

# Magnetic, Liquid Level Gauge-MLG



SINCE 1984

It is commonly used for visual level indication of liquids, which attack glass or are hazardous, flammable, toxic, aggressive, agitated, contaminated and under high temperature & pressure i.e. for services, where glass gauges are unsafe.

## Features :

- Rugged gland less construction to provide safety in handling toxic, flammable & highly corrosive liquid.
- Suitable for glass attacking liquid, where conventional gauge glass can not be used.
- Option of providing continues transmitter for remote indication & control and adjustable level switch for alarm & control.

## Construction & Operations :

It consists of a chamber and an internal float in non-magnetic material, compatible with the liquid. The float containing a magnetic system rides on the liquid level and is coupled to an external visual indicator, which comes in two options. The simpler & economical design consists of a RED magnetic follower capsule, that moves within a glass tube filled with water (to reduce friction) (fig. 1-a) and can be read against a scale. The other system is expensive and consists of a series of bicolour flappers. WHITE on front side and contrasting RED on the reverse. These flappers rotate corresponding to float movement, thus changing their colour from WHITE to RED as the float rises and vice-versa when the float falls. As such the liquid level represented by an external RED column (fig. 1-b).

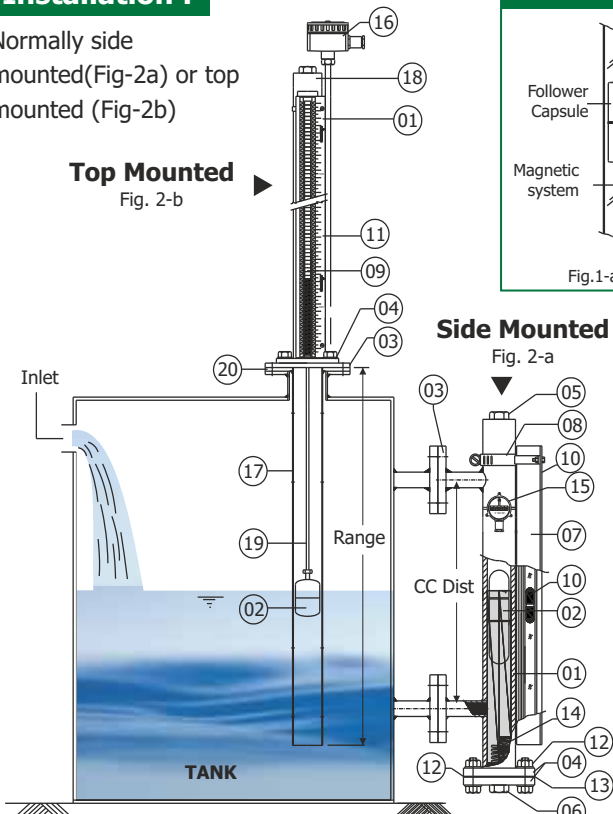


## Installation :

Normally side mounted (Fig-2a) or top mounted (Fig-2b)

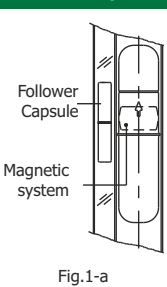
**Top Mounted**  
Fig. 2-b

**Side Mounted**  
Fig. 2-a

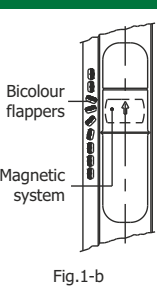


- |  |                             |
|--|-----------------------------|
| 01) Liquid Chamber                     | 11) Calibrated Scale        |
| 02) Float                              | 12) Nuts, Bolts & Washer    |
| 03) Process Flange                     | 13) Gasket                  |
| 04) Chamber Flange                     | 14) Float Retainer (Spring) |
| 05) Vent Plug                          | 15) Switch (Adjustable)     |
| 06) Drain Plug                         | 16) 'X' Mitter              |
| 07) Local Indicator Housing            | 17) Perforated Steel Well   |
| 08) Indicator mtg. clamps              | 18) Magnetic Chamber        |
| 09) Local Indicator Flappers           | 19) Stem                    |
| 10) Local Indicator (Follower Capsule) | 20) Still Well Flange       |

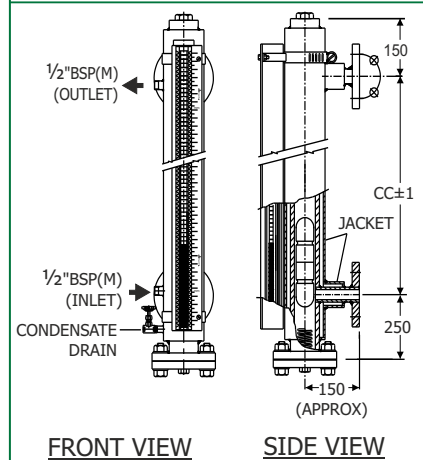
### Follower Capsule



### Rotary Flappers



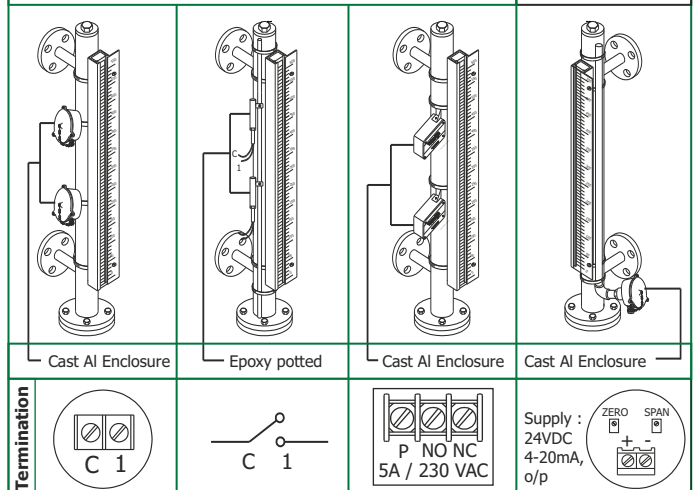
## Jacketing Arrangement



## Accessories

### Magnetic Switches Options

### 'X' mitter



<b>Model Identification No. MLG</b>									
<b>Mounting</b>									
Side Mtd	S								
Top Mtd (for sumps)	T								
<b>Wetted Parts</b>									
SS 304	N								
SS 316	S								
PP (Max-70°C)	P								
PVDF (Max-100°C)	T								
Non Std	O								
<b>Chamber Type</b>									
Top cap with bottom flange	A								
Top & bottom flanges	B								
<b>Process Connections</b>									
Flanged	F								
Screwed	S								
Union	U								
Non-Std.	O								
<b>Shut off Valves</b>									
Not Provided	W								
Ball Valves (PP - 70°C/ SS - 200°C)	B								
Globe Valves (SS/CS - 400°C)	G								
Non Std	O								
<b>Vent x Drain</b>									
Plug x Plug	1								
Plug x Ball Valve	2								
Plug (for Top Mtd only)	3								
Plug x Globe Valve	4								
Non Std	0								
<b>Jacketing</b>									
Not Provided	W								
Provided	J								
<b>Visual Indicator</b>									
Not Provided	W								
Magnetic Follower Capsule (PP-150°C)	C								
Bicolour Rotating Flappers (Plastic-150°C)	R								
Bicolour Rotating Flappers (Ceramic-400°C)	F								
<b>Still Well (for Top Mtd only)</b>									
Without	W								
CS Still Well	1								
SS304 Still Well	2								
SS316 Still Well	3								
PP Still Wel	4								
others	0								
<b>Accessories</b>									
Not Provided	W								
Magnetic Switch	1								
'X' mitter	2								
Magnetic Switch + 'X' Mitter	3								
<b>Magnetic Switch</b>									
Epoxy Potted x Monostable x 40VA (N/O)	1								
Cast Al, WP IP-66 x Monostable - 40VA (N/O)	2								
Cast Al, Ex.proof Gr. IIA & IIB x Monostable - 40VA (N/O)	3								
Cast Al, WP IP-66 x Bistable - 5A, 230 VAC	4								
Cast Al, Ex.proof Gr. IIA & IIB x Bistable - 5A, 230VAC	5								
Non Std	0								
<b>No.of Switches</b>									
One, Two.....Four	1-4								
Non Std	0								
<b>Level Controller (TLC)</b>									
Not Provided	W								
Provided	C								
<b>'X' mitter Enclosure</b>									
Cast Al. W.proof IP-66 x PG 13.5	J								
Cast Al. Ex.proof Gr. IIA & IIB x 1/2"NPT	E								
Non std	O								
<b>Resolution</b>									
±12 mm (Std)	S								
±6 mm (High)	H								
<b>Level Indicator Controller</b>									
Not Provided	W								
TLIC	C								
TLPI	L								
Non std	O								

Dist / Range(mm)

**Specifications**

Installation	: Side / Top
Range (C=C DIST)	: Max. 3000mm (Magnetic follower capsule) Max. 5000mm (Bicolour rotating flappers)
Level Indication	: a) Red PP Follower Capsule -150°C in Toughened glass tube (H <sub>2</sub> O filled) b) Bicolour Rotating PP Flappers - 150°C (White & Red) c) Bicolour Rotating Ceramic Flappers - 400°C (White & Red) Fitted externally to the float chamber
Float Chamber	: Ø 60.3 mm in SS304/SS316/PP/PVDF
Float	: Ø 50 mm in SS316/PP/PVDF (for Side mounted) & Ø 75 mm in SS316/ PP (for Top mounted)
Still Well	: CS/SS304/SS316/PP (80NB)
Calibrated Scale	: White powder coated Aluminium /SS (LC-10mm)
Shut off Valve	: 20 NB Ball/Globe Valves (SS)
(Isolation for Gauge)	: 25NB flanged Ball Valve (PP)
Vent x Drain	: 1/2" Threaded Plugs/Valves
Process Connection	: 1) 25NB/40NB/50NB Flanges for Side Mtd to BS/ANSI/DIN or 100NB Flange for Top Mtd. to BS/ANSI/DIN 2) 1/2"/ 3/4"/ 1" BSP or NPT (M/F) Screwed 3) 1/2"/ 3/4"/ 1" BSP or NPT (M/F) Union
Max Temp	: 70°C ( PP ) /100°C (PVDF)/400°C (SS)
Max Test Pressure	: 2 Kg/cm <sup>2</sup> ( PP/PVDF)/10 Kg/cm <sup>2</sup> (SS) or (at amb. temp)
Min. Liquid Sp. Gr.	: 100Kg/cm <sup>2</sup> (SS)
	: 0.7 - Side Mtd., 0.8 - Top Mtd.

**Accessories**

<b>a) Adjustable Switch</b>	
<b>Monostable Reed Switch</b>	
Enclosure x Cable Gland	: Epoxy potted or Cast AL WP-IP-66 x PG 9 (Polymer) or Cast AL Ex. Proof Gr. IIA & IIB x 1/2" NPT (Brass)
Switch rating x Form	: 40 VA X N/O (SPST) or 60 VA X C/O (SPDT)
<b>Bistable Micro Switch</b>	
Enclosure x Cable Gland	: Cast AL WP IP66 x PG 9 (Polymer) or Cast AL Ex. Proof Gr. IIA & IIB x 1/2" NPT (Brass)
Switch rating x Form	: 5A, 230VAC X C/O (SPDT)
<b>b) Transmitter</b>	
Wiring System	: Two wire
Resolution	: ±12 or ±6 mm
Out put	: 4 -20 mA
Enclosure x Cable Gland	: Cast AL, WP-IP66 x PG13.5 (Polymer) or Cast AL Ex. Proof Gr. IIA-IIB & IIC x 1/2" NPT(Brass)

**Services**

Liquified Gases, Lube/Crude Oil, Dye Liquor, HCL, H<sub>2</sub>SO<sub>4</sub>, Phosphoric Acid, Ammonia, Freon, Therminol, Solvent, Refrigerant, Dowtherm, Gasoline & NaOH.

**Ordering Info :**

Specify Model No. x Liquid x Sp. Gr. Optg Temperature, Pressure & CC Dist / Range

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R A T E D

NSIC-CRISIL SE-1A

All dimensions in mm, except specified.