

HWM11 microwave level switch



Nanjing Hangjia Electronic Technology Co., Ltd.

Overview

The microwave level switch determines the capacitance value at the end of the sensor and the dielectric constant value of the medium through a high-frequency electric field. Since the dielectric constant value of air is different from that of the medium, two states can be identified: covered and uncovered. Under normal circumstances, the indicator light is off to indicate uncovered, and the indicator light is always on to indicate covered, and the switch is switched. This product has the characteristics of compact structure, strong anti-hanging performance, good stability, and wide application of media.

Features

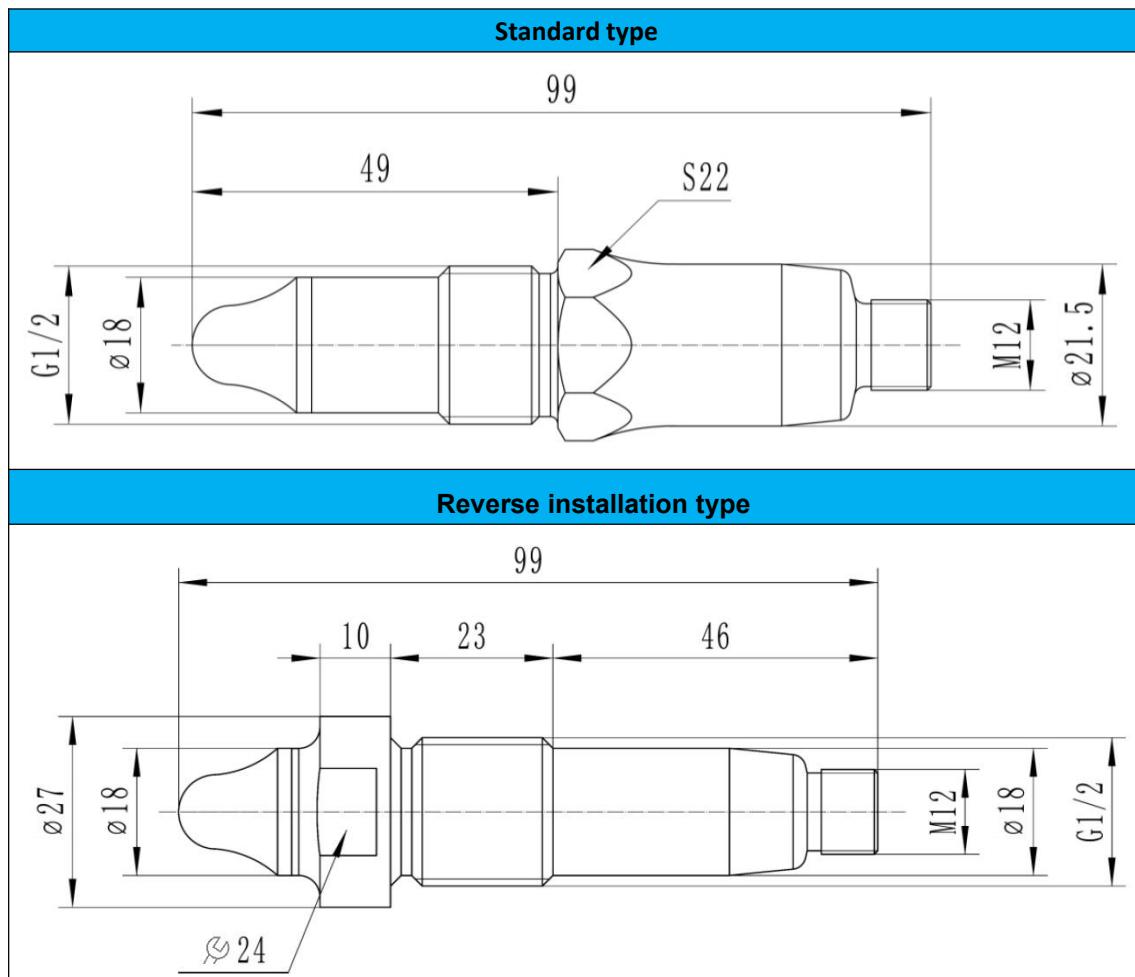
- ◆ Not affected by foam, can detect foam, and can also penetrate foam to detect liquid under the foam, stable detection.
- ◆ Can use the handheld operator to set the alarm threshold on site and view the measured value
- ◆ Can effectively detect adhesive conductive slurry, pure water, metal powder, plastic powder, ultra-fine powder, etc.

Technical Parameters

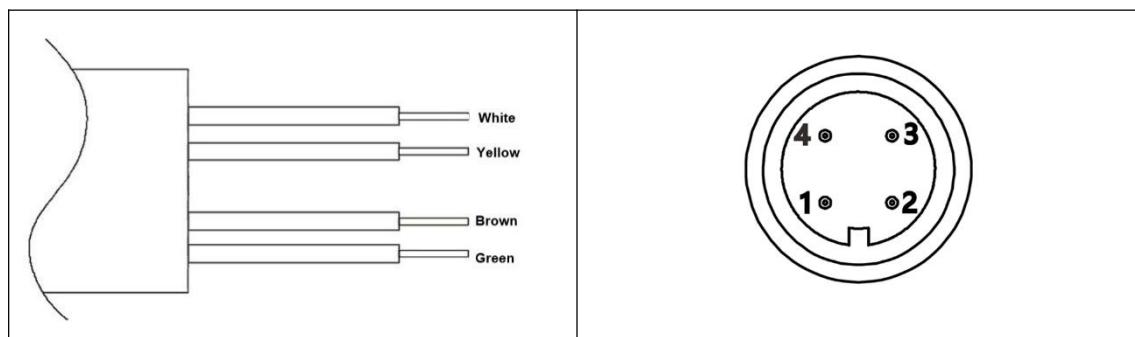
General Performance	
Measurement principle	sweep frequency
Measurement hysteresis	±1mm
Medium characteristics	DC≥1.5
Response time	0.2s
Damping time	0~5s (Configurable)
Repeatability	±5mm
Working Conditions	
Medium Working temperature	-20~80°C (standard) High temperature type up to 235 °C (customized)
Working pressure	-0.1~ +10MPa
Process Connection	
Installation type	Standard installation; Reverse installation;
Surface roughness in contact with liquid	Ra< 0.8 μ m
Wetted material	PEEK +SS304 /316L
Installation thread	G1/2" (M) or customized
Probe length (include thread)	For standard type only: 50mm, 100mm, 150mm, 200mm, 250mm
Environmental Conditions	
Protection level	IP67
Humidity	<98% RH, with condensation
Ambient temperature	Cable outlet type: -25~70 °C M12 connector type: -40~85 °C
Storage temperature	Cable outlet type: -25~70 °C

	M12 connector type: -40~85 °C
Output Signal	
Output signal	NPN , PNP , Relay SPST
Output voltage drop	PNP: 1.5 ±0.5V , Rload=10k NPN: 1.5 ±0.5V , Rload=10k
Output current	20mA(typical); 150mA(optional)
Leakage current	<100uA
Output short circuit protection	with
Electrical Connection	
Electrical connection	M12-4P, with connecting cable 4x0.5mm ²
Power supply	
Power supply	12~30VDC
Start-up time	<1s
Supply current (no load)	8mA (typical) ; 40mA (maximum)
Wetted surface roughness	Ra< 0.8 μ m
Electrical connection	M12-4P
Output signal	NPN /PNP 1.5 ±0.5V , Rload=10k Relay SPST
Reverse polarity protection	Yes
Dielectric strength	500VAC
Default Factory Setting	
Damping time	0s
Alarm point parameter AL1	250 (low dielectric constant medium) 550 (water-based medium) 720 (conductive slurry) Output alarm when ≥AL1
Measurement value PV	0~1000, after calibration: 100: Probe in air 800: Probe in tap water
Alarm hysteresis	25
Protection	Parameters cannot be modified before being unlocked

Product dimensions (unit: mm)

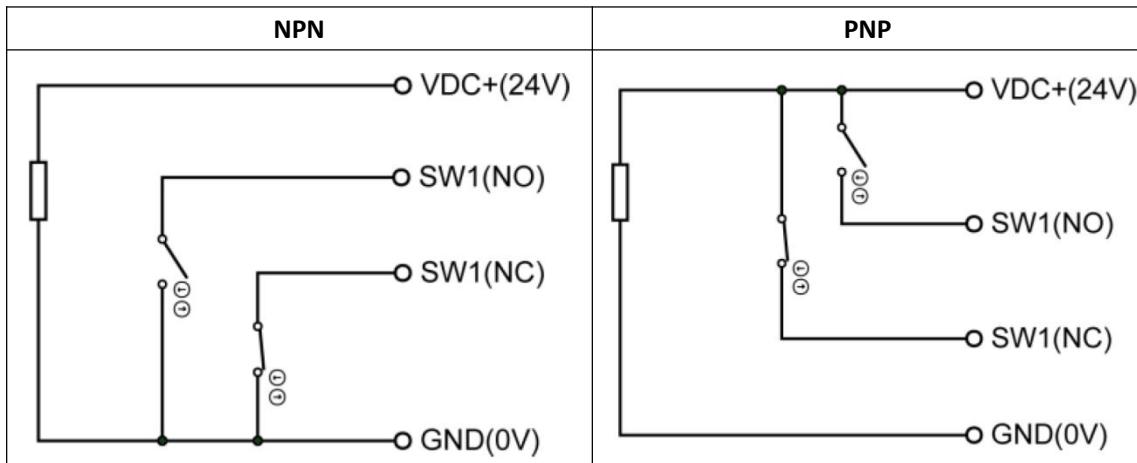


Electrical wiring



Definition	Cable outlet	M12
VDC+	White	1
SW1 (NO)	Yellow	4
SW1 (NC)	Brown	2
GND (OV)	Green	3

Electrical connection



Ordering Guide

Model No.	Type		Code	Output Signal	Code	Housing Material	Code	Process Connection	Code	Electrical Connection	Code	Sealing ring	Code	Factory setting / measuring medium	
	HWM11	Microwave level switch													
eg:HWM11	B10	S4	G12	C5											1