TECHNOLOGY

HOLYKELL®

HPT604-B

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 604-B

Submersible Fuel Level Pressure Transducers & Transmitters

Applications

- Level Measurement in Bio-Fuels
- Monitoring of Gasoline & Diesel Fuel Tanks
- Level Measurement in Ballast Tanks
- Level Measurement in Oil Tanks
- Monitoring of Contain Coolant for Diesel Engines
- Level Measurement in AdBlue Tanks
- Level Measurement in Kerosene

Features

- Imported pressure chip, 0.5% F.S.
- Survives Harsh Environments
- EMI/RFI Protection
- Custom level ranges from 50cm to 50m
- Unique impurities filter mesh design
- IP68 full sealed plastic waterproof design
- CE, ROHS and ATEX Approved
- Custom PUR or FEP cable lengths

Profiles

HPT604-B type is a submersible fuel level transducer suitable for differential fuel level and depth measurement. It consists of an Germany imported FS piezoresistive sensing element encased in 304SS housing. It's all stainless steel, the hermetically sealed housing makes it suitable for immersion in most industrial liquids and oils.

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. Vented 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.

The HPT604 incorporates lightning and surge protection utilizes dual arrestor technology, and assures normal work under the input and output short-circuit conditions to prevent reverse connection. And it eliminates both power supply surges and lightning ground strike transients.

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

Measuring range

bar	0 to 0.05 … 0 to 5
inWC	0 to 20 … 0 to 2000
psi	0 to 1.0… 0 to 72.5
mH2O/Fuel	0 to 0.5 … 0 to 50

When order sensor for gasoline/petrol, please choosing the FEP cable.The given measuring ranges are also available in mbar, KPa and MPa

Materials

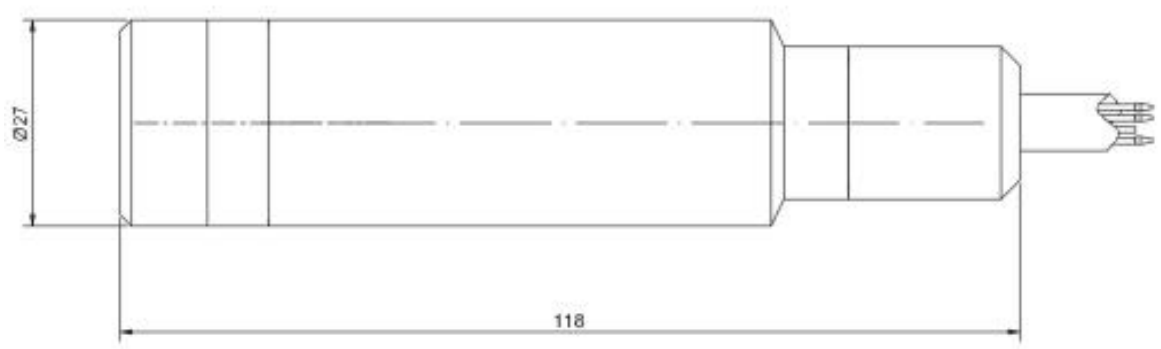| Wetted Parts	Standard	Optional
Sensor	Stainless steel 316L	NA
Housing & Protection cap	Stainless steel 304	316L/PVDF/Nylon
Cable	PUR	FEP

Mounting position

Calibrated in vertical mounting position with pressure connection facing downwards.

1
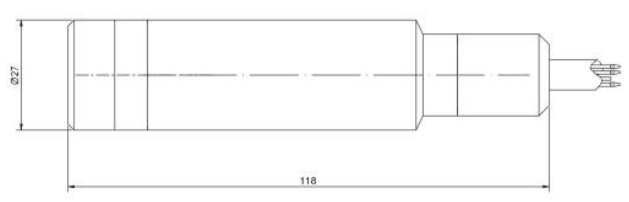
■ Specifications

Ambient Temperature: 25°C (unless specified)

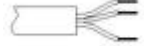| Parameter	HPT604 (B Type)				
Pressure Range	0-0.05 Bar…..5 Bar / 0-0.5M……..50m fuel level Optional (See P1 page description)				
Overload	200% F.S.				
Burst Pressure	500% F.S.				
Accuracy (Linearity Hysteresis Repeatability)	≤ ±0.5%F.S (Typical for 1m to 50m range); ≤ ±1.0%F.S(Typical for 0-1m range) @25 degree C Including non-lin., rep. and hys.				
Long-term Stability	≤ ±0.2% of span/year				
Working Temp.	-30-80℃(non-corrosive medium)				
Storage Temp	-40℃~80℃				
Temperature Compensation	0~50℃				
Medium compatible	Compatible with 304 Stainless Steel				
Electrical Wire	2 Wires		3 Wires		4 wires
Output	4-20mA	1-5V;0-5V	0-10V	0.5-4.5V	RS485 Modbus RTU
Power Supply	7-30Vdc	8-30Vdc	13-30Vdc	5Vdc±5%	3.5-36Vdc
Polarity protection	Yes		Power wires-Yes; Signal Wires-Yes, Power&Signal Wires-No!		
Insulate resistance	＞100M Ω@50V				
Zero Temp. Drift	0.75%FS/℃（≤100kPa）； 0.5%FS/℃（>100kPa）				
FS Temp. Drift	0.05%FS/℃（≤100kPa）； 0.03%FS/℃（>100kPa）				
Electrical connection	Fixed cable and water proof IP68				
Response time	≤10 ms				
Pressure Type	Gauge pressure 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.				
Blind spot	5mm				
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

Ø27

118

Unit: mm

Electrical Connections

Ø27

118

Direct cable outlet			
Current	Red	U+	
	Green	Iout(U-)	
	Yellow	⏚ Connect to earth ground	
Voltage	Red	U+	
	Green	Vout	
	Yellow	⏚ Connect to earth ground	
	Black	U-	
RS485 RTU Modbus	Red	U+	
	Black	U-	
	Green	RS485A	
	Blue	RS485B	
	Yellow	⏚ Connect to earth ground	

How to Order

1. Range Selection Table:

00	0~0.5	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			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 F=m Fuel , that's 5m Fuel
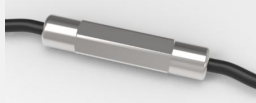
2. Part Number Selection Table:

604B Selection Type	11	F	G	E5	S11	D3	N	1	003

Range	Range reference to range selection table code

Pressure & Level Units	F=m Fuel (Min: 1 m Fuel; Max:50 m Fuel) B=bar (Min: 0.1bar Max: 5bar) P=Psi (Min:1Psi; Max:72.5Psi) K= kPa (Min:10 kPa; Max:500 kPa)

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) E21=0.5-4.5V non-ratiometric (default, 3 wires) E8=0.5-4.5V ratiometric (by customized, 3 wires) E0=1-5V(3 wires) E11=RS485(MODBUS) X= By Customized

Power Supply	S6=5Vdc S11=7-30Vdc S12=8-30Vdc S42=3.5-36Vdc S17=10-30Vdc S43=13-30Vdc X= By Customized

Measuring Medium	CW=Water D1=0.84g/cm3 density diesel D2=0.83g/cm3 density diesel D3=0.85g/cm3 density diesel D4=0.86g/cm3 density diesel G0=0.72g/cm3 density gasoline G2=0.725g/cm3 density gasoline G5=0.737g/cm3 density gasoline X=Others Liquid and Density By Customized

Others Function (Optional)	N=Standard Type (with short filter) MFC= POM material cap AW=Additional weight FC=FEP Cable

Accuracy	0=1%F.S. 1=0.5%F.S 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
	Locking flange For locking cables, made of aluminum alloy	0029
	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
	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