

TECHNOLOGY

**HOLYKELL®**

**HPT200**  
**PRESSURE**  
• DATASHEET •

**1. Pressure Measurement** 2. Level Measurement 3. Temperature Measurement  
4. Flow Measurement 5. Display & Control Instruments

# HPT200 series

## Universal Industry Pressure Transducer & Transmitter

### Applications

- Critical industrial applications
- Petroleum
- Chemi-industry
- Metallurgy
- Power station
- Hydrology, Agriculture
- Harsh environments in the process industry

### Characters

- Fully Welded Stainless Steel Housing
- Non-linearity up to 0.125 % of span
- High Shock and Vibration
- Customized outputs, electrical connections and pressure ports
- CE ATEX RoHS certificate approved
- Overcurrent /overvoltage protection
- Polarity Protection
- Full sealed high stability impact design

### Profiles

HPT200 pressure transducer/transmitters use high quality imported U.S.A piezoresistive pressure sensor, Complete with a fully welded 316 stainless steel housing, high shock and vibration and EMI/RFI protection. It will survive in the most extreme conditions. Even with the lowest temperatures when used outdoors, with extreme shock and vibration in machine building or with aggressive media in the chemical industry, this transmitter can meet all requirements.

HPT200 offers continuous measuring ranges between -1~5 to 0~1000 bar and it can be combined with all the standard industry output signals, the most common process connections and a wide number of electrical connections.

Furthermore, it offers numerous options, such as different accuracy classes, extended temperature ranges and customer-specific pin assignments, meaning it can be suited to the widest range of applications.

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



### Measuring range

Measuring range	
bar	-1 to 1...0 to 0.1...0 to 1000
Kpa	-100 to 100...0 to 10...0 to 100000
psi	-15 to 15...0 to 1.5...0 to 15000
mbar	-1000 to 1000...0 to 100...0 to 1000000

They give measuring range are also available in Mpa , Pa, in Hg, mm Hg

### Materials

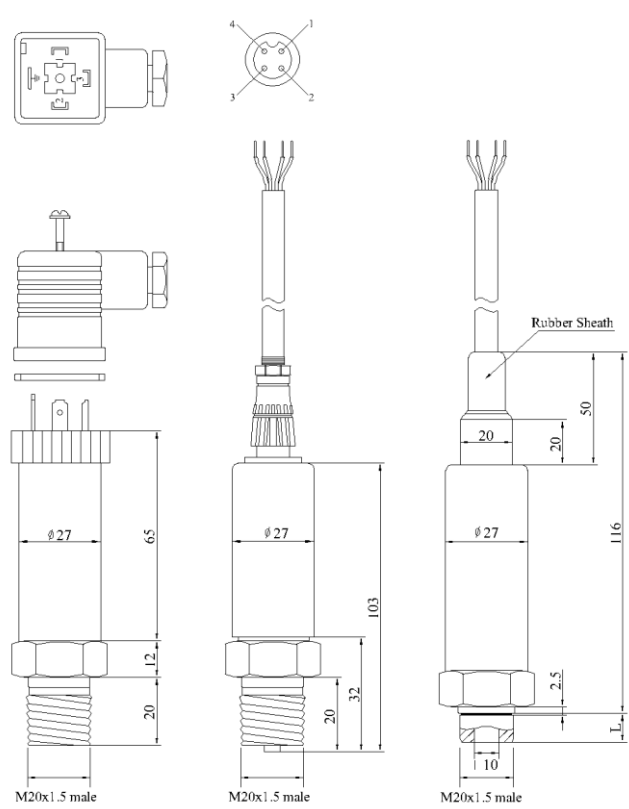
	Wetted Parts	Standard	Option
Case and sensor		Stainless steel 316	316 SST/SUS321
Filled Oil		Silicone oil	Fluorocarbon oil
Cable		PVC	PTFE/PUR/PE

### Specifications

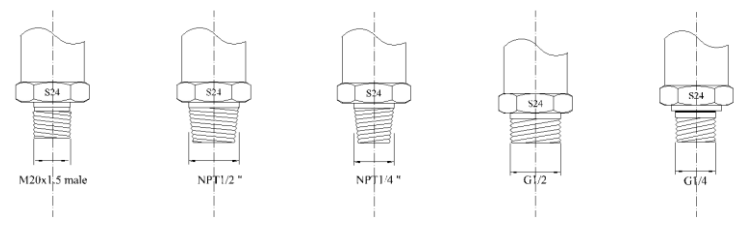
Ambient Temperature: 25°C (unless otherwise specified)

Parameter	HPT200-H/S8/C5				
Pressure Range	Gage / Absolute / Sealed gauge / Negative pressure optional.				
Safe Overload	200% F.S.(standard)				
Burst Pressure	300% F.S. (standard)				
Accuracy (Linearity Hysteresis Repeatability)	$\leq \pm 0.5\% \text{F.S.}$ ; $\leq \pm 0.25\% \text{F.S}$ $\leq \pm 0.1\% \text{F.S}$ (Customized) Including non-lin., rep. and hys. Optional				
Total Error Band	0...50 °C max. $\pm 0.5\% \text{FS}$ ; -10...70 °C max. $\pm 1.0\% \text{FS}$				
Long Stability	-Standard: 0.1%F.S $\pm 0.05\%$				
Working Temp	-30°C~85°C				
Storage Temp	-10°C~50°C(standard); -30°C~80°C(customized)				
Storage Temp	-40°C~125°C				
Medium compatible	Compatible with 316 Stainless Steel or 1Cr18Ni9Ti stainless steel				
Electronic Wire	2 Wires	3 or 4 Wires	3 Wires	4 Wires	3 Wires
Output	4~20mA Or 4~20mA+HART	4-20 mA or Double 4-20mA	0~5V ,1~5V, 0-10V	Rs485	4~20mA +Temp ( $\Omega$ )
Power Supply	7~30V/12~36Vdc	12~36 Vdc	7~30Vdc/15-36Vdc	10~30Vdc	12~36Vdc
Load Resistance	(U-10)/0.02 ( $\Omega$ )	Current type: (U-10)/0.02 ( $\Omega$ ); Voltage type: > 100K $\Omega$			
Insulate resistance	>100M $\Omega$ @100V dc				
Zero Temp. Drift	0.03%FS/°C ( $\leq 100\text{kPa}$ ) , 0.02%FS/°C ( $> 100\text{kPa}$ )				
Body materials	316 stainless steel (standard); 1Cr18Ni9Ti stainless steel optional				
Material of diaphragm	316L Stainless steel				
Filling oil	Silicon oil (standard); Fluorocarbon oil (Oxygen Services)				
Electronic connection	-DIN43650 Hirschman Connector, 4-poles and IP65. -Plug: (4/5-poles) Type IP65; - Directly Outlet Cable Type IP65 ( IP68 by customized).				
Limiting Frequency	1 kHz				
Mechanical vibration	$\pm 20\text{g}$				
Pressure connect port	G1/4" male, G1/2" male, 1/8"NPT male, 1/4"NPT male, 1/2"NPT male and female optional. (by customized)				
Explore Proof Grade	As drawing table listed				
Water Proof	IP65(HPT200-H,HPT200-C5); IP67 (HPT200-C8)				
Response time	$\leq 10\text{ms}$				
Endurance	> 100 million cycles, 0... 100 %FS at 25°C				
Options	Temperature Range by customized, Maximal range: -40...+120 °C Oil Filling Fluorocarbon oil (O2-compatible), olive-oil, lowest temperature oil (-55 °C) Pressure Connection, Electrical Connection Others on request. withstand Xylene medium pressure and level application (customized)				

**Dimensions and Drawing**



Unit: mm



**Electronic Connections**

		Directly sealed cable	
	Current	Red	Vcc+
		Green	S+
		Black	Shield
	Voltage	Red	Vcc+
		Green	GND
		Yellow	S+
		Black	Shield

		Directly sealed cable	
	4-20mA +Temp	Red	Vcc+
		Green	S+(Pressure)
		Yellow	S+(PT100A)
		Blue	S+(PT100B)
		Black	GND&Shield
	Rs485 RTU Modbus	Red	Vcc+
		Green	Vcc-&S-
		Yellow	RS485A
		Blue	RS485B

		DIN 43650 Connector	
	Current	1	Vcc+
		2	S+
		3	NC
		4	Shield
	Voltage	1	Vcc+
		2	GND
		3	S+
		4	Shield

		Plug:(4/5-poles) Type	
	Current	1	Vcc+
		2	S+
		3	NC
		4	Shield
	Voltage	1	Vcc+
		2	S+
		3	GND
		4	Shield

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

### How to Order

#### 1. Pressure Range Selection Table:

01	0~0.1	02	0~0.15	03	0~2	04	0~0.25	05	0~0.3	06	0~0.4	07	0~0.5	08	0~0.6	09	0~1
10	0~1.6	11	0~2	12	0~2.5	13	0~3	14	0~4	15	0~5	16	0~6	17	0~60	18	0~70
19	0~100	20	0~160	21	0~200	22	0~250	23	0~300	24	0~350	25	0~400	26	0~600	27	0.8~1.2
28	-0.6~0	29	-1~0	30	-1~0.6	31	-1~1	32	-1~1.5	X	By Customized						






Kindly according to your application select suitable range code , Example: Code 15 = 5 .

Unit of measure select on the Part Number Selection Table . Example: Code B=Bar , that's 5 bar .

#### 2. Part Number Selection Table:

<b>HPT200</b>	<b>H</b>	<b>G</b>	<b>15</b>	<b>B</b>	<b>E5</b>	<b>3</b>	<b>S3</b>	<b>N</b>	<b>1</b>	<b>002</b>
Selection Type										
Electronic Connection	H= Hirschman DIN43650 EX= 1/2"NPT S= Directly Outlet Cable M= M12 (4-pole) Type G= LED digital display									
Pressure Type	G=Gage A=Absolute N=Negative									
Pressure Measurement	Range reference to pressure range selection table code									
Pressure Unit	B=Bar P=PSI K=kPa M=MPA H=mH2O									
Output	E0= 1-5V (3 wires) E5= 4-20mA(2 wires) E6= 0-5V (3 wires) E7= 0-10V (3 wires) E8= 0.5-4.5V(3 wires) E11= RS485 MODBUS RTU (4 wires) E21=Double 4-20mA for P+T E22= 4-20mA for P and Ω for T X= By Customized									
Pressure connection	3= 1/4" NPT male 6=G1/4" male 7=G1/4"Female 8= M20x1.5 male 9=G1/2" male 10 =1/2" NPT male 26=1/4"-18 NPT Female X= By Customized									
Power Supply	S3=24 V DC (Standard) S5=12 V DC (for E0 ,E5,E6,E11,E21,E22) S6=5V DC (for E8) S9=15~36V DC (for E7) S10=12~30 V DC (for E5) S26=8~36V DC (for E0 ,E6) S30=7~30V DC (for E5)									
Other option	C Anti-Corrosion Type F Flush diaphragm O Oxygen Services X Withstand Xylene N Standard Type									
Accuracy	1=0.5%F.S. 2=0.25%F.S 3=0.1%F.S (high cost)									
Cable length	0=Non-Cable 001= Cable 1M 002= Cable 2M x= By Customized									

### Accessories

	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
	NPT adapter The 316 SS G1/2 adapter replaces the removable protective cap and converts the threads to 1/2"NPT male external, 1/4" female internal threads.	0001
	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
	Attached indicator for transmitters Standard version for Ex version	0006

### Order information

Model /Measuring range /Output Signal/Medium/Cable length/Case/Accessories