

TECHNOLOGY

**HOLYKELL®**

**HPT601/602**  
**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 601 & HPT602 Series

## Flush Pressure Transmitter / Sanitary Tri-Clamp Pressure Transmitter

### Applications

- Irrigation Equipment
- General industrial applications
- Food and beverage industry
- Filling and packing machinery
- Dairy and beverage processing
- Pharmaceutical
- Dosing technology

### Features

- For Sanitary or CIP (Clean-in-Place) applications
- 316L stainless steel diaphragm welded 316SS body construction shock and erosion
- Custom pressure ranges from 0-1m thru 0-500m
- Flush process connection eliminates plugging
- Advanced digital temperature compensation
- Available with an integral cooling extension for high temperature applications

### Profile

HPT601 and HPT602 are a pressure and level transmitter with sanitary flush diaphragm. They adopt U.S.A imported GE core. All process connections of the flush pressure transmitter are made of stainless steel, fully welded and isolate the process medium from the pressure measuring instrument via a positive seal. A reliable, dead-space free sealing between the process connection and the measuring medium is thus assured.

Through its optimized design, the flush process connection enables cleanability with the wetted diaphragm integrated into the process. Low-maintenance and trouble-free pressure measurement is thus guaranteed in critical applications with frequently changing media.

It has been specifically designed for the measurement of viscous, paste-like, adhesive, crystallizing, particulates containing and contaminated media, which would clog the pressure channel of conventional process connections. This model application in the field of water tank, Fuel tank, building & office water level measurement, city water supply, irrigation, food and sanitation, water factory, refinery, metallurgy, glass factory, sewage disposal center, water supply, reservoir.....

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 600
inWC	0 to 40 ... 0 to 24000
psi	0 to 1.5 ... 0 to 9000
mH2O	0 to 1 ... 0 to 6000

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

### Materials

Wetted Parts	Standard	Optional
Case	Stainless steel 304(HPT601) Stainless steel 316L(HPT602)	Ceramic Capacitor
Sensor	Stainless steel 316L	/
Cable	PVC	PUR/PE /PTFE

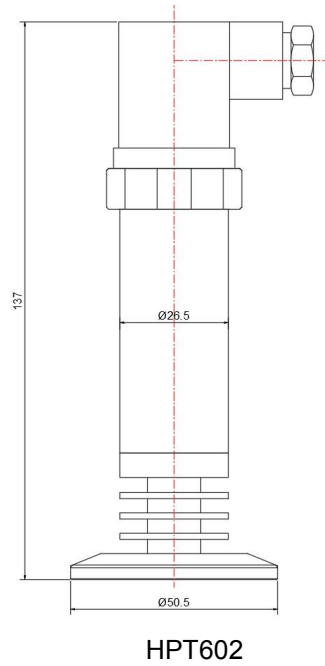
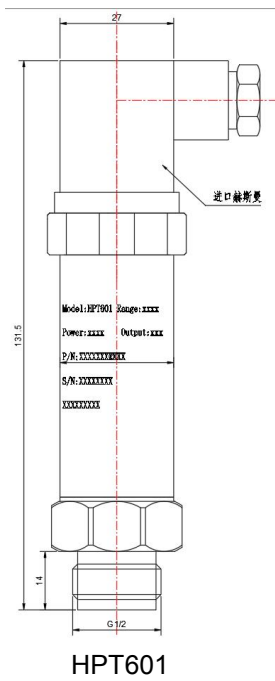
### Mounting position

Calibrated in vertical mounting position with pressure connection facing downwards.

### Specifications

Parameter	HPT601/602				
Pressure Range	Clamp flush type -1 bar-0-0.1 bar...100 Bar Optional Thread flush type 0-20 bar...600bar option				
Overload	150% F.S.				
Burst Pressure	300% F.S.				
Accuracy	≤ ±0.5%F.S@25 degree C (≤ ±0.25%F.S@25 degree C by customized)				
(Linearity Hysteresis Repeatability)	Including non-lin., rep. and hys. Optional				
Long-term Stability	Standard: 0.1%F.S±0.05%				
Working Temp.	-40°C~80°C(non-corrosive medium)				
Storage Temp.	-40°C~125°C(Nitrile rubber sealing ring); -30°C~150°C(fluororubber rubber sealing ring)				
Temperature Compensation	0~80°C				
Medium compatible	Compatible with 304/316L Stainless Steel				
Electronic Wire	2 Wires	3 Wires			4 wires
Output	4-20mA	1-5V;0-5V	0-10V	0.5-4.5V non-ratiometric	RS485 Modbus RTU
Power Supply	7-30Vdc	8-30Vdc	13-30Vdc	5Vdc±5%	3.5-36Vdc
Polarity protection	Yes	No	No	No	Yes
Insulate resistance	> 100M Ω@50V				
Zero Temp. Drift	0.2%FS/°C(≤100kPa); 0.1%FS/°C(>100kPa)				
FS Temp. Drift	0.02%FS/°C(≤100kPa); 0.01%FS/°C(>100kPa)				
Electronic connection	DIN43650 Hirschmann Terminal Box; Fixed cable and water proof IP67 optional				
Response time	≤10 ms				
Pressure Type	Gauge pressure; Sealed gauge and absolute optional				
Certificate	Ex ia IICT6, 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				
Process Connect	G1/2",M20*1.5; G1", Φ50 clamp or by customized				
Ambient Temperature: 25°C (unless specified)					

**Dimensions and Drawing**



Unit: mm

**Electronic Connections**

	<b>DIN 43650 Connector</b>					
	Current	1	V <sub>cc+</sub>	RS485 RTU Modbus	1	V <sub>cc+</sub>
		2	S <sub>i+</sub>		2	GND
		3	NC		3	485A
		4	Shield		4	485B
	Voltage	1	V <sub>cc+</sub>			
		2	GND			
		3	V <sub>out</sub>			
4		Shield				

**Pressure Connections**

M20x1.5 male	G1/2" male	G1 male	Clamp Φ50 mm
<p>M20x1.5 male</p>	<p>G1/2"</p>	<p>G1"</p>	<p>Φ50 flange</p>

01	0~0.1	02	0~0.15	03	0~0.2	04	0~0.25	05	0~0.3	06	0~0.4	07	0~0.5	08	0~1
09	0~2	10	0~2.5	11	0~3	12	0~5	13	0~10	14	0~16	15	0~25	16	0~40
17	0~60	18	0~100	19	0~160	20	0~250	21	0~300	22	0~400	23	0~500	24	0~600
X	By Customized														

### How to Order

1. Range Selection Table:

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Kindly according to your application select suitable range code , Example: code 13 = 10 .









Unit of measure select on the Part Number Selection Table . Example: Code B=Bar , that's 10 bar

2. Part Number Selection Table:

<b>601/602</b> Selection Type	<b>13</b>	<b>B</b>	<b>G</b>	<b>E5</b>	<b>S11</b>	<b>N</b>	<b>8</b>	<b>2</b>	<b>001</b>
Range	Range reference to range selection table code								
Pressure & Level Units	H=mH2O (Min: 1 mH2O; Max:50 mH2O ) B=bar (Min:0.1bar Max:600bar) P=Psi (Min:1Psi; Max:8700Psi) K= kPa (Min:10KPa; Max:60000 KPa) I= inWC (Min: 20 inWC; Max: 20000 inWC ) MB= mbar (Min:100 mbar Max: 5000 mbar)								
Pressure type	G=Gauge/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)    X= By Customized    E11=RS485(MODBUS) E0=1-5V (3 wires)								
Power Supply	S6=5Vdc                          S11=7-30Vdc S12=8-30Vdc                      S42=3.5-36Vdc S43=13-30Vdc                      X= By Customized								
Measuring Medium	N= Standard Type    2= Max 150°C (With Cooling Device)								
Others function (Optional)	8= M20*1.5 male                      9= G1/2" male                      29= G1" male(by customized) 18= Clamp Φ50 mm                      X= By Customized								
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
	<p><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.</p>	0008
	<p><b>Flange</b> 4 holes 316 SS flange, size can be customized</p>	0001
	<p><b>Locking flange</b> For locking cables, made of aluminum alloy</p>	0029
	<p><b>Conduit adapter</b> 316 SS 1/2" NPT male cable conduit adapter. Must be factory installed.</p>	0011
	<p><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.</p>	0003
	<p><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</p>	0009
	<p><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.</p>	0005
	<p><b>Surge electrostatic protector</b> Anti-surge <math>\pm 2000V/\pm 4000V</math>, anti-static 18KV, suitable for protecting 4-20ma and RS485 circuits.</p>	0014

### Ordering information

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