

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, 0.25%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, ATEX and IECEx approved
- Custom PU or FEP cable lengths
- Resolution up to 0.1mm (range less than 6m)



Profiles

HPT604BM 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.

HPT604BM 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 to 72.5
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

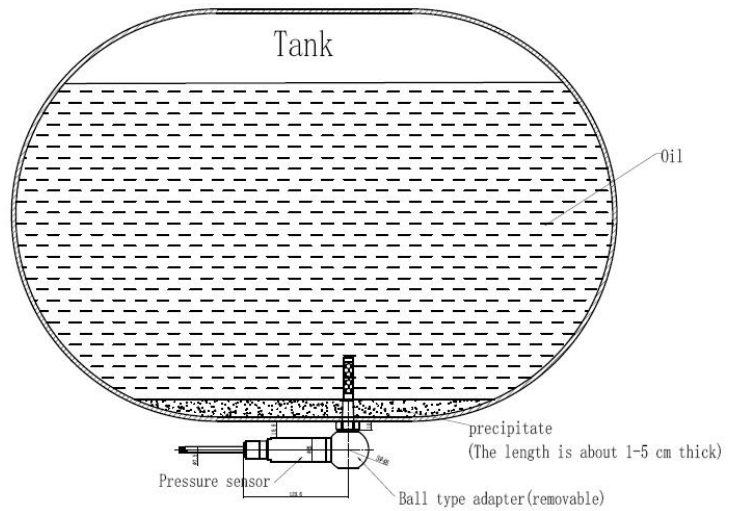
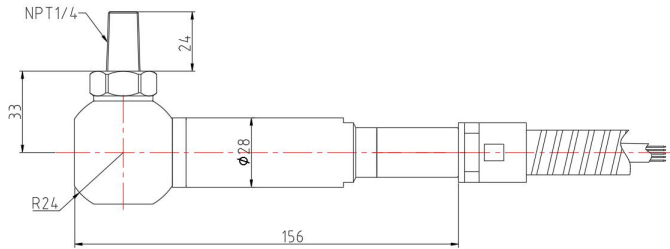
Calibrated in vertical mounting position with pressure connection facing downwards.

Specifications

Ambient Temperature: 25°C (unless specified)

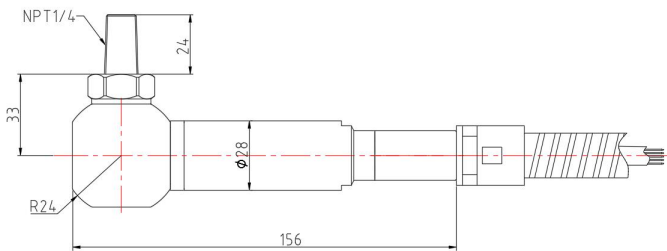
Parameter	HPT604 (Type BM)		
Pressure Range	0-0.1bar.....2 bar / 0-1m.....20m fuel level optional (See P1 page description)		
Overload	150% F.S.		
Burst Pressure	500% F.S.		
Accuracy (Linearity, Hysteresis, Repeatability)	≤ ±0.5%F.S(Typical); ≤ ±0.25%F.S (optional), 0.1%F.S (by customized) @25°C including non-lin., rep. and hys. optional		
Long-term Stability	≤ ±0.2%F.S/ year		
Working Temp.	-40 °C to +85°C		
Medium Temp.	-20°C to +85°C		
Storage Temp.	-40°C to +85°C		
Temp.Compensation	0°C to 50°C; -10°C to 70°C (Range > 200 kPa / 20 mH ₂ O)		
Medium Compatible	Compatible with SUS304 Stainless Steel		
Electrical Wire	2 Wires	3 Wires	4 wires
Signal Output	4-20 mA	0-5 V	RS485 Modbus RTU
Power Supply	7-30 V DC	8-30 V DC	3.6-5 V DC / 8-30 V DC
Polarity Protection	The power lines feature reverse polarity protection; however, the signal lines do not have reverse polarity protection against the positive power supply and must not be cross-connected.		
Insulation Resistance	> 100M Ω@100V		
Zero-point Temp. Drift	0.01%FS/°C		
Full scale Temp. Drift	0.005%FS/°C		
Power Consumption	24V: 2.8mA; 12V: 5.1mA; 5V: 10.1mA		
Electrical Connection	Fixed cable with vented tube and water proof IP68		
Response Time	≤20 ms(Current and voltage signals); ≤100 ms (digital signals)		
Data Overtime Interval	≥20ms		
Material of Housing	304 Stainless Steel		
Blind Area	Determined by the explosion-proof layer thickness of the tank, max 30 mm		
Pressure Type	Gauge pressure; Sealed gauge and absolute optional		
Certificate	ATEX (II 1G Ex ia IIC), IECEx, RoHS and CE		
Surge & Lightning Protection	Surge ±2000V (digital); Air discharge ±8000V; contact discharge ±6000V		
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



		Cable-out	
	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:



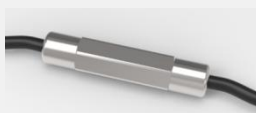




604 Selection Type	BM (Type BM)	00	F	G	E5	S11	D1	N	1	003
Range	Range reference to range selection table code									
Pressure & Level Unit	F=m Fuel (Min: 0.5 m; Max:20 m) B=bar (Min: 0.05bar Max: 2bar) P=Psi (Min:1Psi; Max:15Psi) K= kPa (Min:5 kPa; Max:200 kPa)									
Pressure Type	G=Gauge/Relative pressure type A=Absolute pressure (customize)									
Signal Output	E5=4-20 mA E11=RS485(MODBUS)		E6=0-5 V X= By Customized							
Power Supply	S11=7-30 V DC S62=3.6-5 V DC		S12=8-30 V DC 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	1=0.5%F.S		2=0.25%F.S		3=0.1%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, 4-20 mA, 7-30 V DC, 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
	<p>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.</p>	0008
	<p>Locking flange For locking cables, made of aluminum alloy</p>	0029
	<p>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</p>	0028
	<p>Desiccant drying cartridge Desiccant Pack installed on Vented Transducer cable. The cartridge will have to be field replaced as site environment requires.</p>	0010
	<p>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.</p>	0003
	<p>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.</p>	0005
	<p>Surge Protection Box Surge electrostatic protector Anti-surge $\pm 2000V/\pm 4000V$, anti-static 18KV, suitable for protecting 4-20ma and RS485 circuits.</p>	0014

Ordering information

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