

## HPT604 Submersible Pressure Level Transmitters



HPT604

### Characters:

MEAS TE pressure cell, 0.25% F.S.  
316L stainless steel diaphragm,  
welded 316SS body construction shock and erosion  
Customize level ranges from 50cm to 500m  
Unique 8 pressure holes design  
IP68 full sealed plastic waterproof design  
Optional Lightning Protection  
Customize PU, PE or PTFE cable

### Applications:

- ★ Irrigation Equipment
- ★ Control of Lift and Pumping Stations
- ★ well level measurement and control
- ★ Sea water level measurement and control
- ★ Deep Well and Groundwater Monitoring
- ★ Laboratory equipment
- ★ Oil and Fuel Tank level measuring
- ★ Building monitoring and control for water level.
- ★ Surface Water Monitoring

**I . Profiles:**

HPT604 is full sealed submersible level transmitter. It is made by building in high stable and reliable OEM piezo-resistive pressure sensor and high accurate circuit board into the stainless steel housing. Integrated construction and standard signal provide the user easy and convenient application in the local working place. Each submersible pressure transducer features a removable nose cone at the sensor which protects the diaphragm from damage.

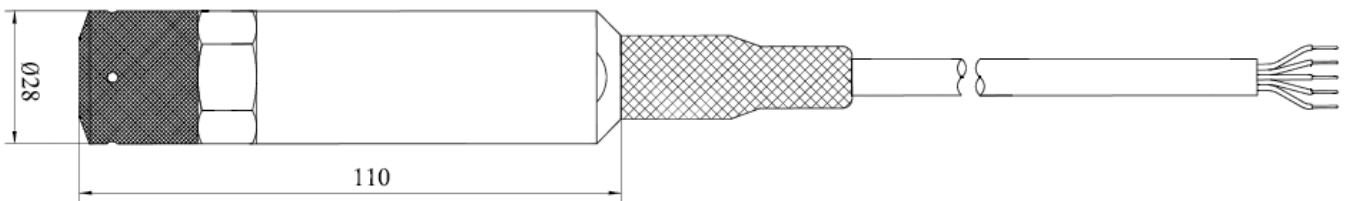
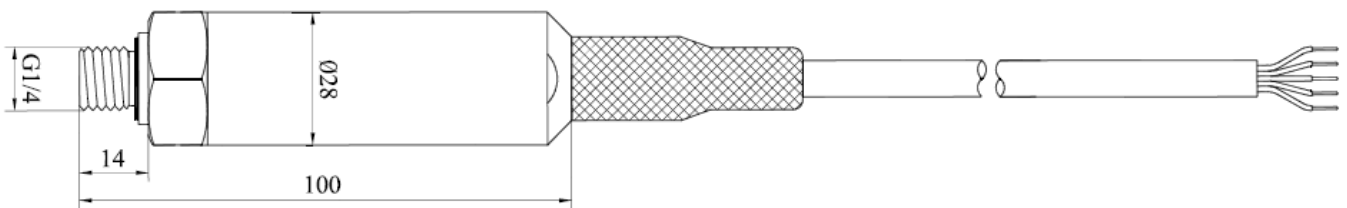
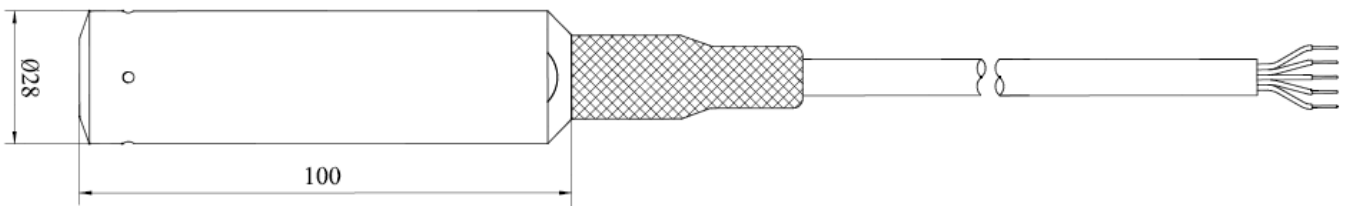
The Ventilation tube in the cable automatically compensates for changes in atmospheric pressure above the tank.

**II . Specifications:**

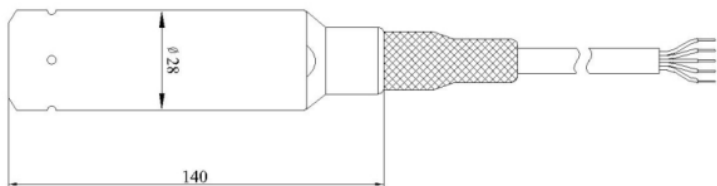
Model:	HPT604
Parameter:	
Applications:	a. Water tank level measurement and control. b. Fuel tank level measurement and monitor (diesel, gasoline, kerosene and so on). c. Liquid level measuring in tank, sea, well, tube, underground water and so on.
Pressure Range:	0-0.1 Bar.....50 Bar / 0-1M.....500M H2O Optional
Overload:	150% F.S.
Burst Pressure	300% F.S.
Accuracy: (Linearity; Hysteresis; Repeatability)	$\leq \pm 0.5\%F.S;$ $\leq \pm 0.25\%F.S;$ $\leq \pm 0.1\%F.S$ Including non-lin., rep. and hys. Optional
Long Stability:	Standard: $0.2\%F.S \pm 0.05\%$
Working Temp:	$-30^{\circ}C \sim 70^{\circ}C$ OR $-30^{\circ}C \sim 100^{\circ}C$ (Customized)
Storage Temp:	$-40^{\circ}C \sim 90^{\circ}C$ OR $-40^{\circ}C \sim 100^{\circ}C$ (Customized)
Temperature Compensation:	$-10^{\circ}C \sim 65^{\circ}C$ OR $-20^{\circ}C \sim 80^{\circ}C$ (Customized)



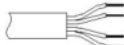
Medium compatible:	Compatible with 316L Stainless Steel				
Electronic Wire:	2 Wires	3 Wires			4 wires
Output:	4~20mA	1~5V 0~5V	0~10 V	0.5~4.5 V Ratiometric	RS485 Modbus RTU
Power Supply:	12~30 V DC	12~30 Vdc	15~30 Vdc	5 Vdc	10~30 Vdc
polarity protection	Yes	Yes	Yes	Yes	Yes
Insulate resistance:	> 100M $\Omega$ @100V				
Zero Temp. Drift:	0.03%FS/°C ( $\leq$ 100kPa); 0.02%FS/°C ( $>$ 100kPa)				
FS Temp. Drift:	0.03%FS/°C ( $\leq$ 100kPa); 0.02%FS/°C ( $>$ 100kPa)				
Electronic connection:	Fixed cable and water proof IP68				
Response time:	$\leq$ 10 ms (standard);				
Pressure Type:	Gage pressure; Sealed gage pressure optional.				
Certificate approving:	intrinsic safety or ExdIICT6 and CE Certificate approving				
EMC Standard:	EN 61326-1:2013; EN 61326-2-3:2013 EN 61000-6-2:2005; EN61000-6-4:2007+A1				
Lighting 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 Proof) ; PTFE Cable (Anti-Corrosive) .				

**III. Dimension and Drawing:**



**IV. Electronic Connections:**



Directly sealed cable		
	Current	Red Vcc+
		Green S+
		Yellow Shield
	Voltage	Red Vcc+
		Green S+
		Yellow Shield
		Black GND
	Rs485 RTU Modbus	Red Vcc+
		Green Rs485+
		Black GND
		Yellow Shield
		Blue Rs485-

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

**V . Part Number Selection Table:**

604	Submersible Pressure Liquid Level Transducers&Transmitters			
	Range code	Pressure & Level Range	Range code	Pressure & Level Range
	00	0...0.5	21	0...7
	01	0...1.0	22	0...8
	02	0...1.1	23	0...10
	03	0...1.2	24	0...12
	04	0...1.3	25	0...15
	05	0...1.4	26	0...16
	06	0...1.5	27	0...20
	07	0...1.6	28	0...25
	08	0...1.7	29	0...30
	09	0...1.8	30	0...35
	10	0...1.9	31	0...40
	11	0...2.0	32	0...50

12	0...2.1	33	0...60
13	0...2.2	34	0...80
14	0...2.3	35	0...100
15	0...2.4	36	0...150
16	0...2.5	37	0...200
17	0...3	38	0...250
18	0...4	39	0...300
19	0...5	40	0...500
20	0...6	X	By Customized
	<b>Code</b>	<b>Pressure &amp; Level Units</b>	
	H	m H2O (Min: 0.5 mH2O; Max:500 mH2O )	
	B	Bar (Min: 0.05Bar Max: 50Bar)	
	P	Psi (Min:1Psi; Max:725Psi)	
	F	m Fuel (Min:0.5m; Max:500m)	
	<b>Code</b>	<b>Pressure type</b>	
	G	Gauge/Relative pressure type (universal)	
	A	Absolute pressure (customized)	
	<b>Code</b>	<b>Power Supply</b>	
	S3	24 V DC (standard)	
	S5	12 V DC (for code E0, E6)	
	S6	5 V DC (for code E8)	
	S9	15~30 V DC (for code E7)	
	S10	12~30 V DC (for code E0, E5, E6)	
	S17	10~30 Vdc (for code E11)	
	<b>Code</b>	<b>Signal Output</b>	
	E0	1-5 V (3 wires)	
	E5	4-20 mA (2 wires)	
	E6	0-5 V (3 wires)	
	E7	0-10 V (3 wires)	
E8	0.5-4.5 V (3 wires)		
E11	RS485 MODBUS RTU (4 wires)		
X	By Customized		
<b>Code</b>	<b>Measuring Medium</b>		
CW	Water		
D1	Diesel, density 0.84		

						D2	Diesel, density 0.83		
						D3	Diesel, density 0.85		
						D4	Diesel, density 0.86		
						X	By Customized		
							<b>Code</b>		
						D1	N	<b>Others Function (Optional)</b>	
							TF	Standard Type (with short filter)	
							M1	With Tapered Filter Covers	
							NM	G 1/4" male thread mounting type	
							TA	Nylon materials filter	
							P	Titanium alloy materials (high cost!)	
								All Plastic Housing Structure	
							N	<b>Code</b>	<b>Accuracy</b>
							1	$\leq \pm 0.5\%F.S$	
							2	$\leq \pm 0.25\%F.S$	
								<b>Code</b>	<b>Cable Length</b>
								003	3 Meters
								XXX	By Customized
604	11	F	G	S10	E5		1	003	<b>Remarks</b>

Example: 60411FGS10E5D1N1003

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