

VIBRATION TYPE LEVEL SWITCH

HTM(HPV)-20N Series



2 YEARS WARRANTY



ISO 9001



ISO 14001

ASME



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Always The Best Solution

HITROL CO., LTD.

Overview

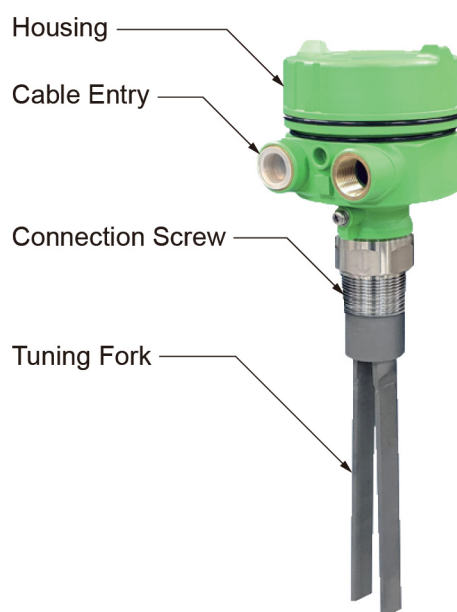
HTM(HPV)-20N Series is a Vibration Type Level Switch which measures a level of solid and powder and is commonly called a Tuning Fork Type. It consists of a membrane and stainless steel tuning forks and is mainly used for alarm or process control by detecting of powder and particle.

Characteristics

- Various kinds of powder or solid levels can be detected.
- Suitable to measure powder and big particle.
- Strong structure and applicable to heavy weight medium due to stainless steel vibration part.
- Applicable to explosion and dust area (Ex-Proof and Dust-Proof version)
- Digital Operating System based on Microprocessor.
- Easy setting, stable operating and improved maintenance by dial adjustment.
- Monitoring function through laptop connecting using USB port of PC.
- Monitoring function through Smartphone(Android OS) connecting using OTG.
- Easy setting and maintenance with Key Button
- Measurement Range Setting is available.
- Adjustment of Delay and Return Time of Relay Contact is available
- Easy Controlling of Relay Contact (NO, NC)
- AC Free voltage and DC 24V both are available.
- Operating can be checked through LED indicator.

Operation Principle

Tuning forks of the level switch are continuously vibrated by an oscillator of piezo sensor. When the medium contacts to the tuning forks, the oscillator of piezo sensor is stopped by decreased vibration frequency. At this very moment, level switch detects the changed frequency and produce a relay output signal.



Control Part

Specification

► Standard Version

Model	HTM-20N-A	HTM-20NH-A	HTM-20N-B	HTM-20NH-B	HTM-20N-C
Mounting	Screw		Screw, Flange		
Process Temperature	Max. 80°C	Max. 120°C	Max. 80°C	Max. 120°C	Max. 60°C
Process Pressure	Max. 10kg/cm ²				Max. 2 kg/cm ²
Power Source	AC 90V~240V, 50/60Hz (std.) / DC24V (opt.)				
Output Signal	DPDT				
Enclosure	Weather Proof (PBT: IP65, AL.C: IP65 or IP66)				
Approvals	KC, CE				
Wetted Part Material	SUS 316L + SCS 14				
Process Connection	PT 1-1/2" (M) (std.)				
Housing Material	PBT (opt. AL.C)				
Cable Entry	2-PF 1/2" (F) (std.)				
Installation	Side or Top				Top
Contact Rating	AC 250V 5A, DC 30V 5A				

► Ex-Proof Version

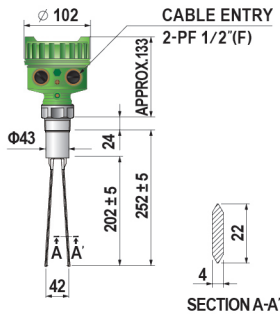
Model	HPV-20N-A	HPV-20NH-A	HPV-20N-B	HPV-20NH-B
Mounting	Screw		Screw, Flange	
Process Temperature	Max. 80°C	Max. 120°C	Max. 80°C	Max. 120°C
Process Pressure	Max. 10kg/cm ²			
Power Source	AC 90V~240V, 50/60Hz / DC 24V			
Output Signal	DPDT			
Enclosure	Ex-Proof (Ex d IIC T6, IP65) Dust-Proof (Ex tD A21 IP65 T90°C / T130°C)			
Approvals	KC, CE, KCs (KOSHA)			
Wetted Part Material	SUS 316L + SCS 14			
Process Connection	PT 1-1/2" (M) (std.)			
Housing Material	Aluminum			
Cable Entry	2-PF 3/4" (F) (std.)			
Installation	Side or Top			
Contact Rating	AC 250V 5A, DC 30V 5A			

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

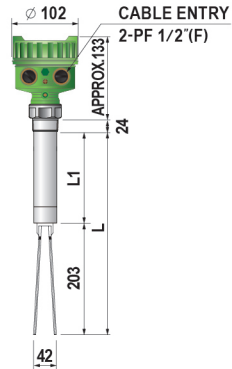
Dimension

► Standard Version

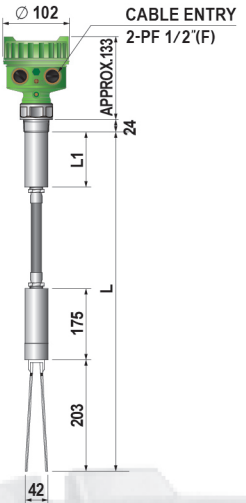
HTM-20N(H)-A
(Screw type)



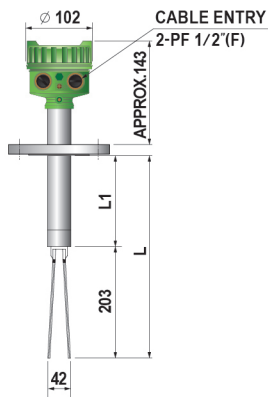
HTM-20N(H)-B
(Screw type)



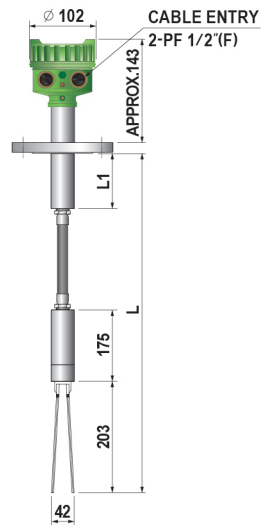
HTM-20N-C
(Screw type)



HTM-20N(H)-B
(Flange type)

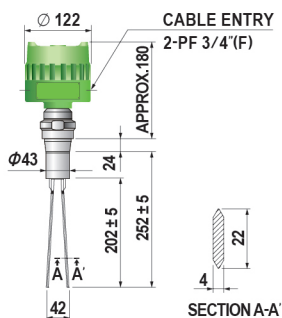


HTM-20N-C
(Flange type)

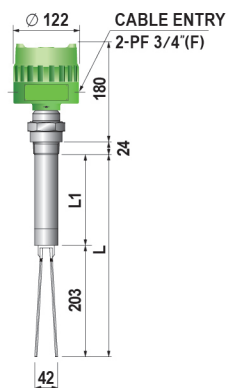


► Ex-Proof Version

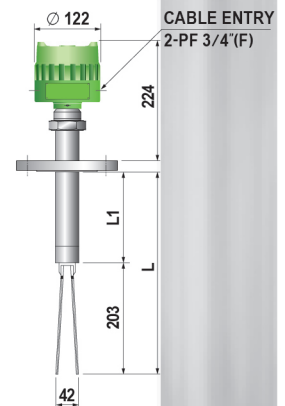
HPV-20N(H)-A
(Screw type)



HPV-20N(H)-B
(Screw type)



HPV-20N(H)-B
(Flange type)



■ Actual product may have a tolerance slightly.

Installation

- Below recommendation should be considered when installation.

Sun cover should be installed to protect the housing from the damage by direct sunlight.

Protector
Sun Cover

Sensor should be installed at the place far from inlet of the tank and protector should be installed in order to protect the sensor from damage by falling medium if it is installed at the inlet.

Min. 50×50

Cable type should be installed vertically.

When side installation, it should be installed slopingly (more than 15°) with a direction of wider side of tuning fork vertically to avoid build-up of the medium on the tuning fork.

15°

The direction of cable entry should be forwarded to the ground.

The length of threaded socket should not be over 24mm because the dust in the socket can make malfunction of the level switch.



VIBRATION TYPE LEVEL SWITCH

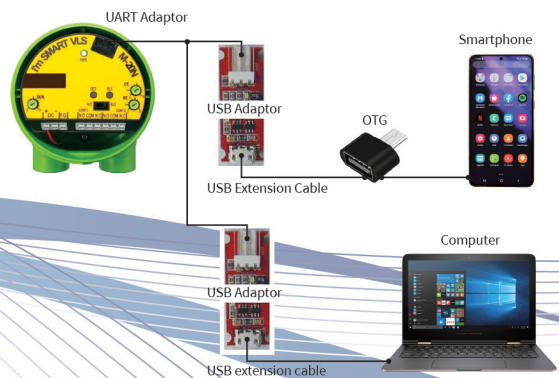
HTM(HPV)-20N Series

01 Various solid and powder can be measured

02 Certified Ex-Proof and Dust-Proof version

03 Digital Operating System based on Microprocessor

04 Convenient Product Operation Status Check!
UART MONITORING



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