TECHNOLOGY

HOLYKELL®

HPT604

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 (Type BM)

Fuel Tank Outside Bottom Mounting Pressure Level Transducer

Applications

- Diesel Level Measurement on moving tanks
- Diesel Level Measurement on static tanks
- Petrol Level Measurement on moving tanks
- Oil Level Measurement on static tanks
- Fuel Level Measurement on different outside tank bottom

Features

- Imported GE pressure cells, 0.5%F.S.
- Survives Harsh Environments
- EMI/RFI Protection
- Custom level ranges from 1m to 20m
- Unique impurities filter mesh design
- IP68 full sealed plastic water proof design
- CE, RoHS and ATEX Approved
- Custom PU or FEP cable lengths
- Resolution up to 0.1mm (range less than 6m)

Profiles

HPT604-BM is a high performance tank bottom outside mounting pressure level transducer that is installed under the fuel tank drain port, no extra opening required. It is suitable for oil level measurement of different types of fuels, no matter static and dynamic mobile tanks.

It adopts the U.S.A. imported GE core. With a filter device equipped, there is no clogging and cleaning concern. And it features simple installation and disassembly, easy maintenance and use.

HPT604-BM incorporates lightning and surge protection utilizing dual arrestor technology to assure under the input and output short-circuit conditions to prevent reverse connection.

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

Measuring range	
bar	0 to 0.05 … 0 to 2
inWC	0 to 20 … 0 to 1000
psi	0 to 1.0… 0 to72.5
mH2O	0 to 0.5 … 0 to 20

When choosing the FEP cable, only measuring ranges up to 0 ...2 bar, 0 ... 30 psi and 0 ... 20 mH2O are available. The given measuring ranges are also available in mbar, kPa and MPa

Materials

Wetted Parts	Standard	Optional
Case and sensor	Stainless steel 304	Ceramic
Protection cap	Stainless steel 304	NA
Cable	PUR	FEP

Mounting position

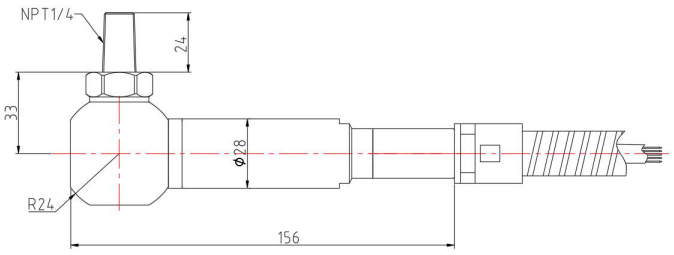
Calibrated in vertical mounting position with pressure connection facing downwards.

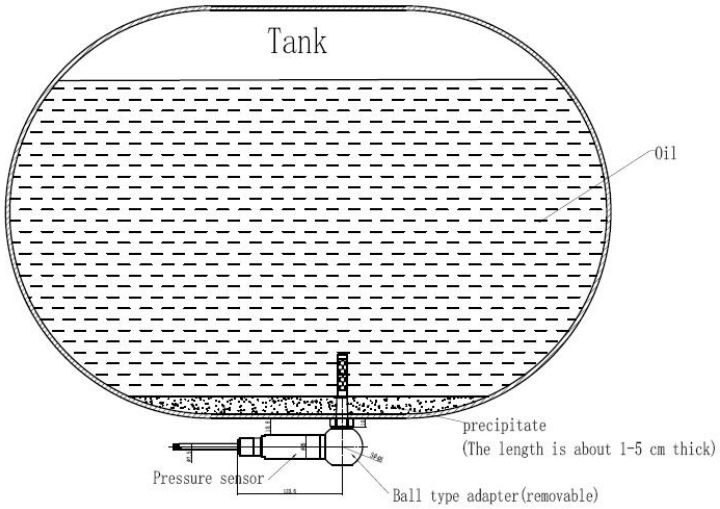
Specifications

Ambient Temperature: 25°C (unless specified)

Parameter	HPT604 (Type BM)		
Pressure Range	0-0.1bar…..2 bar / 0-1m……..20m fuel level Optional (See P1 page description)		
Overload	150% F.S.		
Burst Pressure	300% F.S.		
Accuracy	≤ ±0.5%F.S (≥2m level range and between 0-50 degree C); ≤ ±1.0%F.S (0.5m≤Level Range<2m level range and between0-50 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℃ (Range＜100kPa); -10℃~80℃(Range≥100kP)		
Medium compatible	Compatible with SUS304 Stainless Steel		
Electrical Wire	2 Wires	3 Wires	4 wires
Output	4-20mA	0-5V	RS485 Modbus RTU
Power Supply	7-30Vdc	8-30Vdc	3.5-36Vdc
Polarity protection	Available for signal wires or Power wires each other reverse, unavailable signal and power wire reverse!		
Insulate resistance	＞100M Ω@100V		
Zero Temp. Drift	0.5%FS/℃（≤100kPa）； 0.25%FS/℃（>100kPa）		
FS Temp. Drift	0.02%FS/℃（≤100kPa）； 0.01%FS/℃（>100kPa）		
Electrical connection	Fixed cable with vented tube and water proof IP68		
Response time	≤10ms (digital signal ≤200ms)		
Data overtime interval	≥20ms		
Material of Housing	304 Stainless Steel		
Blind Zone of Probe	30 mm		
Pressure Type	Gauge pressure		
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)	Surge ±2000V, Air conduction ±8000V; contact discharge ±4000V protection.		
Cable optional	Cable materials are optional according request, we offer 3 type special cable as follow: PE Cable（Water Proof）; PU Cable（Diesel Proof）; FEP Cable（Anti-Corrosive for gasoline）		

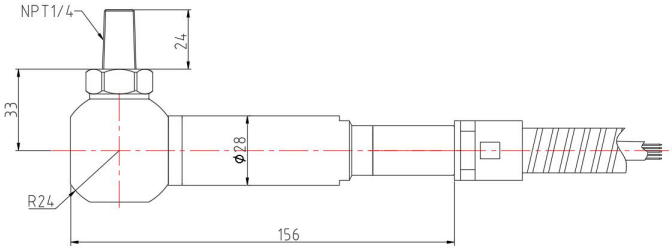
Dimensions and Drawing

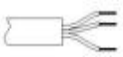
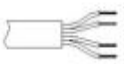




Unit: mm

Electrical Connections



	Direct sealed cable		
	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											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 F=m Fuel , that's 5m Fuel

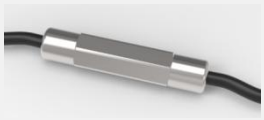
2. Part Number Selection Table:

604 Selection Type	**BM** (Type BM)	**00**	**F**	**G**	**E5**	**S11**	**D1**	**N**	**1**	**003**
Range	Range reference to range selection table code									
Pressure & Level Units	F=m Fuel (Min: 0.5 m; Max:20 m) B=bar (Min: 0.05bar Max: 2bar) P=Psi (Min:1Psi; Max:15Psi) K= kPa (Min:5 kPa; Max:200 kPa)									
Pressure type	G=Gauge/Relative pressure type A=Absolute pressure (customize)									
Signal Output	E5=4-20mA(2 wires) E6=0-5V(3 wires) E11=RS485(MODBUS) X= By Customized									
Power Supply	S11=7-30Vdc S12=8-30Vdc S42=3.5-36Vdc 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 X=Others liquid and density by customize									
Others Function (Optional)	N=Standard Type 2= GE high performance cells									
Accuracy	0=1.0%F.S typical 1=0.5%F.S optional 2=0.25%F.S by customized									
Cable length	001= Cable 1M 002= Cable 2M 003= Cable 3M X= By customized									

Example of a complete PN: 604BM00FGE5S11D1N1003
(Model: HPT604-BM, fuel level range 0-0.5m, gauge type, 4-20mA, 7-30Vdc supply, 0.84g/cm3 density diesel, standard type, 0.5%F.S accuracy with 3 meters cable)

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 IP 67 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 Protection Box** Surge electrostatic protector Anti-surge ±2000V/±4000V, anti-static 18KV, suitable for protecting 4-20ma and RS485 circuits.	0014

Ordering information

Model / Measuring range / Pressure type/Output signal /Power supply/ medium / others option / Accuracy/Cable length /Accessories

HOLYKELL TECHNOLOGY COMPANY LIMITED
•www.holykell.com•
•E-mail: info@holykell.com
•Tel: +86 731 89873265
•Fax: +86 731 89873646