TECHNOLOGY

HOLYKELL®

HPT621

LEVEL

•DATASHEET•

1. Pressure Measurement 2. Level Measurement 3. Temperature Measurement
4. Flow Measurement 5. Display & Control Instruments
6.Wireless Monitoring System 7.Velocity Measurement

HPT 621

Industrial Capacitance Level Sensor

(Truck, Generator,Bus… Fuel Tank/Water tank /Underground tank…)



Applications

- Fuel / oil /diesel/gasoline
- Water tanks and reservoirs
- Underground fuel tank
- Auto, truck fuel storage
- Rooter, railway engine
- Sealed Pressure tank

Features

- Precise linear and temperature compensation
- Support local ZERO and SPAN calibration
- Surge, over-current and polarity resistant design
- Max 200°C customizable for high temperature liquids
- Up to 0.1mm resolution,Min 7mm bottom blind zone
- Simple installation without any settings
- Sensitivity and hysteresis fluently adjustable
- Applicable for various non-conductive liquids

Profiles

HPT621 smart capacitance level sensors are designed for liquid level measurements where the levels are lower than 3 meters, for instance the fuel tank of automobile.

HPT621 smart capacitance level sensor features thread mounting and flange mounting. Both of the models are made of 316 stainless steel. 316 stainless steel allows the transmitter in harsh environments, suitable for various medium, such as oil, fuels, or other media compatible with 316 stainless steel.

It works based on capacitive working principle, there are no moving parts in the transmitter, so the transmitters can provide excellent reliability. We can customize a high temperature type (200°C）.

This smart capacitance level sensor is capable of self-calibration. The user can realize the ZERO or RANGE self-calibration with two buttons or two lead lines to meet different requirements on various complex occasions. Each transmitter is factory calibrated according to the liquid type (or equivalent type) specified by customers so as to provide required accuracy.

Measuring range

Level range	0 to 100mm... 0 to 3000mm

Materials

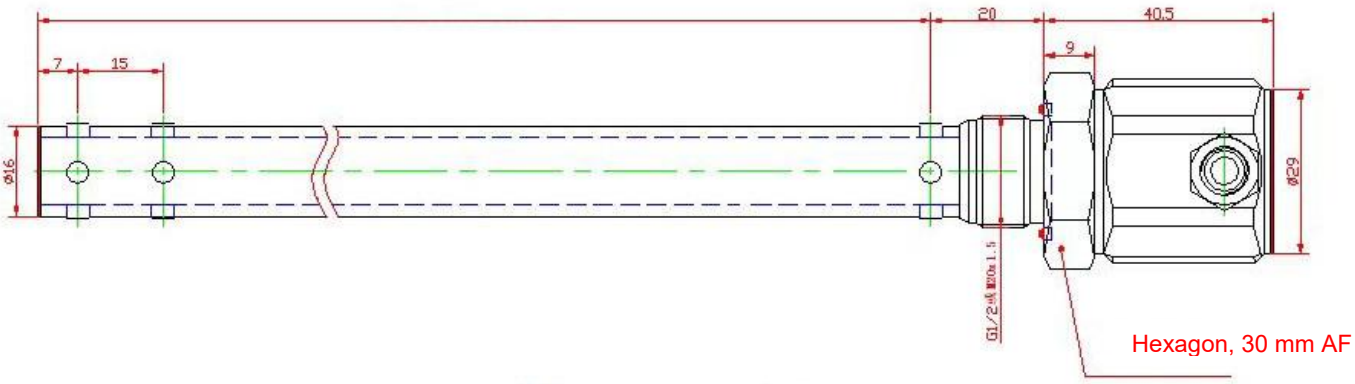
Wetted Parts	Standard	Optional
Case & sensor	Brass and PTFE	NA
Probe	Stainless steel 304	Stainless steel 316

Specifications

Ambient Temperature: 25°C (unless specified)

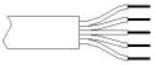
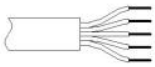
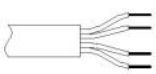
Parameter	HPT621		
Probe Diameter	Φ16 mm (Typical); Φ12 mm (Customized)		
Overload	Standard atmosphere pressure or -1 Bar to 10 Bar by customized		
Accuracy	≤ ±1.0%F.S(Typical); ≤ ±0.5%F.S(by customized)		
Resolution	0.1mm by customized; 1 mm (RS485)		
Bottom Blind Zone	10mm(Standard)		
Stability	Standard: 0.1%F.S/year,Max: 0.15%F.S/year		
Medium working Temp.	-30 °C to +80 °C Standard , -40°C to +200°C by customized.		
Ambient Temp Span	-40 °C to +60 °C		
Storage Temp.	-40 °C to +85 °C		
Probe Materials	304 stainless steel with PTFE/brass		
Electrical wire	3 wires type but with another two wires for calibration	3 wires type but with another two wires for calibration	4 wires Software for re-calibration
Output	4-20 mA	0-5 V	RS485 Modbus
Power Supply	11-33 V DC	12V DC or 11-33 V DC	11-33 V DC
Zero Temp. Drift	0.2% F.S/10 °C		
Electrical Connection	Fixed cable by stainless steel cap and water proof IP67		
Process Connection	G1/2'' male, M20*1.5 male, Flanges 2.5''… (by customized)		
Response Time	First time starting time ≈ 2s; working status ≤200 ms		
Medium Compatible	Diesel, gasoline; water and other liquid is by customized		
EMC Standard	EN 61326-1:2013; EN 61326-2-3:2013; EN 61000-6-2:2005; EN61000-6-4:2007+A1		
Certificate	CE Certificate		

Dimensions and Drawing



Unit, mm

Electrical Connections

	Electrical Wire Connection		
	Current	Red	Vcc+
		Green	Signal+
		Black	GND
		Gray	Full range calibrate
		White	Zero Point calibrate
		Yellow	Shield
	Voltage	Red	Vcc+
		Black	GND
		Green	Signal+
		Gray	Full range calibrate
		White	Zero Point calibrate
		Yellow	Shield
	Rs485 RTU Modbus	Red	Vcc+
		Black	0Vcc-
		Green	RS485A
		White	RS485B
		Yellow	Shield

S=Signal, Vcc=Power Supply, GND=Vcc-&S-

How to Order

1. Range Selection Table:

01	100mm	07	450mm	13	750mm	19	1050mm	25	1350mm	31	1650mm	37	1950mm	43	2400mm	48	2900mm
02	200mm	08	500mm	14	800mm	20	1100mm	26	1400mm	32	1700mm	38	2000mm	44	2500mm	49	3000mm
03	250mm	09	550mm	15	850mm	21	1150mm	27	1450mm	33	1750mm	39	2050mm	45	2600mm		
04	300mm	10	600mm	16	900mm	22	1200mm	28	1500mm	34	1800mm	40	2100mm	46	2700mm		
05	350mm	11	650mm	17	950mm	23	1250mm	29	1550mm	35	1850mm	41	2200mm	47	2800mm		
06	400mm	12	700mm	18	1000mm	24	1300mm	30	1600mm	36	1900mm	42	2300mm	X	By Customized		

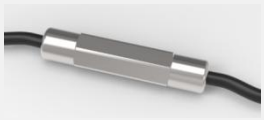
Kindly according to your application select suitable range code , Example: Code 10 =600mm.

2. Part Number Selection Table:

621 Selection Type	**10**	**B**	**0**	**E6**	**S8**	**8**	**D**	**0**	**002**
Range	Range reference to range selection table code								
Probe Diameter(mm)	B=16mm(standard type) C=12mm (by customized)								
Working Pressure	0=Standard Atmosphere Pressure 1=Sealed Pressure (-1Bar to 10 Bar) -Customized. 2=Special Pressure Grade -By Customized								
Signal Output	E6=0-5 V(3 wires) E11=RS485 Modbus RTU (4 wires) E9=4-20 mA(3 wires)								
Power Supply	S5=12 VDC S8=11-33 VDC								
Process connection	8=M20x1.5 male 9=G1/2'' male 15=2.5'' flange (63.5 mm) 4 holes X=By customized								
Measuring Medium	W=Water G=Gasoline D=Diesel X=Others liquid by customized								
Accuracy	0=1.0%F.S typical 1=0.5%F.S optional								
Cable length	000=Non-Cable 001= Cable 1m 002= Cable 2m X= By Customized								

Accessories

(Notes: Please purchase separately. For the price of accessories, please contact our sales.)

	Description	Order number
	**Liquid level display control device** With all kinds of liquid level sensor, measurement according to liquid level, and according to the setting of the container structure and size and the density of liquid, calculation, display liquid volume or quality.	0008
	**IP68 rated deep water level cable extender** Mainly used to extend the cable of deep water level transmitter. Users can rewire it locally. It can work continuously for more than 10 years 500 meters underwater, and the safe tensile strength of the cables at both ends can reach 200N	0028
	**Desiccant drying cartridge** Desiccant Pack installed on Vented Transducer cable.The cartridge will have to be field replaced as site environment requires.	0010
	**Terminal box** The terminal box, with IP67 ingress protection and watertight ventilation element, provides a moisture-free electrical termination for the submersible pressure transmitter. It should be mounted in dry environment or directly in the switch cabinet.	0003
	**USB to RS485 converter**	0005
	**Surge electrostatic protector** Anti-surge ±2000V/±4000V, anti-static 18KV, suitable for protecting 4-20ma and RS485 circuits.	0014

Ordering information

Model / Measuring range / Output signal / Temperature measurement / Cable material / Cable length / Case / Lightning protection / Accessories

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