$ then forms an inversely proportional relationship to the level of medium and is then able to translate the level into a proportional analogue signal 4 - 20mA through a loop powered transmitter.

Technical Advantages

- Long service life
- Customized design available
- Explosion proof design available
- Suitable for most liquid medium
- Suitable for rough environments
- Simple installation and user friendly operation
- Wide range of floats for use in different applications

Product Application

- Power
- Marine
- Petrochemical
- Water Treatment
- Machine Manufacturing

Technical Specifications

Terminal Housing:	Die Cast Aluminium			
Output:	4 - 20mA			
Operating Temperature:	0°C ~ 70°C			
Resolution:	6.35mm or 12.7mm			
Power Supply:	12 ~ 32 Vdc			
Material of Construct:	SUS 304, SUS 316, PP, PVDF			
Connection:	Thread BSP, NPT, PT, PF, G, R Flange ANSI, JIS, DIN			
Max. Length:	6m			
Floats:	Model	Dimensions (mm)	Material	Specific Gravity
	S3	45 x 55 x 15	SUS 316	0.65
	S4	52 x 52 x 15	SUS 316	0.55
	S6	75 x 108 x 20	SUS 316	0.5
	P3	48 x 45 x 18.5	PP	0.6
	F1	50 x 75 x 23	PVDF	0.75

Ordering Code

Model MLT - □ - □ □ - □ □ □ □ - □ - □ □ □ □

Terminal Housing	Code	Material	Protection Class			
	K	Die Cast Aluminium	IP65			
	P	Polypropelene	IP65			
	X	Die Cast Aluminium	Eex d IIC			
	A	Stainless Steel 316	IP65			
	Y	Stainless Steel 316	Eex d IIC			

Connection	Code	Size	Code	Thread / Flange	Code	Thread / Flange
	1	3/8" (10A)	A	PF (G)	I	PN10
	2	1/2" (15A)	B	PT (R)	J	PN16
	3	3/4" (20A)	C	BSP	K	PN25
	4	1" (25A)	D	NPT	L	PN40
	5	1-1/2" (40A)	E	5kg/cm ² JIS		
	6	2"(50A)	F	10kg/cm ² JIS		
	7	2-1/2" (65A)	G	150 Lbs ANSI		
	8	3"(80A)	H	300 Lbs ANSI		

Stem Size	Code	Diameter	Material	Code	Diameter	Material
	B4	ø9.5mm	SUS 304	B6	ø9.5mm	SUS 316
	C4	ø12.7mm	SUS 304	C6	ø12.7mm	SUS 316
	D4	ø14mm	SUS 304	D6	ø14mm	SUS 316
	E4	ø17.2mm	SUS 304	D5	ø17.2mm	SUS 316
	PP	ø12.7mm	PP	PV	ø12.7mm	PVDF

Float Type	Code	Dimension	Specifications	Temperature & Pressure
	S2	41 x 38 x 11	SUS 316 (S.G 0.7)	200°C, 35kg/cm ²
	S3	45 x 55 x 15	SUS 316 (S.G 0.65)	200°C, 12kg/cm ²
	S4	52 x 52 x 15	SUS 316 (S.G 0.55)	200°C, 30kg/cm ²
	P3	48 x 45 x 18.5	PP (S.G 0.6)	80°C, 5kg/cm ²
	F1	75 x 50 x 23	PVDF (S.G 0.8)	120°C, 5kg/cm ²

Number of Floats	Code	Resolution	
	H	6.35mm	
	L	12.7mm	* Only Available for Stem Size ø12.7mm and above

Length	Code	Length (mm)

* Connection Size starts at 2" thread and 2-1/2" flange for transmitter housing