

VIBRATION TYPE LEVEL SWITCH

HTM-30N Series



2 YEARS WARRANTY



ISO 9001



ISO 14001

ASME



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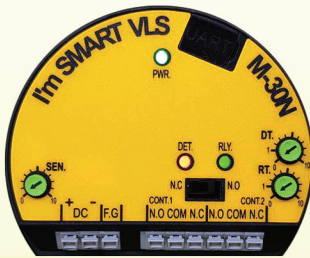
Always The Best Solution

HITROL CO., LTD.

Overview

HTM-30N Series is a Vibration Type Level Switch which is generally calling as Tuning Fork type consisting of a membrane and stainless steel tuning forks. It outs relay contact signal after detecting of liquid or solid level in the tank and can be especially applied for alarm and process control, etc..

Characteristics



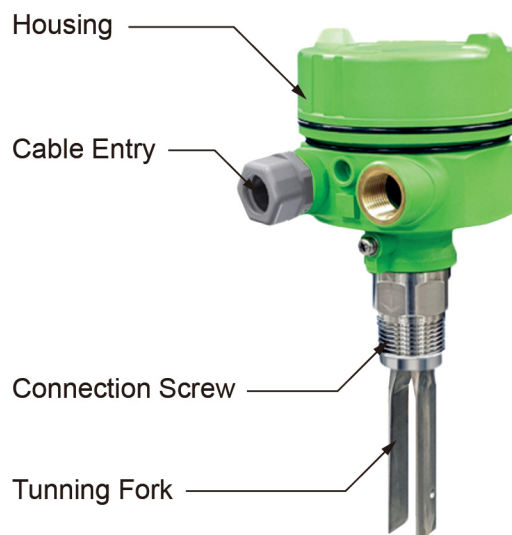
CONTROL PART
M-30N

- Digital operating system based on Microprocessor.
- Detecting of various kinds of liquid and solid level.
- Activation Point User Setting function.
- Applicable to Interface measurement.
- Applicable to Measurement Range Setting.
- Adjustment function with Delay and Return Time of Relay.
- Switching function between Relay Contact type. (NO, NC)
- Self-diagnosis function.(Diagnosis of state of sensor with current vibration frequency)
- Easy setting, stable operating and improved maintenance by dial adjustment.
- Easy operating check through LED indicator.
- Solid structure and applicable for small process connection due to Mini Tuning Fork.
- AC Free voltage or DC 24V is available.
- Monitoring function through laptop and/or mobile phone connecting using USB port.

Operation Principle and Composition

Tuning fork of the level switch is continuously vibrated by the oscillator or piezo sensor. When the tuning fork is contacted by the medium, the oscillator of piezo sensor is stopped by decreased vibration frequency. At this moment, level switch detects the changed frequency and produce a replay output signal.

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CONTROL PART

Specification

► Specification

Model	HTM-30N	HTM-30N-Ex-**
Mounting	Screw or Flange	
Housing ; Cable Entry	PBT / AL.C; 2 - PF 1/2"(F)	AL.C; 2 - PF 1/2"(F)
Enclosure	Weather-Proof (PBT; IP65 / AL.C; IP66)	Ex td A21 T160°C, IP66 (Fluid Temperature 150°C) Ex d IIC T3/T4/T5/T6 (*), IP66
Max. Temperature	PBT Housing: 80°C AL.C Housing: 150°C	Max. 150°C for T3 / Max. 100°C for T4 Max. 60°C for T5 / Max. 50°C for T6
Ambient Temperature	-20°C ~ +60°C	
Max. Process Pressure	20kgf/cm ² (Screw Type)	
Power Source	AC 90V~240V, 50/60Hz (std.) / DC +24V (opt.)	
Output Signal	DPDT	
Wetted Part Material	SUS 316L + SCS 14	
Process Connection	PT 1"(M)	
Installation	Side or Top	
Contact Rating	AC 250V, 5A / DC 30V, 5A	

(*) Fluid Temperature and Class of Ex-Proof (Flameproof, Ex d)

(**) Refer to model identification method

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► AMPLIFIER Specification (M-30N)

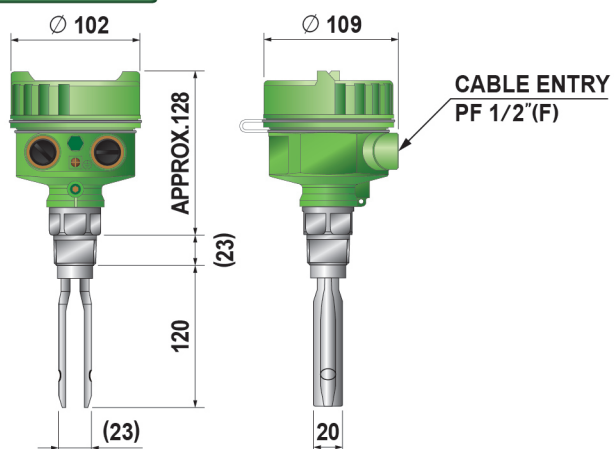
Module	M-30N
Microprocessor	16Bit Microprocessor
Oscillation Frequency	380KHz @ ± 50KHz
Sensitivity Resolution	1Hz
Density of Medium	0.6g/cm ³ @ Min. (Liquid)
Function (Adjustment)	<ul style="list-style-type: none"> ■ Sensitivity ■ Relay Delay Time ■ Relay Return Time ■ Relay Contact Control (Normal / Reverse)
Relay Contact Out Control	Normal Close @ Default
Status Indicator	Bi-Color LED [Green / Red / Orange]
Detection Indicator	RED LED
Relay Control Indicator	GREEN LED
Dimension	80mm x 65mm x 54mm
UART	Monitoring
Ambient Temperature	-20°C ~ +80°C

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

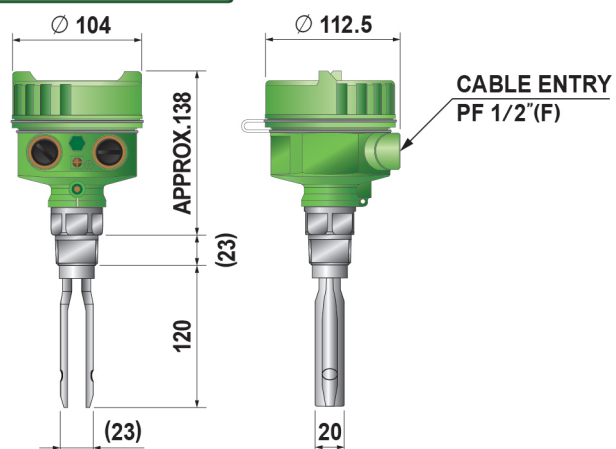
Dimension

► Screw type

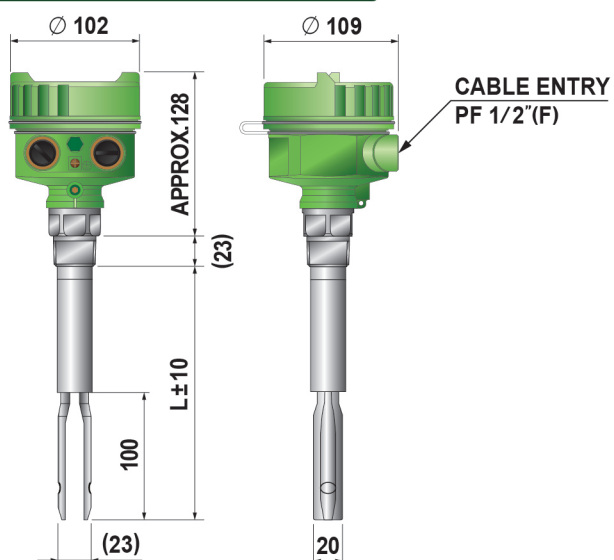
HTM-30N



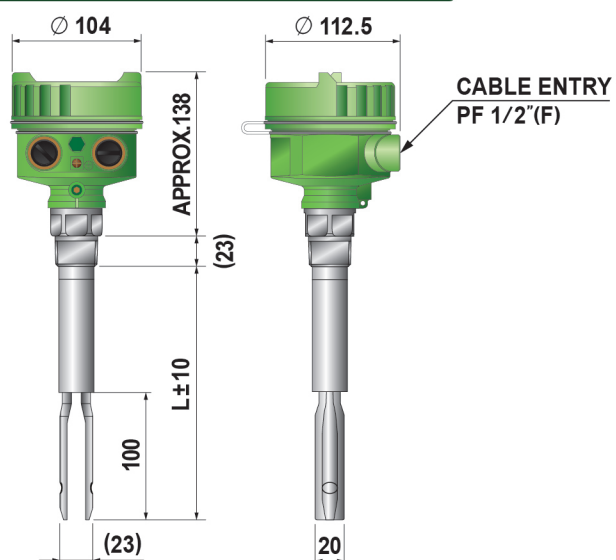
HTM-30N-Ex-^{**}



HTM-30N (Extension Type)

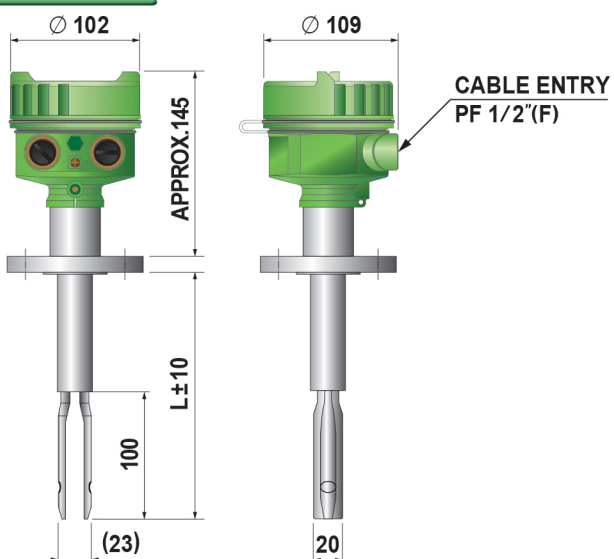


HTM-30N-Ex-^{**} (Extension Type)

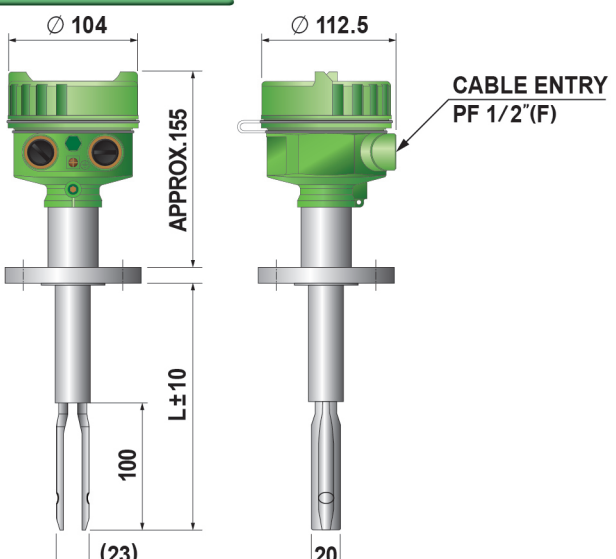


► Flange type

HTM-30N



HTM-30N-Ex-^{**}



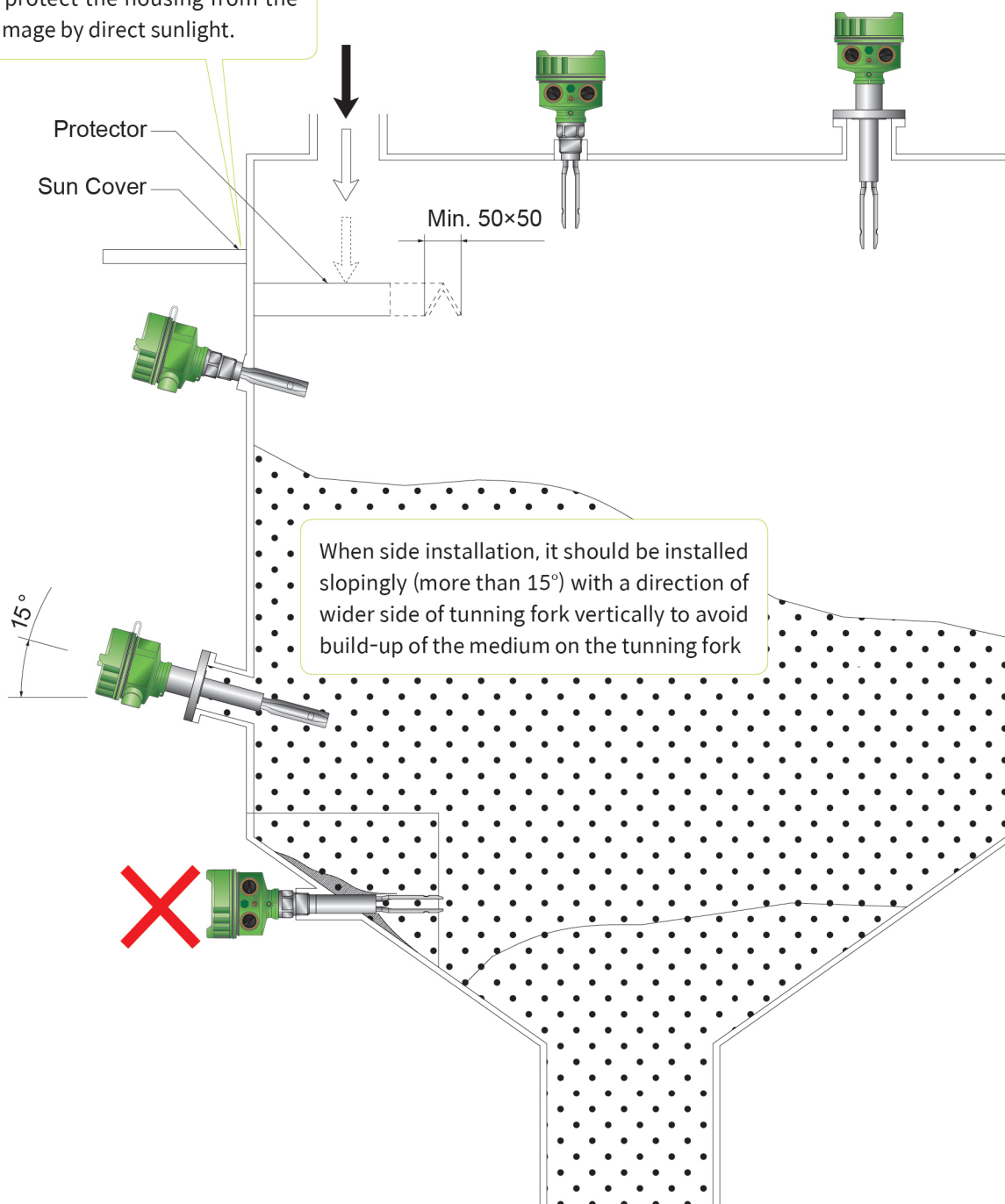
■ Actual product may have a tolerance slightly.

Installation

- Below recommendation should be considered when installation.

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

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



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