TECHNOLOGY

HOLYKELL®

HPT608

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 608

Marine & Vessel Application Submersible Sea Water&Fuel Level Transmitter

Applications

- Sea Water ballast
- Fuel/Oil Ballast Tank
- Seawater Pumping Systems
- Cargo Ships Which Carry a Variety of Chemicals
- Sea Water Level Measurement
- Ship Draught Measurement
- Sea Port Wharf Level Measurement

Features

- Accuracy: ≤±0.25%F.S.
- Titanium alloy diaphragm,
- Titanium alloy body construction shock and erosion
- Custom level ranges from 1m to 200m
- 300%F.S.Safe overload
- IP68 full sealed plastic waterproof design
- Optional Lifetime Lightning Protection
- Custom PU, PE or FEP cable length

Profiles

HPT608 level transmitters use high quality U.S.A imported GE ceramic capacitance pressure sensor as signal sensing element, utilizes an all-titanium design to provide long term stability and continued performance under the harshest conditions. This includes corrosive and hazardous chemical applications. The slim design and high media resistance of the titanium submersible level transmitter allow it to perform exceptionally well in down hole applications.

Each submersible pressure transducer features a removable nose cone at the sensor which protects the diaphragm from damage. Units come equipped with a 270-pound tensile strength shielded and vented cable. Ventilation tube in the cable automatically compensates for changes in atmospheric pressure above the tank. The vent is protected with a maintenance free filter eliminating particulate or water droplets from entering the transducer.

They are also useful in applications which often have tight space constraints and caustic environmental conditions.

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 40 …0 to 8000
psi	0 to 1.5…0 to 300
mH2O	0 to 1…0 to 200

Materials

Wetted Parts	Standard	Optional
Case and sensor	Titanium alloy/Ceramic	/
Protection cap	316L	Titanium
Cable	PUR	FEP

Mounting position

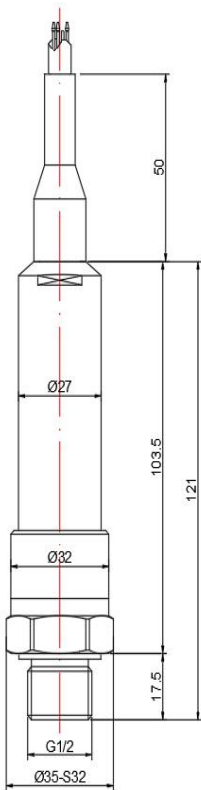Calibrated in vertical mounting position with pressure connection facing downwards.

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Specifications
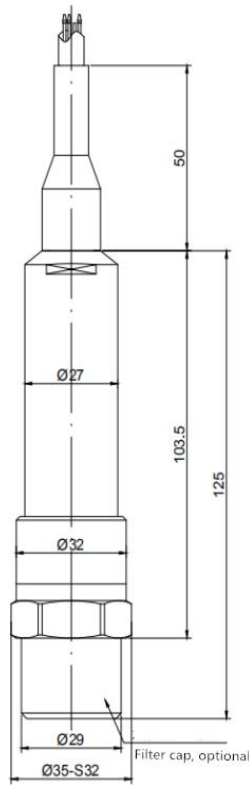
Ambient Temperature: 25°C (unless specified)

Parameter	HPT608		
Pressure Range	0-0.1 Bar…..20 Bar / 0-1m…..200m H_2O Optional (See P1 page description)		
Overload	300% F.S.		
Burst Pressure	500% F.S.		
Accuracy	≤ ±0.50%F.S(Typical); ≤ ±0.25%F.S (by customized) @25 degree C		
(Linearity Hysteresis	Including non-lin., rep. and hys.		
Repeatability)	Optional		
Long-term Stability	≤ ±0.1%F.S. of span/year		
Working Temp.	-20-80℃(corrosive medium)		
Storage Temp.	-40℃~80℃(Nitrile rubber sealing ring); -20℃~80℃(fluororubber rubber sealing ring)		
Temperature Compensation	0℃~50℃		
Medium compatible	Compatible with titanium alloy		
Electronic Wire	2 Wires		4 wires
Output	4-20mA	4-20mA+Hart	RS485 Modbus RTU
Power Supply	7-30Vdc	12-30Vdc	3.5-36Vdc
Polarity protection	Yes	Power wires-Yes; Signal Wires-Yes, Power&Signal Wires-No!	
Insulate resistance	> 100M Ω@50V		
Zero Temp. Drift	0.2%FS/℃（≤100kPa）；0.1%FS/℃（>100kPa）		
FS Temp. Drift	0.02%FS/℃（≤100kPa）；0.01%FS/℃（>100kPa）		
Electronic connection	Fixed cable with vented tube and water proof IP68		
Response time	≤10 ms		
Pressure Type	Gauge pressure; Sealed gauge and absolute optional		
Certificate	Exia 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		
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）; PU Cable（Oil/Fuel Proof）; FEP Cable（Anti-Corrosive）		

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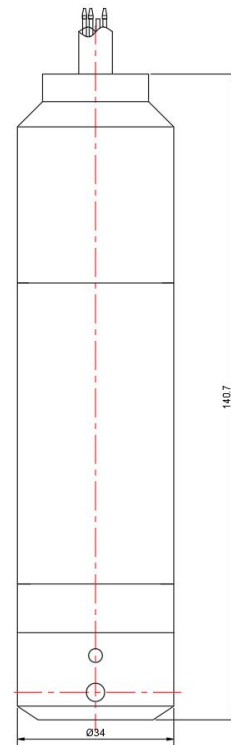## Dimensions and Drawing

Unit: mm
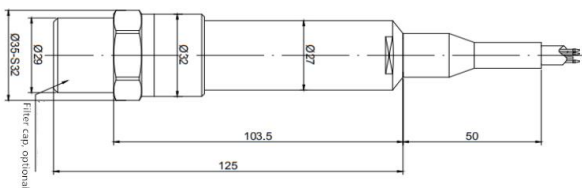

Titanium alloy case
Pressure sensor

Titanium alloy case
Submersible level sensor

PVDF case

Electronic Connections

Directly sealed cable		
Current	Red	$V_{cc}+$
	Green	S_i+
	Yellow	Shield
RS485 RTU Modbus	Red	$V_{cc}+$
	Black	GND
	Green	RS485A
	Blue	RS485B
	Yellow	Shield

How to Order

1.Range Selection Table:

NA	NA	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 Customized						

Kindly according to your application select suitable range code , Example: code 19 = 5 .
Unit of measure select on the Part Number Selection Table . Example: Code H=mH2O , that's 5m H2O

2.Part Number Selection Table:

608 Selection Type	19	H	G	E5	S11	W	N	1	002

Range	Range reference to range selection table code
Pressure & Level Units	H=m H_2O (Min: 1 mH2O; Max:200 mH2O) B=bar (Min: 0.1bar Max: 20bar) P=Psi (Min:1.5Psi; Max:300Psi) K= KPa (Min:10 KPa; Max:2000 KPa) I= inWC (Min: 40 inWC; Max: 8000 inWC) MB= mbar (Min: 100 mbar Max: 20000 mbar)
Pressure type	G=Gauge/Relative pressure type (universal) A=Absolute pressure (customized)
Signal Output	E5=4-20mA E11=RS485(MODBUS) E14=4-20mA+Hart X= By Customized
Power Supply	S10=12-30Vdc S11= 7-30Vdc S17=10-30Vdc X= By Customized
Measuring Medium	W= Water D1=0.84g/cm3 density fuel D3=0.85g/cm3 density fuel D4=0.86g/cm3 density fuel X= by customized
Others Function (Optional)	N=Standard type, pure titanium housing+Titanium alloy diffused silicon core(without filter cap) C=Pure titanium housing+Titanium alloy diffused silicon core(with filter cap) P=PVDF housing+Ceramic capacitor core 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
	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
	Flange 4 holes 316 SS flange, size can be customized	0001
	Locking flange For locking cables, made of aluminum alloy	0029
	Conduit adapter 316 SS 1/2" NPT male cable conduit adapter.Must be factory installed.	0011
	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
	Additional weight 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
	Adapter Converter 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
	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