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# INSTRUCTION MANUAL

## FLOAT TYPE LEVEL SWITCH

### HR-30 Series



Doc. no.: HR30\_IM\_Eng\_Rev.10.5

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WARNING

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



CAUTION

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



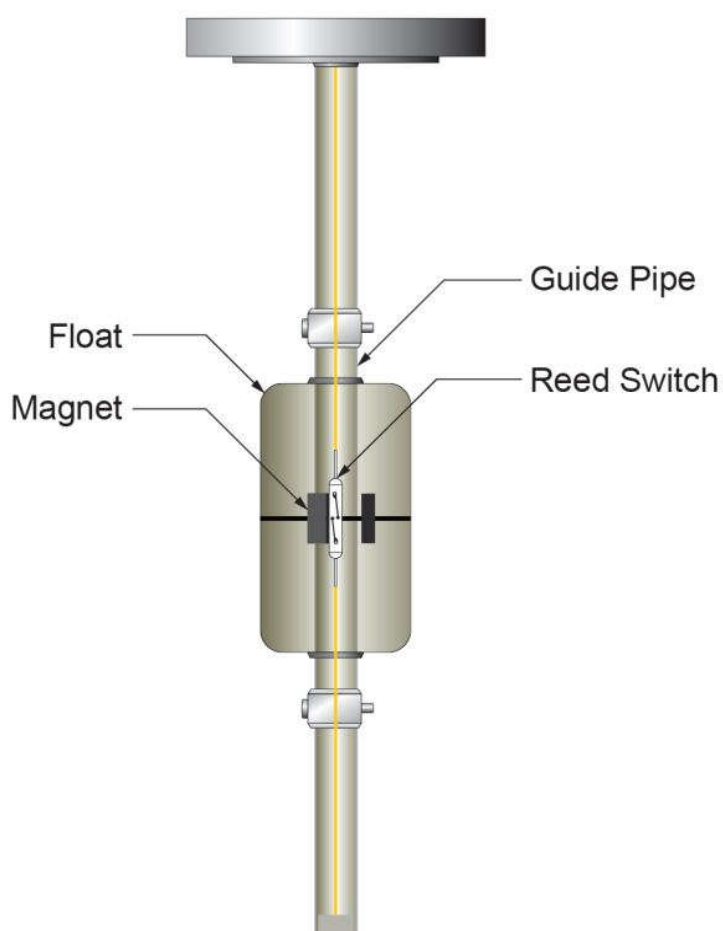
NOTICE

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

**Overview** HR-30 Series is a Float Type Level Switch which is basically operated with the usage of reed switch and magnet. It can be applied to various storage containers, including those in chemical factories, which are highly oxidative and corrosive. Also, it can be widely used in general industries with high reliability and long life spans.

**Operation Principle** As liquid level is changed in the tank, the float which is manufactured in accordance with the specific gravity of liquid moves upward or downward along the guide pipe with the same liquid level by buoyancy. The built-in magnet in the float activates reed switch which is located in the guide pipe and contact signal is out. Each alarm or H/L control with multiple setting points is available.

- Characteristics**
- Widely used to measure various liquid
  - Applicable to corrosive and acidic liquids with anti-corrosive material for the sensor (PVC, Teflon)
  - Applicable to explosion area (Ex-proof Version)
  - Long life cycle
  - Strong structure and high reliability



Product images are for reference only.

**Specifications****Stainless Steel (Direct Mounting)**

|                       |                                |                           |                                |                                  |
|-----------------------|--------------------------------|---------------------------|--------------------------------|----------------------------------|
| Model                 | HR-30                          | HR-30H                    | HR-30-Ex                       | HR-30H-Ex                        |
| Mounting              | Level Gauge(HLG-100F) Outside  |                           |                                |                                  |
| Temperature           | Max. 120℃                      | Max. 150℃                 | T6 (Max. 70℃)<br>T5 (Max. 80℃) | T4 (Max. 130℃)<br>T3 (Max. 150℃) |
| Switch Type           | Reed switch                    |                           |                                |                                  |
| Contact Form          | SPST, SPDT                     |                           |                                |                                  |
| Enclosure             | Weather-proof                  |                           | Ex-proof(Ex d IIC T6/T5)       | Ex-proof(Ex d IIC T4/T3)         |
| Wetted Part Material  | SUS316L                        |                           |                                |                                  |
| Housing ; Cable Entry | ABS ; PF<br>3/4"(F), IP65      | AL. ; PF<br>3/4"(F), IP65 | AL. ; PF 1/2"(F), IP66         |                                  |
| Combination Unit      | HLC-200A, HLC-300N, or HLC-400 |                           |                                |                                  |

**Stainless Steel (Flange Mounting)**

|                                   |                                   |                           |                                  |                                    |
|-----------------------------------|-----------------------------------|---------------------------|----------------------------------|------------------------------------|
| Stainless Steel (Flange Mounting) |                                   |                           |                                  |                                    |
| Model                             | HR-30S                            | HR-30SH                   | HR-30S-Ex                        | HR-30SH-Ex                         |
| Mounting                          | Flange                            |                           |                                  |                                    |
| Temperature                       | Max. 80°C                         | Max. 150°C                | T6 (Max. 70°C)<br>T5 (Max. 80°C) | T4 (Max. 130°C)<br>T3 (Max. 150°C) |
| Process Pressure                  | Up to 20kg/cm <sup>2</sup> (300#) |                           |                                  |                                    |
| Switch Type                       | Reed switch                       |                           |                                  |                                    |
| Contact Form                      | SPST, SPDT                        |                           |                                  |                                    |
| Enclosure                         | Weather-proof                     |                           | Ex-proof(Ex d IIC T6/T5)         | Ex-proof(Ex d IIC T4/T3)           |
| Wetted Part Material              | SUS316L                           |                           |                                  |                                    |
| Process Connection                | 80A JIS 10K                       |                           |                                  |                                    |
| Housing ; Cable Entry             | ABS ; PF<br>3/4"(F), IP65         | AL. ; PF<br>3/4"(F), IP65 | AL. ; PF 1/2"(F), IP66           |                                    |
| Combination Unit                  | HLC-200A, HLC-300N, or HLC-400    |                           |                                  |                                    |

**Stainless Steel (Screw Mounting)**

|                       |                                   |                           |                                |                                  |
|-----------------------|-----------------------------------|---------------------------|--------------------------------|----------------------------------|
| Model                 | HR-30C                            | HR-30CH                   | HR-30C-Ex                      | HR-30CH-Ex                       |
| Mounting              | Screw                             |                           |                                |                                  |
| Temperature           | Max. 80℃                          | Max. 150℃                 | T6 (Max. 70℃)<br>T5 (Max. 80℃) | T4 (Max. 130℃)<br>T3 (Max. 150℃) |
| Process Pressure      | Up to 20kg/cm <sup>2</sup> (300#) |                           |                                |                                  |
| Switch Type           | Reed switch                       |                           |                                |                                  |
| Contact Form          | SPST, SPDT                        |                           |                                |                                  |
| Enclosure             | Weather-proof                     |                           | Ex-proof(Ex d IIC T6/T5)       | Ex-proof(Ex d IIC T4/T3)         |
| Wetted Part Material  | SUS316L                           |                           |                                |                                  |
| Process Connection    | PT 2"(M)                          |                           |                                |                                  |
| Housing ; Cable Entry | ABS ; PF<br>3/4"(F), IP65         | AL. ; PF<br>3/4"(F), IP65 | AL. ; PF 1/2"(F), IP66         |                                  |
| Combination Unit      | HLC-200A, HLC-300N, or HLC-400    |                           |                                |                                  |

## PVC

|                       |                                |                        |
|-----------------------|--------------------------------|------------------------|
| Model                 | HR-30V                         | HR-30V-Ex              |
| Mounting              | Flange                         |                        |
| Temperature           | Max. 60°C                      |                        |
| Process pressure      | Up to 0.5kg/cm <sup>2</sup>    |                        |
| Switch type           | Reed switch                    |                        |
| Contact form          | SPST, SPDT                     |                        |
| Enclosure             | Weather-proof                  | Ex-proof (Ex d IIC T6) |
| Wetted part material  | PVC                            |                        |
| Process connection    | 80A JIS 10K                    |                        |
| Housing ; Cable entry | ABS ; PF 3/4"(F), IP65         | AL. ; PF 1/2"(F), IP66 |
| Combination unit      | HLC-200A, HLC-300N, or HLC-400 |                        |

## TEFLON

|                       |                                |                          |                        |            |
|-----------------------|--------------------------------|--------------------------|------------------------|------------|
| Model                 | HR-30T                         | HR-30TH                  | HR-30T-Ex              | HR-30TH-Ex |
| Mounting              | Flange                         |                          |                        |            |
| Temperature           | Max. 80°C                      | Max. 150°C               | Max. 80°C              | Max. 150°C |
| Process pressure      | Up to 0.5~3kg/cm <sup>2</sup>  |                          |                        |            |
| Switch type           | Reed switch                    |                          |                        |            |
| Contact form          | SPST, SPDT                     |                          |                        |            |
| Enclosure             | Weather-proof                  |                          | Ex-proof (Ex d IIC T6) |            |
| Wetted part material  | SUS316L + TEFLON               |                          |                        |            |
| Process connection    | 80A JIS 10K                    |                          |                        |            |
| Housing ; Cable entry | ABS ; PF<br>3/4"(F), IP65      | AL.; PF<br>3/4"(F), IP65 | AL. ; PF 1/2"(F), IP66 |            |
| Combination unit      | HLC-200A, HLC-300N, or HLC-400 |                          |                        |            |



The HR-30 Series recommends working with our Combination Unit as arc phenomena may cause malfunction and damage to parts, and guides you that you cannot be responsible for the warranty caused by failure to meet them.

### Specifications Applied to the Float

| Float    | Environment |                              |      |          |     |         |            |
|----------|-------------|------------------------------|------|----------|-----|---------|------------|
|          | Temp. (°C)  | Press. (kg/cm <sup>2</sup> ) | Acid | Alkaline | Oil | Solvent | Liquid gas |
| SUS316L  | -20 ~ +150  | Up to 20                     | △    | ○        | ○   | ◎       | △          |
| PVC      | -10 ~ +60   | 0.5                          | ○    | ○        | X   | △       | X          |
| TEFLON   | -20 ~ +150  | Up to 0.5~3                  | ◎    | ◎        | X   | ○       | △          |
| NBR      | -48 ~ +60   | Up to 20                     | X    | △        | ◎   | △       | ○          |
| TITANIUM | -20 ~ +150  | Up to 10                     | X    | △        | ◎   | △       | ○          |

Note: ◎ – Excellent, ○ – Good, △- Acceptable, X- Not good



The application specification may vary depending on the specific measurement and the specific gravity.

**Contact  
Point  
Capacity**

SPST

| Float      | Enclosure     | Max. Switch Voltage | Max. Switch Current |
|------------|---------------|---------------------|---------------------|
| 1"         | Weather-proof | DC 24V              | 0.5A                |
|            | Ex-proof      |                     |                     |
| 2", 3", 4" | Weather-proof | AC 250V / DC 24V    | 1A/0.5A             |
|            | Ex-proof      |                     |                     |

SPDT

| Float  | Enclosure     | Max. Switch Voltage | Max. Switch Current |
|--------|---------------|---------------------|---------------------|
| 1", 2" | Weather-proof | DC 24V              | 0.25A               |
|        | Ex-proof      | DC 24V              | 0.2A                |
| 3", 4" | Weather-proof | AC 250V / DC 24V    | 1A/0.5A             |
|        | Ex-proof      |                     |                     |

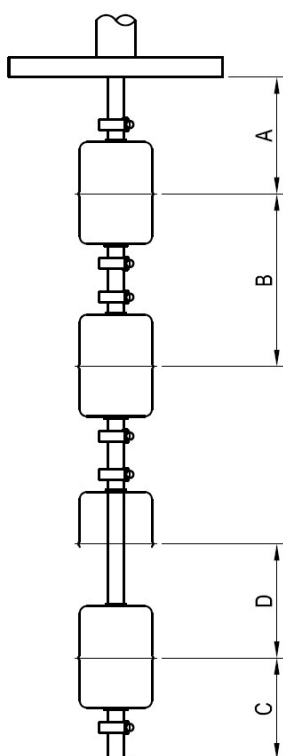
Latching Switch

| Float  | Enclosure     | Max. Switch Voltage | Max. Switch Current |
|--------|---------------|---------------------|---------------------|
| 1", 2" | Weather-proof | DC 24V              | 0.25A               |
|        | Ex-proof      |                     |                     |
| 3", 4" | Weather-proof | AC 250V / DC 24V    | 1A/0.5A             |
|        | Ex-proof      | AC 110V / DC 24V    |                     |

**Contact  
Form**

| Float | Max. Contact form |        |
|-------|-------------------|--------|
| 1"    | 4-SPST            | 2-SPDT |
| 2"    | 6-SPST            | 3-SPDT |
| 3"    | 6-SPST            | 4-SPDT |
| 4"    | 6-SPST            | 4-SPDT |

### Minimum Section Distance



### Stainless Steel

| Standard Type | Float Size |         |     |     |
|---------------|------------|---------|-----|-----|
|               | 1"         | 2"      | 3"  | 4"  |
| Section A(mm) | 40         | 50      | 100 | 100 |
| Section B(mm) | 55         | 80      | 160 | 170 |
| Section C(mm) | 40(100)    | 50(100) | 100 | 100 |

| Latching Type | Float Size |    |    |    |
|---------------|------------|----|----|----|
|               | 1"         | 2" | 3" | 4" |
| Section D(mm) | 20         |    |    |    |

### PVC

| Standard Type | Float Size |     |     |
|---------------|------------|-----|-----|
|               | 2"         | 3"  | 4"  |
| Section A(mm) | 60         | 100 | 100 |
| Section B(mm) | 110        | 150 | 150 |
| Section C(mm) | 60(100)    | 100 | 100 |

| Latching Type | Float Size |    |    |
|---------------|------------|----|----|
|               | 2"         | 3" | 4" |
| Section D(mm) | 20         |    |    |

### TEFLON

| Standard Type | Float Size |         |     |     |
|---------------|------------|---------|-----|-----|
|               | 1"         | 2"      | 3"  | 4"  |
| Section A(mm) | 40         | 50      | 100 | 100 |
| Section B(mm) | 55(120)    | 80(120) | 180 | 180 |
| Section C(mm) | 40(100)    | 50(100) | 100 | 100 |

| Latching Type | Float Size |    |    |    |
|---------------|------------|----|----|----|
|               | 1"         | 2" | 3" | 4" |
| Section D(mm) | 20         |    |    |    |

A = Upper Dead Band: Minimum length which cannot be measured from the bottom of flange

B = Minimum distance between two setting points

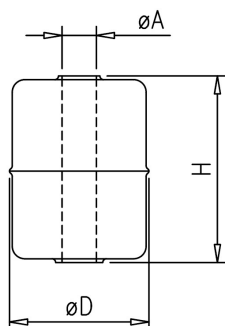
C = Lower Dead Band: Minimum length which cannot be measured from the end of guide pipe

D = Minimum distance between two setting points for detecting by one float

( ) = Minimum distance between two setting points for A/B alarm (@Section B)

Lower Dead Band for latching type (@Section C)

**Float  
Application  
Table**



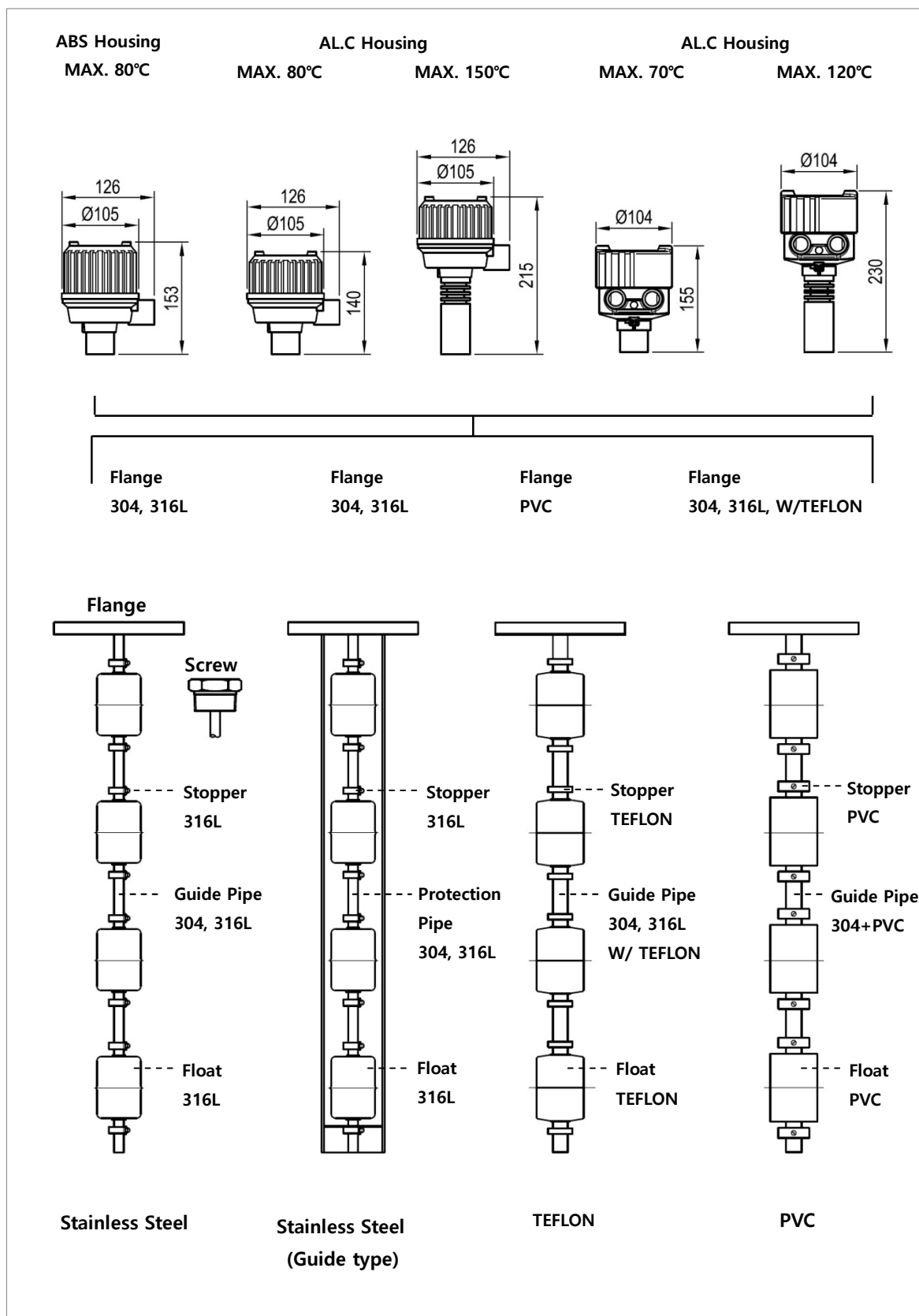
| Product          | Size | Dimensions(mm) |     |       | Guide Tube | Material | (*)S.G Range |
|------------------|------|----------------|-----|-------|------------|----------|--------------|
|                  |      | D              | H   | A     |            |          |              |
| HR-30S<br>HR-30C | 1"   | Ø28            | 28  | Ø9.5  | Ø8         | 316L     | 0.9~1.4      |
|                  |      | Ø26            | 15  | Ø9.5  | Ø8         | Foam NBR | 0.8~1.3      |
|                  | 2"   | Ø49            | 50  | Ø15.5 | Ø12.7      | 316L     | 0.7~1.0      |
|                  |      | Ø50            | 45  | Ø20   | Ø15.8      | Foam NBR | 0.6~0.9      |
|                  |      | Ø42            | 50  | Ø15   | Ø12.7      | 316L     | 0.8~1.3      |
| HR-30S           | 3"   | Ø73            | 105 | Ø23.5 | Ø21.7      | 316L     | 1.0~1.5      |
|                  |      | Ø73            | 108 | Ø23   | Ø21.7      | Titanium | 0.6~0.9      |
|                  |      | Ø65            | 90  | Ø25   | Ø21.7      | 316L     | 0.9~1.5      |
|                  | 4"   | Ø95            | 119 | Ø30   | Ø25.4      | 316L     | 0.8~1.3      |
|                  |      | Ø95            | 103 | Ø23   | Ø21.7      | Titanium | 0.6~0.8      |
|                  |      | Ø95            | 118 | Ø23   | Ø21.7      | Titanium | 0.5~0.6      |
|                  |      | Ø80            | 80  | Ø28   | Ø25.4      | Foam NBR | 0.5~0.7      |
|                  |      |                |     |       |            |          |              |

| Product | Size | Dimensions(mm) |     |       | Guide<br>Tube | Material | (*)S.G Range |
|---------|------|----------------|-----|-------|---------------|----------|--------------|
|         |      | D              | H   | A     |               |          |              |
| HR-30V  | 2"   | Ø49            | 60  | Ø20   | Ø18           | PVC      | 1.0~1.6      |
|         | 3"   | Ø76            | 110 | Ø31.5 | Ø26           |          | 1.0~1.6      |
|         | 4"   |                |     |       |               |          |              |

| Product | Size | Dimensions(mm) |     |       | Guide Tube | Material | (*)S.G Range |
|---------|------|----------------|-----|-------|------------|----------|--------------|
|         |      | D              | H   | A     |            |          |              |
| HR-30T  | 1"   | Ø26            | 30  | Ø10.5 | Ø10        | TEFLON   | 1.1~1.7      |
|         |      | Ø28            | 35  | Ø11   | Ø10        | TEFLON   | 1.1~1.7      |
|         |      | Ø28            | 30  | Ø11   | Ø10        | PP       | 1.0~1.7      |
|         | 2"   | Ø45            | 50  | Ø17   | Ø15        | TEFLON   | 0.9~1.6      |
|         |      |                |     |       |            |          | 1.1~1.7      |
|         | 3&4" | Ø69            | 96  | Ø23.5 | Ø21        | TEFLON   | 0.8~1.3      |
|         |      |                |     |       |            |          | 0.9~1.5      |
|         | 4"   | Ø85            | 100 | Ø33   | Ø28        | TEFLON   | 1.1~1.7      |
|         |      |                |     |       |            |          |              |

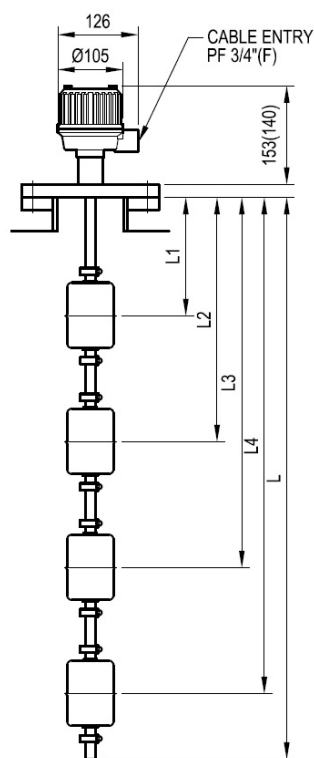
(\*)S.G: Specific Gravity

**Product  
Composition**

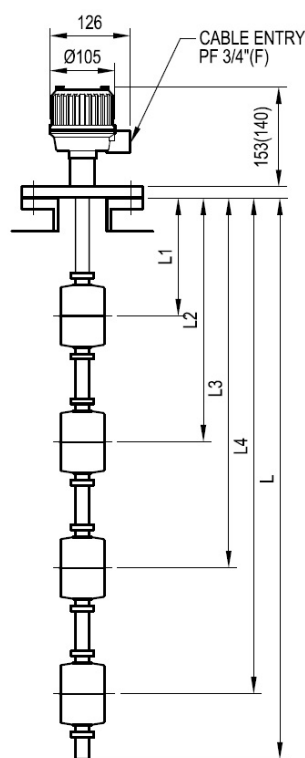


Dimension

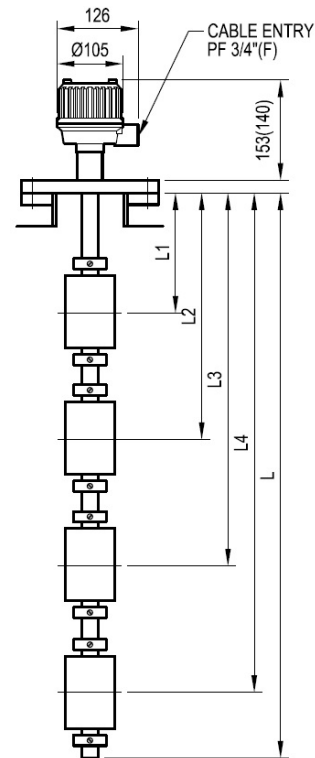
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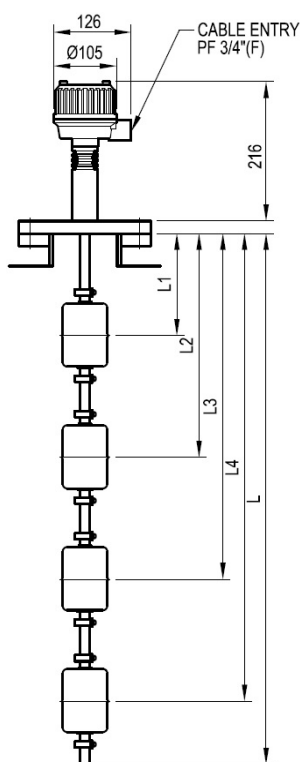
HR-30S



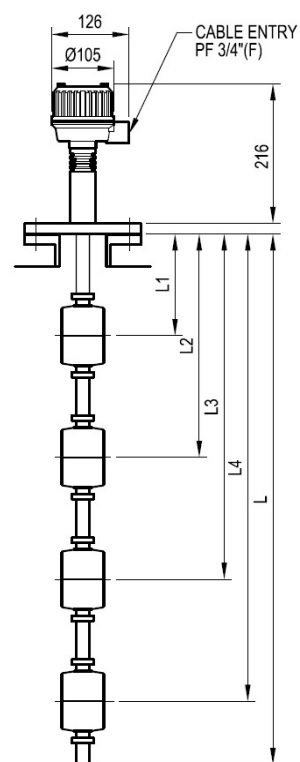
HR-30T



HR-30V

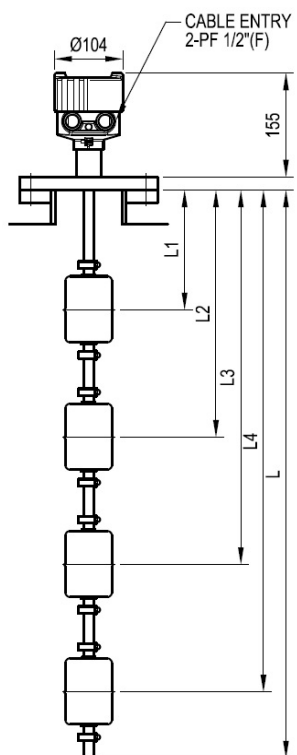


HR-30SH

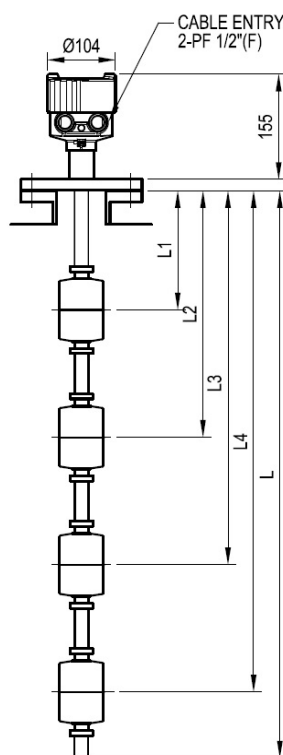


HR-30TH

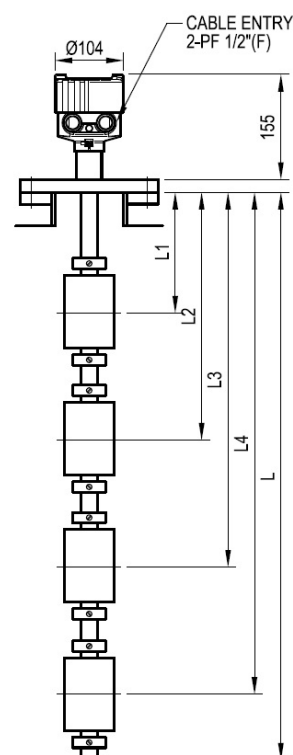
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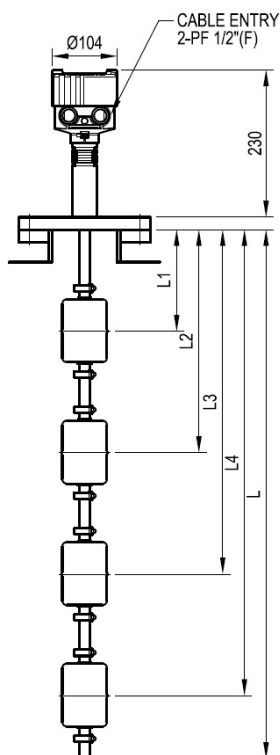
HR-30S-EX



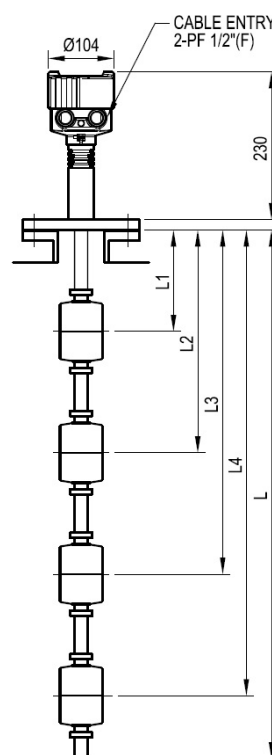
HR-30T-EX



HR-30V-EX

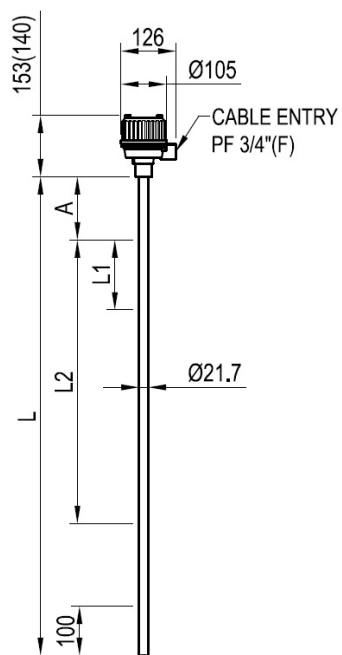


HR-30SH-EX

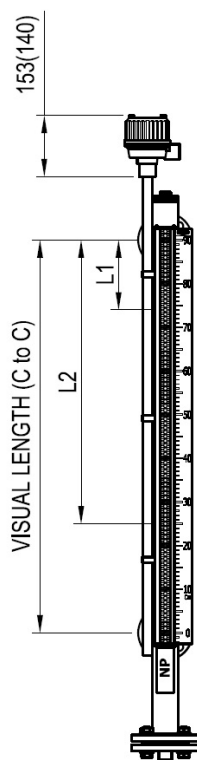


HR-30SH-EX

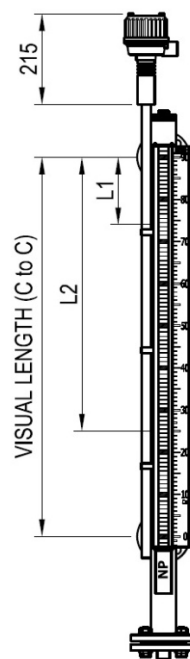
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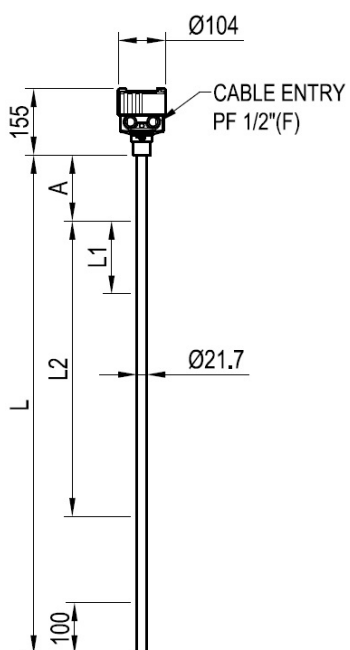
HR-30



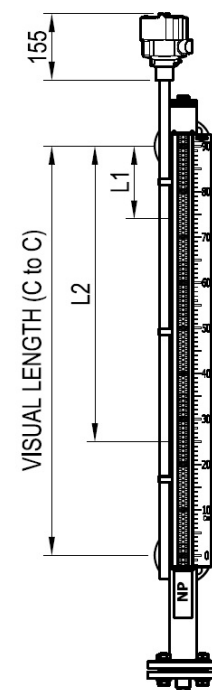
HR-30+HLG-100F



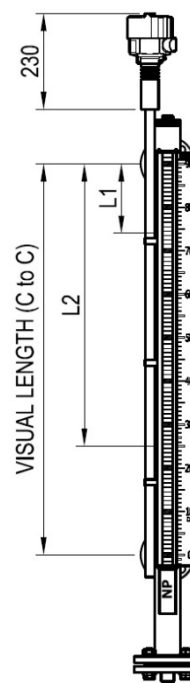
HR-30H+HLG-100F



HR-30-Ex



HR-30-Ex+HLG-100F



HR-30H-Ex+HLG-100F



VENT PLUG

: A=180mm

NOTICE

VENT VALVE /w PLUG : A=250mm

**Maintenance**

The major parts of HR-30 Series to be inspected are float and reed switch. The life span of key parts depends on user's environment and can be used optimally through periodic check. Therefore, regular inspection ensures optimal performance of product, so take regular inspection and maintenance at least every year. In addition, check for the exterior of the product like visual damage. If there is scale caused by measurements, it shall be removed for the smooth operation of the float. Reed switch can simply be inspected using a Digital Multimeter as follow.

- Select the buzzer of the Digital Multimeter and connect it to one of product's terminal blocks, E1~E4, and the COM terminal.
- If the buzzer rings when the float reaches the upper/lower contact points, it works normally.
- If the contact state is checked by resistance, the Digital Multimeter indicates 0Ω by moving the float, it is normal to the N.C (Normal Close), and the N.O (Normal Open) indicates infinite.



**Please turn off the power of the product for maintenance.**

**Precautions  
for Removal**

- Check the level and presence of measurements in the tank before removing it.
- Wear gloves when removing it, to prevent a burn.
- Disassemble work shall be done with the power off.
- If there is explosive gas atmosphere, do not open the cover.
- Unlock the lock key (Set screw) before removing the cover. (Ex-proof)
- Make sure that any O-ring or gasket is not damaged while opening or closing the cover of product.

**Precautions  
for  
Installation**

- Use the same standard flange or screw.
- Make sure to insert washers between bolts and nuts to prevent loosening.
- When you attach the product to a hopper, make sure that it is as bonded as possible by means of tools.
- Make sure to insert gaskets between flanges. (Select the gaskets in consideration of temperature of content and pressure of vessel.)
- Install an Ex-proof product only in an Ex-proof zone.
- After the installation is complete and the cover of the product is assembled, power it on.



**Please do not apply high impact to the product.**

**Precautions  
for Inserted  
External Wire  
(Ex-proof)**

- Use the cable gland connection or metal pipe line lead-in on the wire inlet, and use a product with equivalent Ex-proof certificate to connect it with the external line lead-in method.
- For non-use external wire inlet, use a closed plug that passes safety certificate above equivalent performance with the product.

**Precautions  
for  
Grounding  
(Ex-proof)**

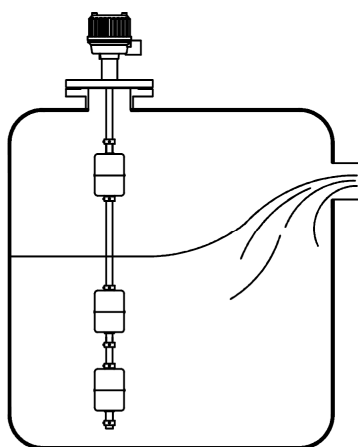
- The grounding has an external and an internal grounding. When connecting to an external ground, the ground wire shall be 4mm<sup>2</sup> (4mmSQ).
- The internal grounding wire shall be the same size as the power line, and the size of the internal grounding terminal lug shall be 3.1mm<sup>2</sup> (3.1mmSQ). If the power line is larger than 3.1mm<sup>2</sup>, connect the ground wire without terminal lug.



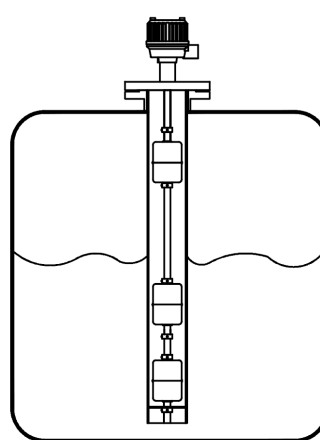
**Make sure to insert a washer if the terminal lug is removed from ground terminal and then re- connected. (Loosening prevention)**

**Precautions  
for  
Attachment**

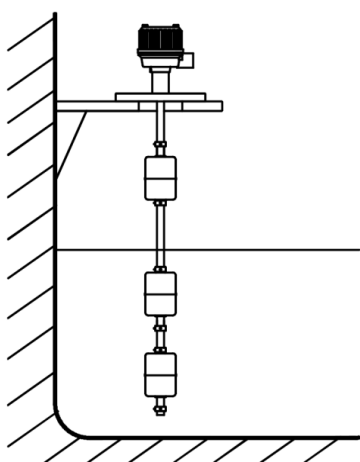
Below recommendation shall be considered when installation.



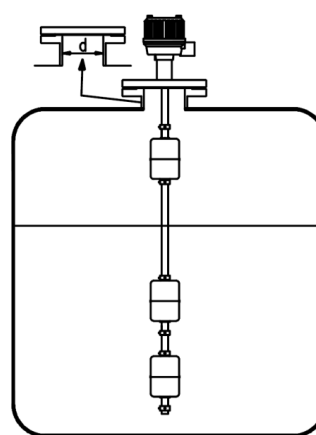
Product shall be installed at the place far from inlet in order to avoid the malfunction.



Protection tube shall be applied if there is a flow or slopping of the medium in the tank.



Bracket shall be installed with the product when the installation on the concrete as per above figure.

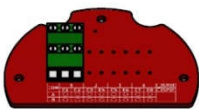
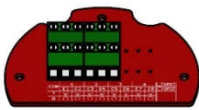
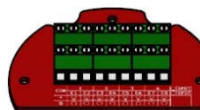





Inner diameter "d" of tank nozzle shall be larger than the outer diameter of float as per above figure.

## Wiring

The terminals of the products are composed according to contact points and shall be connected as follows.

- Open the cover and insert the cable through the wire inlet.
- Identify the contact points (E1, E2 ...) on the terminal block and connect the cable.

|               |                                                                                   |         |                                                                                    |         |                                                                                     |         |
|---------------|-----------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------|---------|-------------------------------------------------------------------------------------|---------|
| Weather-Proof |  |         |  |         |  |         |
| Ex-Proof      |  |         |  |         |  |         |
|               | SPST                                                                              | 1F ~ 2F | SPST                                                                               | 3F ~ 5F | SPST                                                                                | 6F      |
|               | SPDT                                                                              | 1F      | SPDT                                                                               | 2F      | SPDT                                                                                | 3F ~ 4F |

### ■ Contact Form notation

| COM | 1                     |                       | 2                     |                       | 3                     |                       | 4                     |                       | <input type="radio"/> SPDT |
|-----|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------|
|     | E1                    | E2                    | E3                    | E4                    | E5                    | E6                    | E7                    | E8                    | <input type="radio"/> SPST |
| A   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                            |
| B   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |                            |

### Ex) 3-SPST A Contact order indication

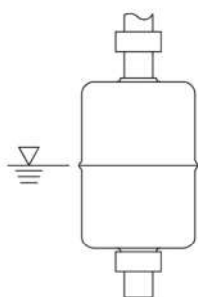
| COM | 1  |    | 2  |    | 3  |    | 4  |    | <input checked="" type="radio"/> SPDT<br><input type="radio"/> SPST |
|-----|----|----|----|----|----|----|----|----|---------------------------------------------------------------------|
|     | E1 | E2 | E3 | E4 | E5 | E6 | E7 | E8 |                                                                     |
| A   | ●  | ●  | ●  | ○  | ○  | ○  | ○  | ○  |                                                                     |
| B   | ○  | ○  | ○  | ○  | ○  | ○  | ○  | ○  |                                                                     |

### Ex) 3-SPDT order indication

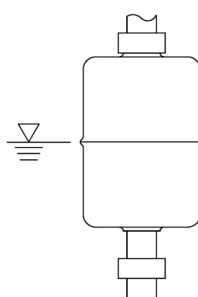
| COM | 1  |    | 2  |    | 3  |    | 4  |    | SPD |
|-----|----|----|----|----|----|----|----|----|-----|
|     | E1 | E2 | E3 | E4 | E5 | E6 | E7 | E8 | SPS |
| A   | ●  | ○  | ●  | ○  | ●  | ○  | ○  | ○  |     |
| B   | ○  | ●  | ○  | ●  | ○  | ●  | ○  | ○  |     |

## Matters regarding Operation and Use

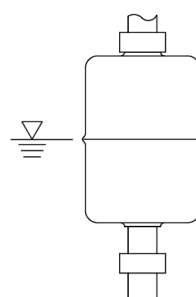
The Product can be manufactured to N.O (Contact with A)/N.C (Contact with B) on orders from customers, and if there are no specific requirements for them, it can be manufactured to N.O (Contact with A). The shape of the contacts is shown below.



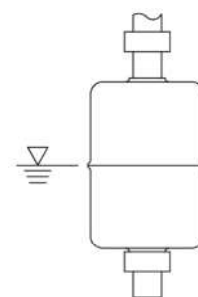
Contact with A (OFF)



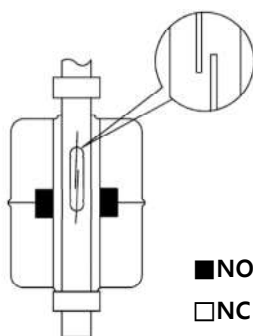
Contact with A (ON)



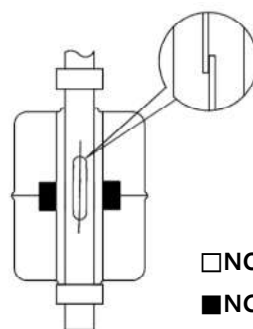
Contact with B (OFF)



Contact with B (ON)



Switch ON, when the level rises. (Contact with A)



Switch ON, when the level drops. (Contact with B)



**Please do not move the stopper holding the float at random.**

## Safety and Environment

### ■ Precautions for Use

- Make sure to connect the product and vessel using required tools for sure.
- Keep the lock key safe and make sure that it is locked.
- Do not apply high impact to the product.

### ■ Precautions for Wiring

- Make sure to wire contacts correctly (refer to Wiring)
- Internal ground (inside product housing) and external ground shall be connected.
- Pay attention to prevent electric shock.

### ■ Disposal of Product

- Make sure to separate the amplifier and main unit from housing before disposing the products. Also, the amplifier shall be detached and discard the metal and non-metallic materials. No part (ex. Mercury switch) has influence on the environment, so no special attention is required.

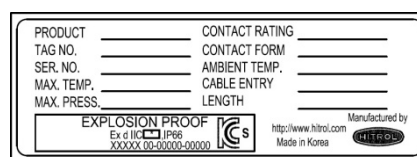
## Marking

### ■ Product Identification

- The product identification mark is attached onto the housing and shows the model name, serial number, working temperature, working pressure, and matters regarding output. The serial number is a unique manufacturing number for the identification of products.



<Weather-proof>



<Ex-proof>

## User Training

The fluid temperature of the container shall be up to 80°C for Weather-proof type. For high temperature, the fluid temperature shall not exceed 150°C and the surface temperature of the product installed in the container shall not exceed 85°C(T6 grade).

In addition, make sure that the ambient temperature of housing is kept at -20°C ~ +60°C. (However, product with PVC sensor part, the fluid temperature of the container is limited to 60°C.) An Ex-proof product is a pressure-resistant and Ex-proof type, so never open the cover during operation. Ex-proof products are designed according to Article 34 of the Industrial Safety and Health Act and Article 58.4 of the Enforcement Rules of the same Act.



**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 2**

## Warranty and Contact

### ■ Warranty and Service

This product is subject to the warranty for 2 years of shipment and unpaid service will be provided for any damage found under normal operating conditions. If it is not about the failure of product, the service charge will be payable.

You can request A/S at our website or by contacting our headquarters.



**PTFE Float and Tube have a warranty period of one year after the product is shipped.**

### ■ Headquarters . Factory . Laboratory Contact Number

ADDRESS: HITROL CO., LTD 141, Palhakgol-gil, Jori-eup, Paju-si, Gyeonggi-do, Korea

T E L : 031-950-9700 (Headquarters & A/S)

F A X : 031-943-5600 (Headquarters & A/S)