

TECHNOLOGY

**HOLYKELL®**

# **HPT606**

## **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 606

## Submersible Flood & River Level Transducer & Transmitter

### Applications

- Flood level monitor and alarm
- Wastewater treatment and biogas production
- Retention Ponds Monitoring
- Canals and Dams Monitor Systems
- Level Measurement in Lakes, Pond and Rivers
- Level Measurement in waste water channels
- Agricultural applications hydro-static level control

### Features

- Imported GE pressure cell, 0.25% F.S
- 316L stainless steel diaphragm welded 316SS body construction shock and erosion
- Custom level ranges from 1m to 200m
- Special sediment filter to prevent the tiny impurities clogging problem
- IP68 full sealed plastic waterproof design
- Optional Lifetime Lightning Protection
- Custom PU, PE or FEP cable lengths

### Profiles

HPT606 a fully submersible level transducer suitable for flood and river level measurement. It consists of the U.S.A imported GE piezoresistive sensing element encased in a 316 SS housing. It's all stainless steel, hermetically sealed housing make it suitable for immersion for a long time in most river and flood water.

Each submersible sewage level transducer features a removable 30 um ceramic filter nose which can effective against the inside of the rivers and lakes sediment, stones and grasses into the liquid level sensor, and easy to clean. Ventilation tube in the cable automatically compensates for changes in atmospheric pressure. The vent is protected with a filter eliminating moisture in the transducer. It incorporates lightning and surge protection utilizing dual arrestor technology, to assure under the input and output short-circuit conditions and prevent reverse connection.

It can be used for rivers, flood, sewage, water, liquid measure and control of sewage pump station, water well, liquid tank, medicine, metallurgy, electricity, mine, city water supply and drainage and hydrology, especially used in the field of sewage level and pressure measurement.

Holykell can provide a cost effective solution for level monitoring for a variety of applications. Welcome your inquiry.



#### Measuring range

bar	0 to 0.1... 0 to 20
inWC	0 to 20 ...0 to 8000
psi	0 to 1.0...0 to 300
mH2O	0 to 1.0...0 to 200

The given measuring ranges are also available in mbar, kPa and MPa

#### Materials

Wetted Parts	Standard	Optional
Housing	Stainless steel 316L	Titanium alloy
Cable	PUR/PE	FEP

#### Mounting position

Calibrated in vertical mounting position with pressure connection facing downwards.

### Specifications

Ambient Temperature: 25°C (unless specified)

Parameter	HPT606					
Pressure Range	0-0.1 Bar.....20 Bar / 0-1m....200m H <sub>2</sub> O Optional (See P1 page description) * 80m max for SDI-12 signal					
Overload	200% F.S.					
Burst Pressure	500% F.S.					
Accuracy	≤ ±0.5%F.S (Typical); ≤ ±0.25%F.S; ≤ ±0.1%F.S optional @25 degree C					
(Linearity Hysteresis	Including non-lin., rep. and hys.					
Repeatability)	Optional					
Long-term Stability	≤ ±0.1 % of span/year					
Working Temp.	-40-80℃(non-corrosive medium)					
Storage Temp.	-40℃~80℃(Nitrile rubber sealing ring); -20℃~80℃(fluororubber rubber sealing ring)					
Temperature Compensation	0~50℃					
Medium compatible	Compatible with 316L Stainless Steel					
Electrical Wire	2 Wires	3 Wires			4 wires	
Output	4-20mA	1-5V;0-5V	0-10V	0.5-4.5V non-ratiometric	SDI-12	RS485 Modbus RTU
Power Supply	7-30Vdc	8-30Vdc	13-30Vdc	5Vdc±5%	12Vdc	3.5-36Vdc
Polarity protection	yesPower wires-Yes; Signal Wires-Yes, Power&Signal Wires-Without!					
Insulate resistance	> 100M Ω@100V					
Zero Temp. Drift	0.2%FS/℃ ( ≤100kPa ) ; 0.1%FS/℃ ( >100kPa )					
FS Temp. Drift	0.02%FS/℃ ( ≤100kPa ) ; 0.01%FS/℃ ( >100kPa )					
Process Connection	Submersible Type					
Electrical connection	Fixed cable with vented tube and water proof IP68					
Response time	≤10 ms					
Pressure Type	Gage pressure and absolute optional.					
Certificate	TUV RoHS and CE Certificate					
EMC Standard	EN 61326-1:2013; EN 61326-2-3:2013 EN 61000-6-2:2005; EN61000-6-4:2007+A1					
Lightning Protection (optional functions)	Air conduction more than 8000V; external sensor more than 4000 Voltage protection.					
Cable optional	Cable materials are optional according request, we offer 3 type special cable as follow: PE Cable ( Water proof ) ; PUR Cable ( Oil/fuel-proof ) ; FEP Cable ( Anti-corrosive )					




Dimensions and Drawing



Unit: mm

Electrical Connections



Directly cable outlet			
	Current	Red	V <sub>cc</sub> +
		Green	S <sub>i</sub> +
		Yellow	Shield
	Voltage/ SDI-12	Red	V <sub>cc</sub> +
		Green	V <sub>out</sub> (for voltage) S(for SDI-12 )
		Yellow	Shield
		Black	GND
	RS485 RTU Modbus	Red	V <sub>cc</sub> +
		Black	GND
		Green	RS485A
		Blue	RS485B
		Yellow	Shield

### How to Order

#### 1. Range Selection Table:

		01	0~1.0	02	0~1.1	03	0~1.2	04	0~1.3	05	0~1.4	06	0~1.5	07	0~1.6	08	0~1.7
09	0~1.8	10	0~1.9	11	0~2	12	0~2.1	13	0~2.2	14	0~2.3	15	0~2.4	16	0~2.5	17	0~3
18	0~4	19	0~5	20	0~6	21	0~7	22	0~8	23	0~10	24	0~12	25	0~15	26	0~16
27	0~20	28	0~25	29	0~30	30	0~35	31	0~40	32	0~50	33	0~60	34	0~80	35	0~100
36	0~150	37	0~200							X	By Customize						

Kindly according to your application select suitable range code , Example: code 30 = 35 .









Unit of measure select on the Part Number Selection Table . Example: Code H=m H<sub>2</sub> O , that's 35m H<sub>2</sub> O .

#### 2. Part Number Selection Table:

<b>606</b>	<b>30</b>	<b>H</b>	<b>G</b>	<b>E5</b>	<b>S11</b>	<b>CW</b>	<b>N</b>	<b>1</b>	<b>003</b>
Selection Type									
Range	Range reference to range selection table code								
Pressure & Level Units	H=mH <sub>2</sub> O(Min:1 mH <sub>2</sub> O; Max:200 mH <sub>2</sub> O ) B=bar(Min: 0.1bar Max: 20bar) P=Psi(Min:1.5Psi; Max:300Psi)								
Pressure type	G=Gage/Relative pressure type (universal) A=Absolute pressure (customized)								
Signal Output	E5=4-20mA(2 wires) E6=0-5V(3 wires) E7=0-10V(3 wires) E8=0.5-4.5V(3 wires) E11=RS485(MODBUS) E16=SDI-12 E0=1-5V(3 wires) X= By customized								
Power Supply	S6=5Vdc S5=12Vdc S11=7-30Vdc S12=8-30Vdc S42=3.5-36Vdc S43=13-30Vdc X= By Customized								
Measuring Medium	CW=Normal Water SW=Sewage X=by customized								
Others Function (Optional)	N=Standard Type ELP=External Lightning protection box								
Accuracy	1=0.5%F.S (Typical) 2=0.25%F.S (by customized)								
Cable length	001= Cable 1m 002= Cable 2m 003= Cable 3m X= By customized								

### Accessories

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

	Description	Order number
	<b>Liquid level display control device</b> 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
	<b>Flange</b> 4 holes 316 SS flange, size can be customized	0001
	<b>Locking flange</b> For locking cables, made of aluminum alloy	0029
	<b>Conduit adapter</b> 316 SS 1/2" NPT male cable conduit adapter. Must be factory installed.	0011
	<b>Terminal box</b> 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
	<b>Additional weight</b> The additional weight increases the dead weight of the submersible pressure transmitter. It simplifies the lowering into monitoring wells, narrow shafts and deep wells. It effectively reduces negative environmental influences on the measuring result from the measured medium (e.g. turbulent flow). Stainless steel 316L, approx. 1.46kg, height (H) 70 mm	0009
	<b>Adapter Converter</b> It is able to convert RS-232 signal to RS-485 balanced differential signal and extend the communication distance to 1.2km. It uses a particular pump to gain power from RS-232 signal (RTS, DTR, TXD) without initializing the RS-232 series interface. This interface converter does this without requiring any AC or DC power.	0005
	<b>Surge electrostatic protector</b> Anti-surge $\pm 2000V/\pm 4000V$ , 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