CAPACITANCE TYPE LEVEL SWITCH

HCC-95P Series

2 YEARS WARRANTY

ISO 14001 ISO 9001 ASME

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Always The Best Solution

HITROL CO., LTD.

Overview

HCC(HPC)-95P Series is a Capacitance Type Level Switch and it detects a level of medium by sensing of capacitance value change caused by dielectric constant of each medium.

Characteristics

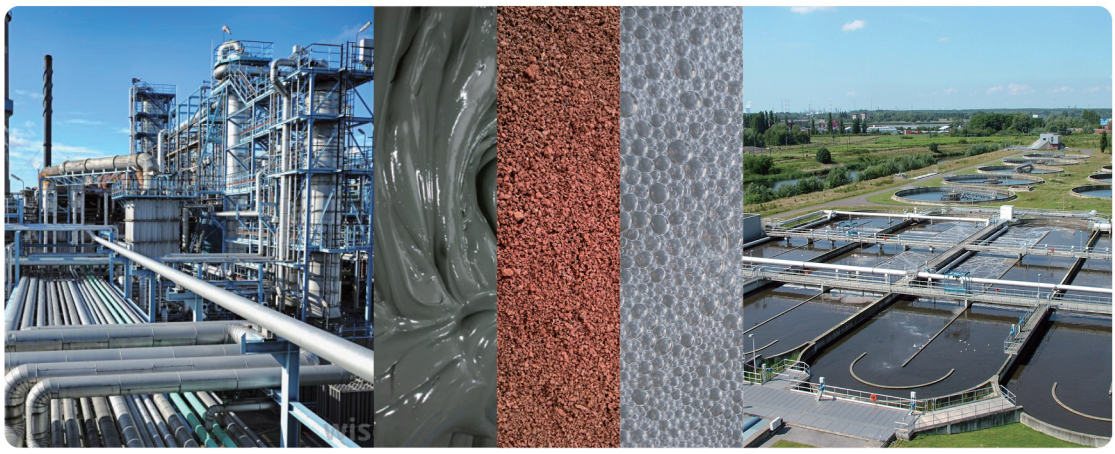
- Widely used for various type of medium such as solid, powder and liquid
- Applicable to the medium which has low dielectric constant
- High sensitivity and stability
- Semi-permanent life cycle due to moveless parts
- Easy installation and calibration
- Operating can be checked at the site
- Available to the tank which has an agitator
- Various sensor types can be applied according to installation condition at the site.

Operation Principle

When an air surrounding the electrode probe is replaced by other medium, the capacitance value is changed according to the dielectric constant of the medium. Once the electrode probe is touched by the medium, the capacitance value is increased and the level switch activates relay output by converting of the changed capacitance value to the electronic signal.

Applications

- Liquid
  Various fuels, Solvent, Acids, Alkali, Liquefied gas and Pure water, etc.
- Mixes Liquid
  Industrial sewage, Urban sewage, Agricultural chemicals, Various sludge and aqueous solutions, etc.
- Interface
  Oil and water, Mercury in the water, Alcohol and acid, Sediment in liquid, Liquid and foam, etc.
- Material
  Clay, Sludge, Varnish, Paint, Grease, Adhesive, Paraffin, Cheese and Honey, etc.
- Powder
  Plastic powder, Rock powder, Carbon, Iron chloride powder, Silt, Sugar and Flour, etc.
- Granule
  Plastic pellet, Metallic pellet, Chemical fertilizer, Medicine, Grain and Food, etc.
- Lump
  Coal, Lime stone, Ore and Aggregate, etc.



CAPACITANCE TYPE LEVEL SWITCH
HCC-95P Series

Specification

▶ HCC-95P Series (Weather Proof Version)

Model	HCC-95P	HCC-95PW	HCC-95PH	HCC-95PWH
Process Connection	Screw PT 1″(std.)			
Process Temperature	Max. 80°C		Max. 150°C	
Process Pressure	10 kg/cm²(std.), Max. 20 kg/cm²			
Probe Type	Rod	Rope	Rod	Rope
Enclosure	Weather Proof (PBT: IP65, Aluminum:IP66)		Weather Proof (IP66)	
Housing Material	PBT(std.)		Aluminum(std.)	
	Aluminum(opt.)			
Sensor Material	SUS 316L + Teflon (Rope: SUS 316)			
Cable Entry	PF 1/2″ (F) (std.)			
Length	Rod : 300mm (std.), Max. 2.5m Wire : 1,000mm (std.), Max. 10m			
Power Source	AC 90~240V @50/60Hz, DC 24V			
Output	1-DPDT			
Contact Rating	AC 250V 5A, DC 30V 5A			

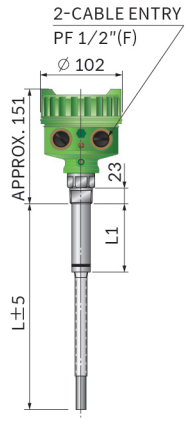
▶ HCC-95P-Ex / HPC-95P Series (Ex-Proof Version)

Model	HCC-95P-Ex	HCC-95PW-Ex	HCC-95PH-Ex	HCC-95PWH-Ex
Enclosure (Dust-Proof)	Ex tD A21 T80°C, IP66		Ex tD A21 T150°C, IP66	
Enclosure (Ex-Proof)	Ex d IIC T5 Max. 80°C, IP66		Ex d IIC T3 Max. 150°C, IP66	
	Ex d IIC T6 Max. 70°C, IP66		Ex d IIC T4 Max. 130°C, IP66	
Model	**HPC-95P**	**HPC-95PW**	**HPC-95PH**	**HPC-95PWH**
Enclosure (Ex-Proof)	Ex d IIC T6, IP65		Ex d IIC T4, IP65	
Mounting	Screw PT 1″(std.)			
Process Temperature	Max. 80°C		Max. 150°C	
Process Pressure	10kg/cm²(std.), Max. 20kg/cm²			
Probe Type	Rod	Rope	Rod	Rope
Housing Material	Aluminum			
Sensor Material	SUS 316L + Teflon (Rope: SUS 316)			
Cable Entry	PF 1/2″(F) (HCC-95P-Ex Series std.) PF 3/4″(F) (HPC-95P Series std.)			
Length	Rod: 300mm(std.), Max. 2.5m Wire: 1,000(std.), Max. 10m			
Power Source	AC 90~240V @ 50/60Hz, DC 24V			
Output	1-DPDT			
Contact Rating	AC 250V 5A, DC30V 5A			

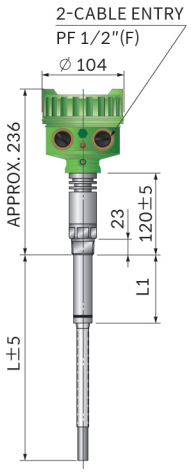
▶ **Order Code** can be printed at our website (www.hitrol.com)

Dimension

HCC-95P



HCC-95PH



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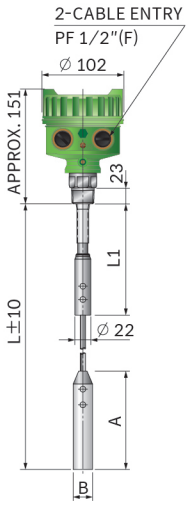

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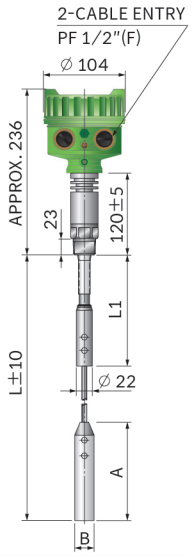
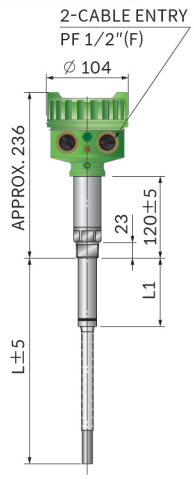


HCC-95P-Ex



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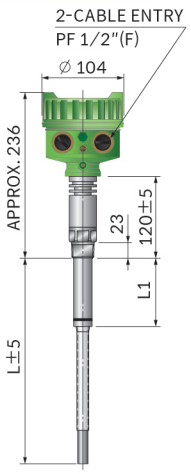

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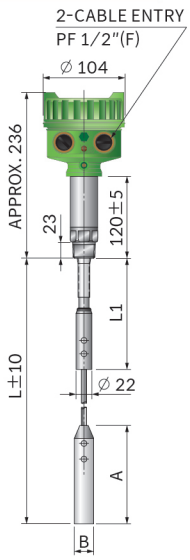

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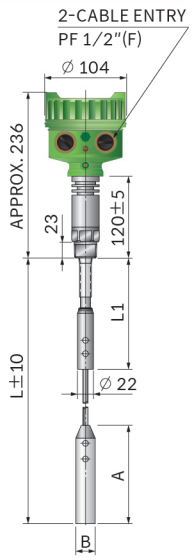
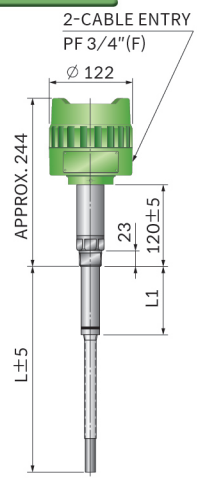


HPC-95P



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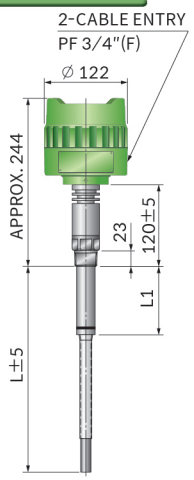

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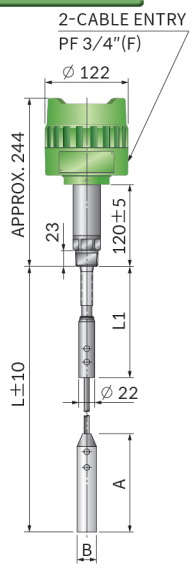
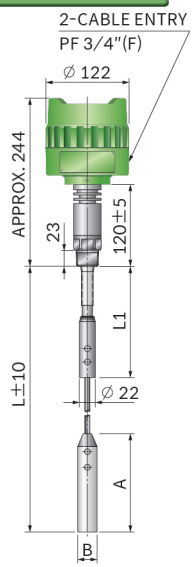


HPC-95PWH



■ Actual product may have a tolerance slightly.

Installation

■ Below recommendation should be considered when installation.

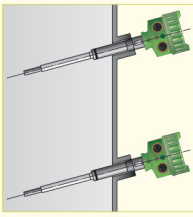
HCC-95P(HPC-95P) Series is generally used for high or low alarm with the installation on the side or top of the tank and can be also applied to metallic or synthetic resin tank because the ground electrode is installed in the level switch and measurement is not affected by tank material.

1. Top Mounting Installation

This installation is not much affected by build-up of the medium on the probe but the sensitivity is lower than side mounting because it measures the level by the end of probe only, and it is not suitable to detect a level of the medium which has a low dielectric constant.

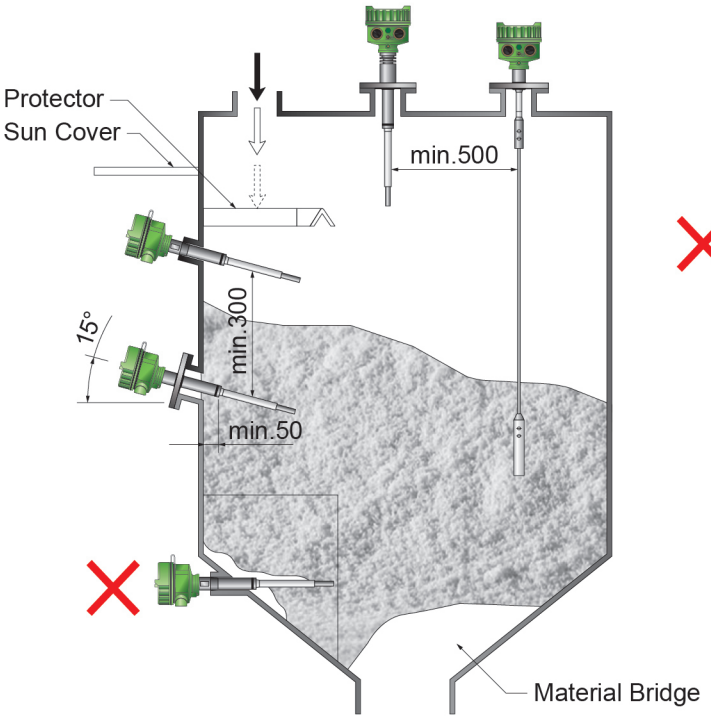
2. Side Mounting Installation

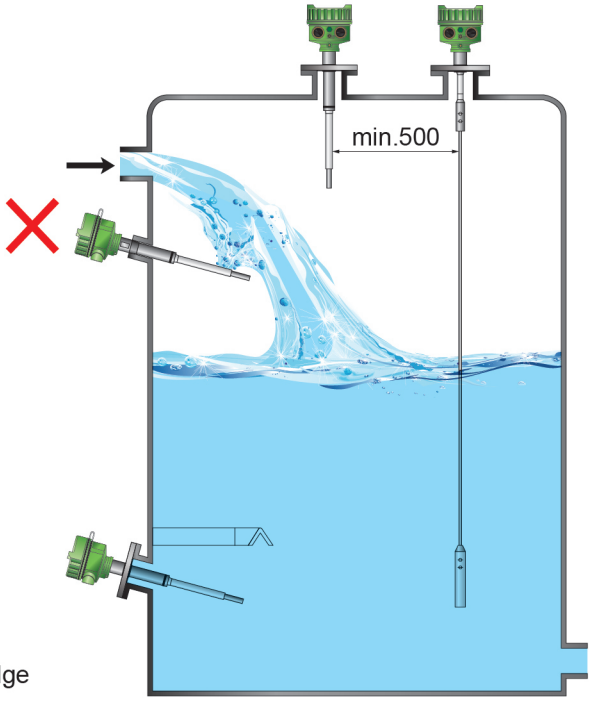
Highly sensitive measurement is available because it measures the level by whole of probe but it should be installed slopingly, forwarding of sensor to the bottom in order to avoid a malfunction caused by build-up of the medium on the sensing probe.



· If the probe length is below than 300mm
– Min. 250mm distance between sensors

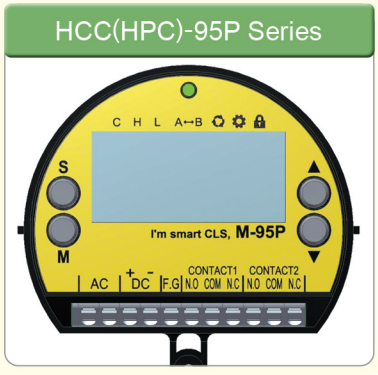
· If the probe length is below than 500mm
– Min. 350~400mm distance between sensors





▶ *Wiring*

- Wiring the AC (90~240V) or DC (24V) according to specification of power supply.
- When wring of DC power supply, +, - should be wired correctly.
- Wiring should not be carried out when the power is On.
- The standard is DPDT and the COM and N.O terminal can be used for High Alarm.
- The external ground must be completely connected.



CAPACITANCE TYPE LEVEL SWITCH

HCC-95P Series

01 Applicable to various mediums (Solid, Powder and Liquid)

02 Digital Operating System based on Microprocessor

03 Easy Setting

04 Convenient Product Operation Status Check! LCD DISPLAY MONITORING

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* Design of product can be changed for upgrade without notice.