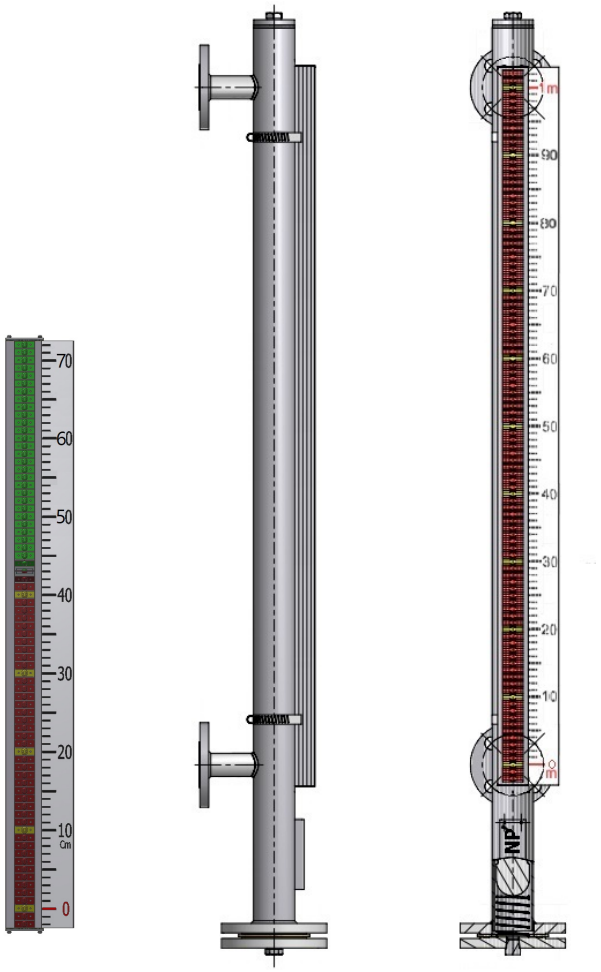
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INSTRUCTION MANUAL

MAGNETIC FLAP TYPE LEVEL GAUGE

HLG-100F & HI-MF SERIES



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You should be well-informed of the contents where WARNING is marked before carrying out the work.



You should be careful where CAUTION is marked to carry out the work.



You should be aware of where NOTICE is marked to carry out the work.

Overview

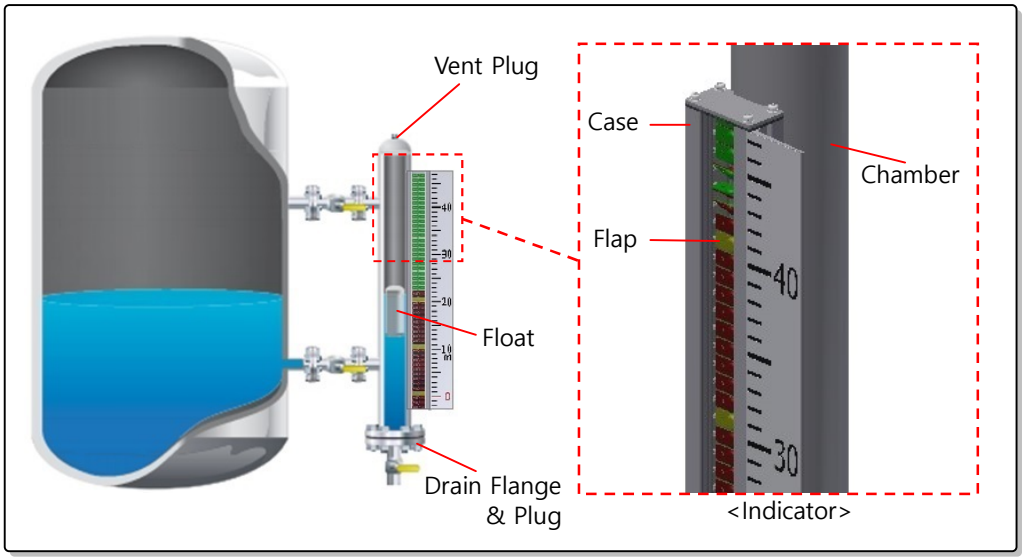
HLG-100F Series is a Magnetic Flap Type Level Gauge which strengthens the weak point of glass level gauge and it continuously measures a liquid levels in a tank, can be used combining with a level transmitter and/or level switch. It has a chamber type installation method and the liquid level can be easily read through the change of flap color.

Characteristics

- Easy Installation for the measurement of liquid levels in various tanks.
- Suitable to be used for the tank requires current output (DC 4~20mA) and contact (SPST or SPDT) as well as local indication simultaneously.
- Flange or socket as a process connection is available as per the site condition.
- Applicable to the explosive liquid (volatile liquid) and harmful liquid. (Teflon Type)
- Available to use for high temperature and pressure process.

Operation Principle

A float which is located in a chamber moves up or down as per liquid level in a tank and a built-in magnet in a float changes the color of indicating flap by magnetism, indicates liquid level in the tank by a flap color.



Specification

■ **HLG-100F (Standard)**

Model	HLG-100F	
	Stainless Steel	Teflon
Type	Magnetic Flap Type Level Gauge	
Installation	Side to Side	
Fluid Temp.	Max. 120 ℃ / Max. 350 ℃ (Opt.)	Max. 120 ℃
Operating Press.	Up to 10 kg/㎠ / Up to 63 kg/㎠ (900#) (Opt.)	Up to 3 kg/㎠
Enclosure	Weather-Proof	
Measuring Range	Min. 350 mm / Max. 5000mm	Min. 350mm / Max. 2500mm

CAUTION **If the measurement is basic, Teflon material should be applied.**

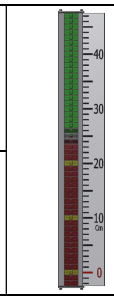
■ HLG-100FT (HLG-100F with Transmitter)

Model		HT-100MS	HT-100MS-Ex
Enclosure		Weather-Proof (IP65)	Ex-Proof (Ex d IIC T6/T5, IP66)
Ambient Temp.		-20℃ ~ +60℃	-20℃ ~ +40℃
Power		DC 24V	
Output		DC 4 ~ 20mA (2-wire)	
Material	Housing	Aluminum	
	Tube	316L SS	

■ HLG-100FS (HLG-100F with Switch)

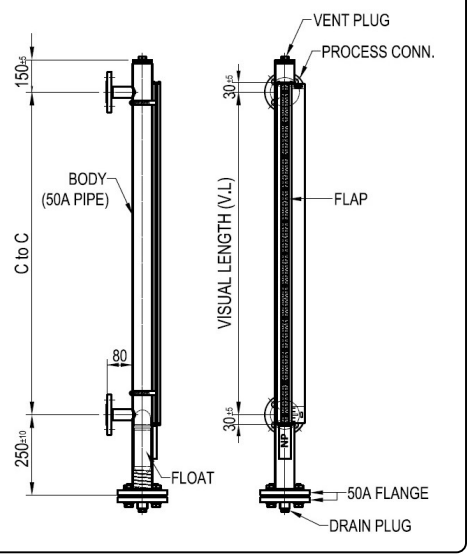
Model		HR-10L	HR-10L-Ex
Enclosure		Weather-Proof (IP65)	Ex-Proof (Ex d IIC T6, IP65)
Ambient Temp.		-20℃ ~ +60℃	
Contact Form		SPDT	
Contact Rating		AC 220V, 0.5A / DC 24V, 0.5A	
Material	Housing	PA66(Std.) / Aluminum (Opt.)	Aluminum
	Body	Duralumin	
Model		**HR-30**	**HR-30-Ex**
Enclosure		Weather-Proof (IP65)	Ex-Proof (Ex d IIC T6/T5, IP66)
Ambient Temp.		-20℃ ~ +60℃	
Contact Form		SPST	
Contact Rating		AC 250V, 1A / DC 24V, 0.5A	
Material	Housing	Aluminum	
	Tube	316L SS	

■ Indicator

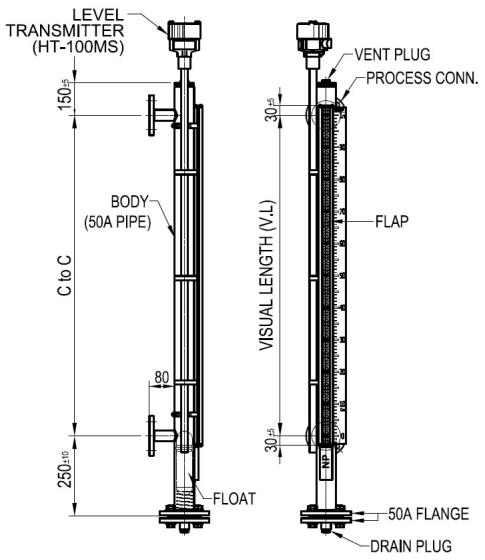
Model		HI-MF			
Installation		Band			
Material	Case	Aluminum			
	Flap	Ceramic			
Fluid Temp.		Max. 120 ℃		Max. 350 ℃	
Flap Color.	Level Down	Green		White	
	Level Up	Red (Yellow/10cm)		Black (Yellow/10cm)	
Scale Unit		m(Std.) / m, cm(Opt.)			

Composition & Technical Information

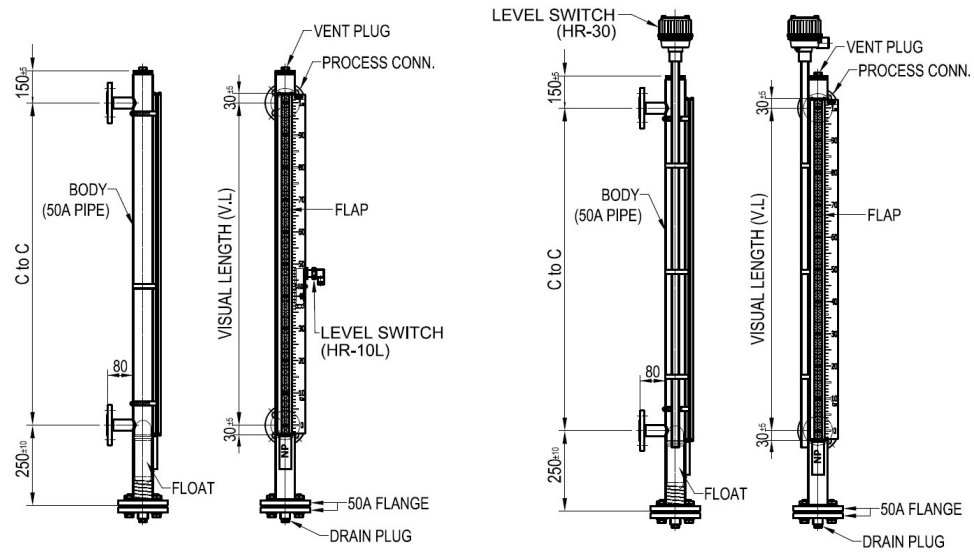
▶ **HLG-100F (Standard)**



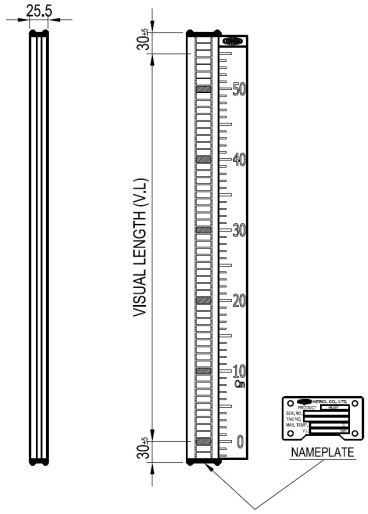
▶ **HLG-100FT (HLG-100F with Transmitter)**



▶ **HLG-100FS (HLG-100F with Switch)**



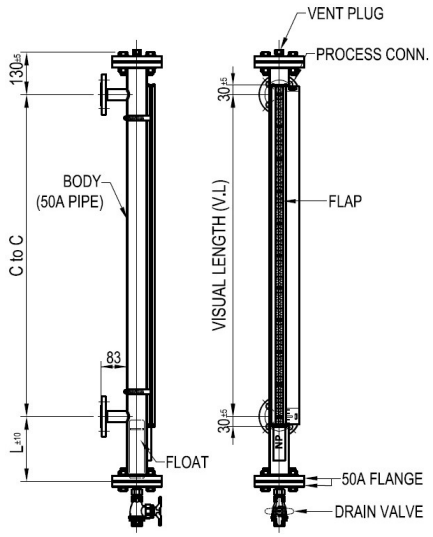
▶ **HI-MF (Indicator)**



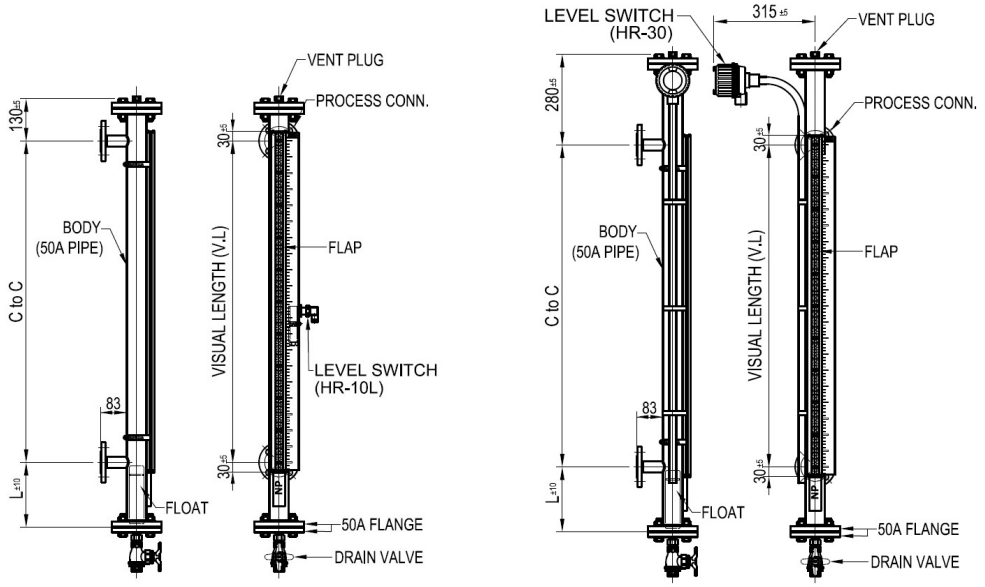
※ The scale unit of the image above is optional

Composition & Technical Information (Teflon Type)

▶ **HLG-100F (Standard)**



▶ **HLG-100FS (HLG-100F with Switch)**



NOTICE If you change the direction of HT-100R Cable Entry, Please be careful as may affect L/T performance.

※ The scale unit of the image above is optional

Precautions for Installation

■ Same standard and sized flange or screw should be used for the mounting.

■ Washers should be used to prevent a loosening between bolts and nuts.

■ Gasket should be used between flanges when mounting.
(Gasket should be selected suitable for the temp. of content and pressure of the tank)

■ In case with Transmitter, Power should be applied after completing of installation, and assembling of the cover.

■ In case with Switch, special attention is not required because the switch already assembled to the gauge at manufacturer's factory before supply to customer.

■ The lower process connection may have a support that holds the float and must be removed prior to installation.



■ If you change the direction of HT-100R Cable Entry, Please be careful as may affect L/T performance. (PAGE.5 Refer to product configuration and technical information image.)

Matters regarding User Training

Temperature of the medium in the tank should not exceed the maximum temperature described at the specification. And also, ambient temperature around product should not be over -20 ~ +60℃.

In case using Ex-proof version for Transmitter and/or Switch, below precaution should be considered.

Ex-Proof version

Ex-proof type of product is certified as pressure-resistant. So, it is not allowed to open the cover of product if explosive gas atmosphere exists.

Do not apply the Non Ex-proof product in an Ex-proof zone.

The Ex-proof product can be used where the environment and liquid inside the containers are of Zone 1 and Zone 2.



Warranty and Contact

■ **Warranty and Service**

Warranty of the product is 2 years after shipment and it can be warranted for malfunction occurred under use in normal condition, but it can be charged regardless of warranty period in case that after sales service is requested not for malfunction of product.

The After sales service can be requested through our website or headquarter.

■ **Headquarter · Factory · R&D Center**

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