

# **FOCUS ON SENSING & CONTROL FOR 20 YEARS**

Provided Quality Automatic Instruments for Thousands of Customers







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Shanghai Zhaohui Pressure Apparatus Co., Ltd.

# PRODUCT BROCHURE

**PROFESSIONAL MANUFACTURER** FOR MEASUREMENT AND CONTROL

**SINCE 1999** 





# Welcome

Shanghai Zhaohui Pressure Apparatus Co., Ltd. (ZHYQ) is the leading professional manufacturer in the industrial of pressure, flow, temperature, liquid level and Internet of Things (IoT).

Established in 1999, developed a series of large scale and professional measurement products.

In recent years, ZHYQ actively expands the capacity and enhances to develop new products to meet the requirement of the market, found R&D center covers 1500<sup>m</sup> and production base covers 1500<sup>m</sup>, annual yield more than 200,000 pieces, the products are widely used in the field of industrial process control, energy & electricity, hydrology, construction machinery, medical experiment, military equipment and etc, our market spread all over the world with more than 50 countries and areas.

# Why choose ZHYQ?



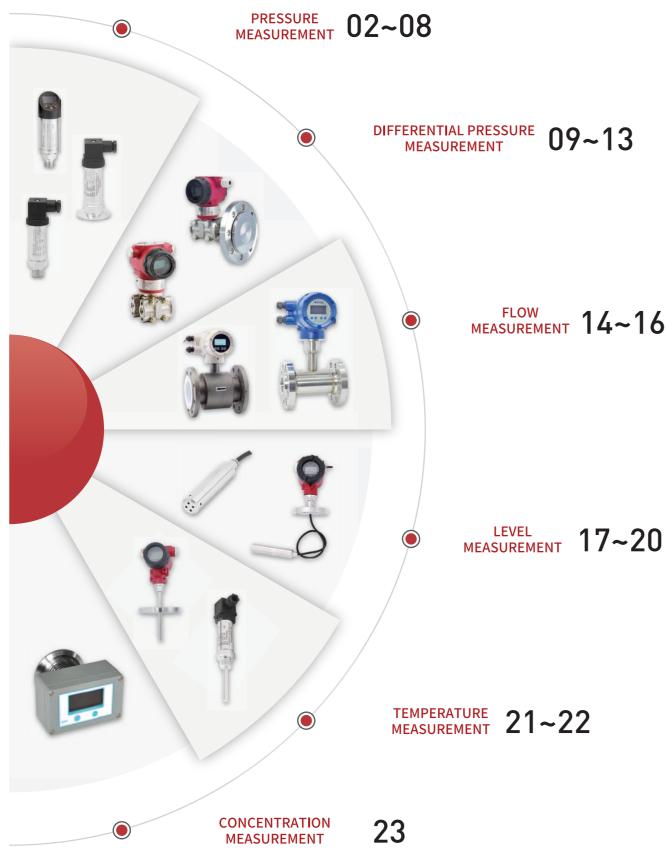
	Expert technical advice from our
	15,000m² plant, annual output 20
	Nearly 60 national invention pate
ISO	ISO 9001: 2015 accredited quality
	CMC, Ex, MA, CE, RoHS, ATEX, SIL
	High-tech enterprises, Shanghai
A=	The first in the industry to obtain
	Efficient and complete productio



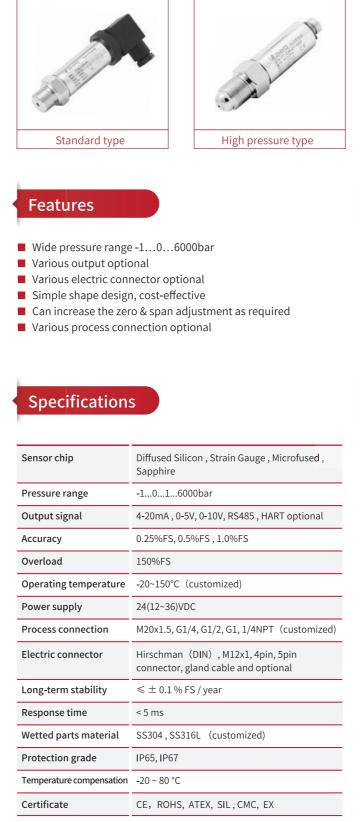
- highly experienced and trained staff
- 00,000 pieces transmitters
- ents and utility model patents
- / systems
- certification
- "specialized special new" enterprises
- a high-range 500MPa metering license
- on line of monocrystalline silicon sensor



# **CONTENTS**



### PT124B-21X Series General Purpose Pressure Transmitters



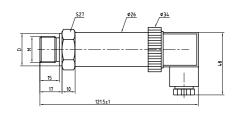


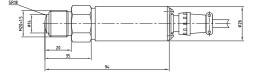


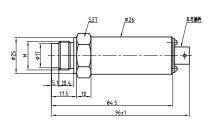
#### Applications

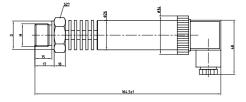
- Mechanical engineering
- Servo systems, hydraulic steam
- High pressure water jet, air pressure measurement
- Cement, mud, asphalt
- General industrial control field

#### Dimension













# PT124B-21X Series General Purpose Pressure Transmitters



■ Wide pressure range -1~0~700bar

Simple shape design, cost-effective

Various process connection optional

■ High accuracy , high steadily & Polarity protection

Can increase the zero & span adjustment as required

-1~0~700bar

150%FS

24(12~36)VDC

**Operating temperature** -20~150°C (customized)

0.1%FS, 0.25%FS, 0.5%FS

Diffused Silicon , monocrystalline silicon

4-20mA , 0-5V, 0-10V, RS485 , HART optional

M20x1.5, G1/4, G1/2, G1, 1/4NPT, 1.5" Clamp

Various output optional

**Specifications** 

Sensor chip Pressure range

Output signal

Power supply

Process connection

Accuracy

Overload

**Features** 



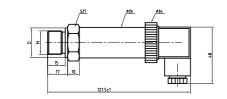


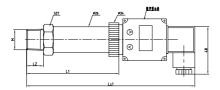


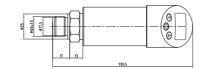
#### Applications

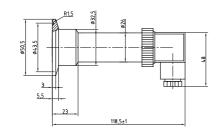
- Mechanical engineering
- Automatic control and detection system, building automation
- Constant pressure water supply
- Medicine machine, food, beverage, brewing industry
- Petrochemical, environmental protection, industrial process

#### Dimension









Model	Transmitter type		
	Standard type	PT124B-215	Explosion proof type
	High pressure type		Local display & switch type
	High accuracy type		Sanitary type
	Compact type		Moderate and high temperature type
PT124B-214	Flush diaphragm type		Marine / shipping type
Code	Range		
Х~Ү	-100~0~100kpa, 0~600MPa		
Code	Process connection		
G1	M20 x 1.5 male	G5	1/4" NPT male
G2	G1/2" male	G6	G3/8" male
G3	G1/4" male	G0	Other on request
G4	1/2" NPT male		
Code	Wetted parts material		
C1	SS304		
C2	SS316L		
C3	2205		
C0	Other on request		
Code	Output signal		
S1	4~20 mA (2-wire)	S5	0~10 V DC (3-wire)
S2	4~20 mA + HART (2-wire)	S6	1~5 V DC (3-wire)
S3	RS485 / Modbus (4-wire)	S0	Other on request
S4	0.5~4.5 V DC (3-wire)		
Code	Accuracy		
J3	$\pm$ 0.25 % FS		
J4	± 0.5 % FS		
J5	±1%FS		
Code	Electrical connection		
D1	Hirschman (DIN 43650)		
D2	Gland cable		
D3	5 pins		

PT124B-210-(0~5bar)G1C1S1J3D1

Example

Long-term stability	$\leq \pm$ 0.1% FS / year
Response time	< 5 ms
Wetted parts material	SS304, SS316L (customized)
Protection grade	IP65, IP67
Temperature compensation	-20 ~ 80 °C
Certificate	CE, ROHS, ATEX, SIL, CMC, EX







# PT124B-28X Series General Purpose Pressure Transmitters







# Specifications

Sensor chip	Diffused Silicon , monocrystalline silicon		
Pressure range	-1~0~700bar		
Output signal	4-20mA,RS485 ,HART optional		
Accuracy	0.25%FS,0.5%FS,1%FS		
Overload	150%FS		
Operating temperature	-20~150°C (customized)		
Power supply	24(12~36)VDC		
Process connection	M20x1.5, G1/4, G1/2, G1, 1/4NPT, 1.5" Clamp		
Electric connector	M12x1, Gland cable, Terminal		
Long-term stability	$\leqslant \pm$ 0.1% FS / year		
Response time	< 5 ms		
Wetted parts material	SS304 ,SS316L ,2205 , TA2(customized)		
Protection grade	IP65, IP67		
Explosion proof grade	Exib II CT4 Gb , Exib II CT6 Gb		
Certificate	CE, ROHS, ATEX, SIL, CMC, EX		





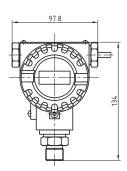
#### Features

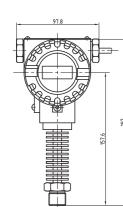
- Thermal power unit, light industry, machinery, metallurgy
- Building self-control, constant pressure water supply
- Petrochemical, environmental protection, air compression
- Automatic control and detection system
- Power station operation inspection
- Industrial process detection and control

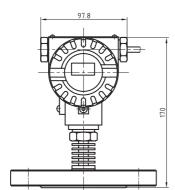
#### Applications

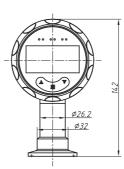
- Wide pressure range -1~0~700bar
- Various output optional
- High accuracy , high steadily & Polarity protection
- Aluminum alloy or stainless steel housing material
- Can increase the zero & span adjustment as required
- Various process connection optionalLED indicator can be rotated 360°

#### Dimension









Model	Transmitter type		
	Standard type (without display)	PT124B-284	Clamping type
	Anticorrosion type		Moderate and high temperature type
	Standard type (with display)	PT124B-286	
	Flush diaphragm type		Sanitary type
Code	Range		
Х~Ү	-1~0~700 bar		
Code	Process connection		
G1	M20 x 1.5 male	G6	G3/8" male
G2	G1/2" male	G7	1.5" clamp
G3	G1/4" male	G8	DN50 standard flange
G4	1/2" NPT male	G9	DN80 standard flange
G5	1/4" NPT male	G0	Other on request
Code	Wetted parts material		
C1	SS304	C4	Hastelloy C
C2	SS316L	C0	Other on request
C3	PTFE		
Code	Output signal		
S1	4~20 mA (2-wire)	S5	0~10 V DC (3-wire)
S2	4~20 mA + HART (2-wire)	S6	1~5 V DC (3-wire)
S3	RS485 / Modbus (4-wire)	S0	Other on request
S4	0.5~4.5 V DC (3-wire)		
Code	Accuracy		
J3	± 0.25 % FS	J5	±1%FS
J4	± 0.5 % FS		
Code	Display		
X1	Without display	X4	Percentage display
X2	LCD display	X0	Other on request
Х3	LED display		
Code	Electrical connection		
D2	Gland cable	D5	Terminal
D3	M20x1.5	D0	Other on request
D4	M12x1		
Code	Protection grade		
F1	IP65	F2	IP67
Code	Explosion proof grade		





# PT124B-289 Wireless Pressure Transmitter



#### Features

- Low power design, battery powered, long battery life
- Battery power or 24VDC power supply Optional
- Various wireless transmission type optional
- Various pressure unit switching
- Mating with gateway ,efficient pressure monitoring in the LAN

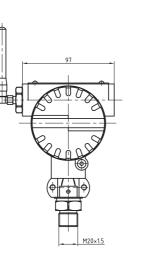
#### Applications

- Corrosive, impact, shock and other places pressure display
- Aboratories and industrial sites
- Coal mine wells, water pipe pressure , fire pipe network
- Oil, coal, tap water, automation control

# Specifications

Pressure range	-1~0~700bar
Output signal	GPRS, LoRa, NB-IoT, ZigBee, WiFi
Accuracy	0.25%FS,0.5%FS
Overload	150%FS
Operating temperature	-20~120°C
Power supply	3.6V Li battery or 24V or 12V DC optional
Process connection	M20x1.5, G1/2, 1/4NPT (Customized)
Electrical protection	Anti-electromagnetic interference
Display and backlight	LCD display and white backlight
Sampling rate	1~600s/time Settable
Data configuration	Button setting or remote setting
Upload rate	1-1440 minute settable
Explosion proof grade	Exib II CT4 Gb , Exib II CT6 Gb
Response frequency	3.2KHz (-3dB)
Long-term stability	$\leqslant \pm$ 0.2 % FS / year
Certificate	CE, ROHS, ATEX, SIL, CMC, EX
Temperature compensation	-20 ~ 80 °C

# Dimension



	*
SW27	27

## Ordering Guide

Model	Transmitter type						
PT124B-289A	Clamp mounting type	PT124B-289B	Thread	mounting ty	pe	PT124B-289C	Flange mounting type
Code	Range						
Х~Ү	-1~0~700 bar						
Code	Process connection						
G7	1.5" clamp	G1	M20 x 1	.5 male		G8	DN50
G14	2" clamp	G2	G1/2" m	nale		G9	DN80
G0	Other on request	G0	Other o	n request		G0	Other on request
Code	Server type						
V1	ZHYQ server			V3	Third se	erver	
V2	Custom server						
Code	Protocol type						
A1	ZHYQ protocol			A3	Third p	rotocol	
A2	Custom protocol						
Code	Wetted parts material						
C1	SS304			C0	Other o	n request	
C2	SS316L						
Code	Output signal						
S10	GPRS			S13	ZigBee		
S11	LoRa			S14	WiFi		
S12	NB-IoT						
Code	SIM card type (only for GPRS	& NB-loT)			_		
K1	ZHYQ card			K2	Custom	card	
Code	DTU / gateway (only for LoRa	, ZigBee & WiFi	)				
W1	ZHYQ DTU / gateway			W2	Custom	DTU / gateway	/
Code	Accuracy						
J3	± 0.25 % FS			J4	± 0.5 %	FS	
Code	Electrical connection						
D5	Terminal			D0	Other o	n request	
Code	Explosion proof grade						
T4	Exib II CT4 Gb			Т6	Exib II C	T6 Gb	
Code	Power supply						
P2	24V DC						
P4	3.6V Li battery						
P5	12V DC						
Example	PT124B-289B-(0~5bar)G1V2A	2C1S11W2J3D	5T6P4				







#### **PT3501 Differential Pressure Transmitter**

#### **Specifications**

Sensor chip	Monocrystalline silicon
Pressure range	-0.1 ~ 0 ~ 2000kPa
Output signal	4-20mA,RS485 ,HART optional
Accuracy	0.075%FS,0.1%FS,0.25%FS,0.5%FS
Overload	150%FS
Operating temperature	-20~150°C (Customized)
Power supply	24(12~36)VDC
Process connection	1/4NPT , 1/2NPT (Customized)
Electric connector	Gland cable, Terminal
Long-term stability	$\leqslant \pm$ 0.1% FS / year
Wetted parts material	SS304, SS316L (customized)
Response frequency	3.2KHz (-3dB)
Max static pressure	32MPa
Protection grade	IP65, IP67
Explosion proof grade	Exib II CT4 Gb , Exib II CT6 Gb
Certificate	CE, ROHS, ATEX, SIL, CMC, EX
Temperature compensation	-20 ~ 80 °C

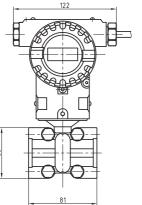
#### Features

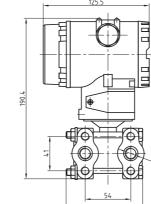
- Widely pressure range : -0.1~0~2000 kPa
- Excellent static pressure performance (up to 32MPa)
- High accuracy , high steadily & Polarity protection
- Zero & Range can be set on-site, the range ratio is 50:1
- Can increase the zero & span adjustment as required
- LED indicator can be rotated 360°

#### Applications

- Hydraulic and pneumatic control systems
- Level measure and control
- Petrochemical, environmental protection, pharmaceutical
- Thermal power unit, light industry, machinery, metallurgy
- Industrial process detection and control

# Dimension





90.6

#### PT3503 Dual Remote Differential Pressure Transmitter



#### Features

- 0~100~500kPa range pressure level measurement
- High accuracy , high steadily & Polarity protection
- Zero & Range can be set on-site, the range ratio is 50:1
- Can increase the zero & span adjustment as required
- LED indicator can be rotated 360°

#### Specifications

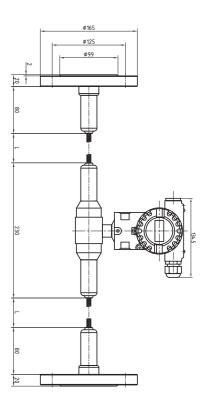
Sensor chip	Monocrystalline silicon		
Pressure range	0 ~ 100 ~ 500kPa		
Output signal	4-20mA,RS485 ,HART optional		
Accuracy	0.075%FS,0.1%FS,0.25%FS,0.5%FS		
Overload	150%FS		
Operating temperature	-20~150°C (Customized)		
Power supply	24(12~36)VDC		
Process connection	DN50, DN80 Flange, Clamp (customized)		
Electric connector	Gland cable, Terminal		
Long-term stability	$\leq \pm$ 0.1% FS / year		
Wetted parts material	SS316L,Ta,PTFE,Hastalloy C (customized)		
Response frequency	3.2KHz (-3dB)		
Protection grade	IP65, IP67		
Explosion proof grade	Exib II CT4, Exib II CT6		
Certificate	CE, ROHS, ATEX, SIL, CMC, EX		
Temperature compensation	-20 ~ 80 °C		
Capillary length	0.5 ~ 10m optional		
Temperature compensation	-20 ~ 80 °C		



#### Applications

- Hydraulic and pneumatic control systems
- Level measure and control
- Petrochemical, environmental protection, pharmaceutical
- Thermal power unit, light industry, machinery, metallurgy
- Industrial process detection and control

#### Dimension





# PT3504 Single-flange Differential Pressure Transmitter



# Features

Widely range 0~100~2000 kPa

- High precision, high stability, polarity protection
- Zero & Range can be set on-site, the range ratio is 50:1
- Can increase the zero & span adjustment as required
- LED indicator can be rotated 360°

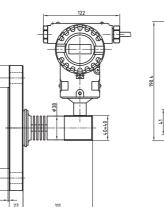
#### Applications

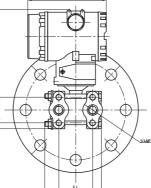
- Corrosive, impact, shock and other places pressure display
- Aboratories and industrial sites
- Petrochemical, environmental protection , pharmaceutical
- Thermal power unit, light industry, machinery, metallurgy
- Industrial process detection and control

# Specifications

Sensor chip	Monocrystalline silicon		
Pressure range	0~100~2000kPa		
Output signal	4-20mA,RS485 ,HART optional		
Accuracy	0.075%FS,0.1%FS,0.25%FS,0.5%FS		
Overload	150%FS		
Operating temperature	-20~150°C (Customized)		
Power supply	24(12~36)VDC		
Process connection	DN50, DN80 Flange (customized)		
Electric connector	Gland cable, Terminal		
Long-term stability	$\leqslant \pm$ 0.1% FS / year		
Wetted parts material	SS316L,Ta ,PTFE,Hastalloy C (customized)		
Response frequency	3.2KHz (-3dB)		
Protection grade	IP65, IP67		
Explosion proof grade	Exib II CT4 Gb , Exib II CT6 Gb		
Certificate	CE, ROHS, ATEX, SIL, CMC, EX		
Temperature compensation	-20 ~ 80 °C		

# Dimension





## Ordering Guide

1odel	Transmitter type		
PT3501	Standard type	PT3504	Single flange type
PT3502	Single measurement & single remote type	PT3505	Dual measurement & single remote type
PT3503	Dual measurement & dual remote type		
Code	Range		
Х~Ү	-0.1202000kPa, 020mH <sub>2</sub> O (pls. advise static p	ressure)	
Code	Process connection		
G7	1.5" clamp	G12	1/4" NPT female
G8	DN50 standard flange	G13	DN25 standard flange
G9	DN80 standard flange	G0	Other on request
G11	1/2" NPT female		
Code	Mount bracket		
A1	Tube flat bracket	A3	Board mounted flat bracket
A2	Tube bending bracket		
Code	Capillary length		
L1	1m	L3	5m
L2	3m	LO	Other on request
Code	Wetted parts material		
C1	SS304	C4	Hastelloy C
C2	SS316L	C5	Tantalum
C3	PTFE	C0	Other on request
Code	Output signal		
S1	4~20 mA (2-wire)	S7	4~20mA rooting output
S2	4~20 mA + HART (2-wire)	S0	Other on request
S3	RS485 / Modbus (4-wire)		
Code	Accuracy		
J1	$\pm$ 0.075 % FS	J3	± 0.25 % FS
J2	± 0.1 % FS	J4	± 0.5 % FS
Code	Display		
X1	Without display	X4	Percentage display
X2	LCD display	Х0	Other on request
Code	Electrical connection		
D5	Terminal	D0	Other on request
Code	Protection grade		
F1	IP65	F2	IP67
Code	Explosion proof grade		
T4	Exib II CT4 Gb	Т6	Exib II CT6 Gb
xample	PT3503-(0~5mH,0)G8A2L2C5X2D5F2T4		





# PT124B-20X Series Micro Differential Pressure Transmitter







#### Features

- Wide pressure range -0.1~0~2000kPa
- High accuracy , high steadily
- Compact design for small spaces
- Polarity protection, strong anti-interference ability

## Specifications

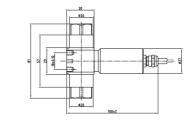
Sensor chip	Diffused Silicon , monocrystalline silicon	
Pressure range	-0.1~0~2000kPa	
Output signal	4-20mA , RS485 , HART optional	
Accuracy	0.1%FS, 0.25%FS , 0.5%FS	
Overload	150%FS	
Operating temperature	-20~80°C (customized)	
Power supply	24(12~36)VDC	
Process connection	M20x1.5, 1/4NPT (customized)	
Electric connector	Gland cable, Terminal	
Long-term stability	$\leq \pm$ 0.1% FS / year	
Response time	< 5 ms	
Wetted parts material	SS304, SS316L (customized)	
Protection grade	IP65, IP67	
Certificate	CE, ROHS, ATEX, SIL, CMC, EX	

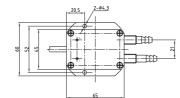


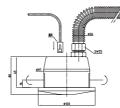
#### Applications

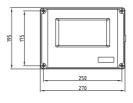
- Hydraulic and pneumatic control systems
- Level measure and control
- Petrochemical, environmental protection, pharmaceutical
- Fire Equipment
- Smart factory

# Dimension









## PT6006 Multi-parameter Transmitter



#### Specifications

Measuring type	Differential pressure, static pressure, temperature, flow	
Measuring range	Differential pressure: 0-150KPa Static pressure: 0-2.5MPa, 6.4MPa, 10MPa Temperature: -55~150°C	
Measuring medium	Liquid, gas, vapour	
Accuracy	Differential pressure : 0.2%FS, Static pressure: 0.2%FS, Temperature: 0.5%FS	
Output	RS485	
Process connection	1/4NPT、M20*1.5、intubation( customized)	
Operating temperature	-20~150°C	
Protocol	Modbus RTU	
Wetted parts material	SS304, SS316L (customized)	
Protection grade	IP67	
Electrical connection	Gland cable, terminal (customized)	
Power supply	9~36VDC	
Overload pressure	150%FS	
Burst pressure	300%FS	
Pressure connection	DN50、DN80 (customized)	
Temperature compensation	-20 ~ 80 °C	



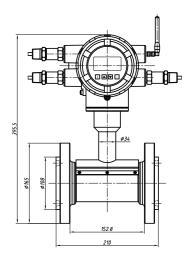
#### Features

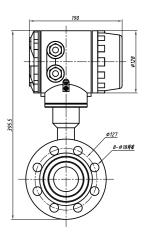
- Multi-function monitoring of differential pressure, static pressure and temperature
- Direct measurement of liquids, gases and vapors
- Easily install and operate
- Flameproof design, with high safety

#### Applications

 Oilfield single well metering, simultaneous monitoring and measurement

#### Dimension







# PT124B-501 Electromagnetic Flowmeter



#### Specifications

Drift diameter	10~2000mm	
Output signal	4-20mA, HART, RS485 optional	
Accuracy	0.25%FS,0.5%FS	
Power supply	110/220VAC, 24VDC, 24V DC + battery double	
Nominal pressure	4.0MPa, 2.5MPa, 1.6MPa, 1.0MPa, 0.6MPa	
Lining material	CR, PTFE, PFA, PU, F46, etc.	
Flange material	Carbon steel, SS304, SS316, SS316L optional	
Maximum flow rate	15m/s	
Electric Connector	Terminal	
Fluid conductivity	≥ 5µS/cm	
Power consumption	< 20W	
Operating temperature	$-25^{\circ}C \sim 60^{\circ}C$	
Electrode material	SS316L, Hastelloy C, Ti, Ta, Pt, optional	
Number of electrodes	Standard 3 electrodes	
Protection grade	IP67	
Explosion Proof Grade	Exib II CT4 Gb , Exib II CT6 Gb	
Certificate	CE, ROHS	

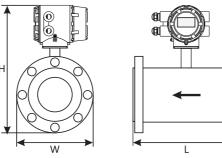
#### Features

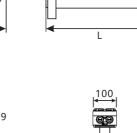
- High accuracy, linearity and stability
- Good reliability and anti-interference performance
- Good pressure tightness and high intelligence
- Good corrosion and wear resistance
- Two-way measurement system that measures forward flow and reverse flow

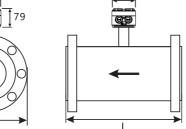
#### Applications

- Food and Beverage, Pharmaceutical, Reclaimed Water
- Petrochemical, Refining & Chemical Metering
- Facility or Property Management
- Process or Industrial
- Water & Wastewater Treatment
- Water Distribution

# Dimension







## Ordering Guide

Model	Flowmeter type
PT124B-501A	Integrated type
Code	Drift diameter
DN	10 ~ 2000 mm
Code	Electrode material
E1	SS316L
E2	Hastelloy C
E3	Titanium
Code	Lining material
L1	Chloroprene Rubber (CR)
L2	PTFE
L3	Teflon (PFA)
Code	Flange material
C1	SS304
C2	SS316L
Code	Power supply
P1	110/220V AC
P2	24V DC
Code	Output signal
S1	4~20 mA (2-wire)
S2	4~20 mA + HART (2-wire)
S3	RS485 / Modbus (4-wire)
Code	Accuracy
J3	± 0.25 % FS
J4	± 0.5 % FS
Code	Display
X6	LCD display instantaneous / cumulative flow
X0	Other on request
Code	Electrical connection
D6	M20 x 1.5 female
D0	Other on request
Code	Pressure grade
Y1	1.6MPa
Y2	2.5MPa
Code	Explosion proof grade
T4	Exib II CT4 Gb
Т6	Exib II CT6 Gb
Example	PT124B-501A-50E1L1C1P2S1J4X6D6Y1



#### PT124B-501B Separated type

E4	Tantalum
E5	Platinum
E0	Other on request
L4	PU
L5	F46
L0	Other on request
C11	Carbon steel
P3	24V DC + battery double
S14	Frequency / pulse output
S14 S0	Frequency / pulse output Other on request



# PT124B-22X Series Hydrostatic Level Transmitters



Features

■ Wide range 0~1~50mH<sub>2</sub>O

Various output optional

High precision and high stability

Simple shape design, cost-effective

Can increase the zero & span adjustment as required







## Applications

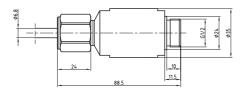
- Wells, pools, sinks, urban water supply and sewage treatment
- Industrial site level measurement and control
- Reservoir, river, ocean monitoring
- Dam, water conservancy and hydropower, hydrological
- Liquid irrigation, sewage pool, oil pool
- Food, beverage, pharmaceutical, chemical
- Navigation and ship system

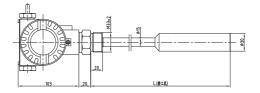
#### Specifications

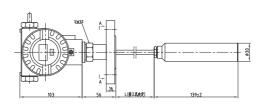
Sensor chip	Diffused Silicon , monocrystalline silicon	
Range	$0 \sim 1 \sim 50 \text{mH}_2\text{O}$	
Output signal	4-20mA, 0-5V, 0-10V, RS485 ,HART optional	
Accuracy	0.1%FS, 0.25%FS , 0.5%FS	
Overload	150%FS	
Operating temperature	-10~80°C (Customized)	
Power supply	24(12~36)VDC	
Process connection	Submersible, screw thread, flange optional	
Electric connector	Gland cable, Terminal	
Long-term stability	$\leq\pm$ 0.1% FS / year	
Wetted parts material	SS304, SS316L, PTFE (customized)	
Response frequency	3.2KHz (-3dB)	
Protection grade	IP68	
Explosion proof grade	Exib II CT4 Gb , Exib II CT6 Gb	
Certificate	CE, ROHS, ATEX, SIL, CMC, EX	
Temperature compensation	-20 ~ 80 °C	

# Dimension









Orderin	g Guide
Model	Transmitter type
PT124B-220	Standard type
PT124B-221	
PT124B-222	Insert type
Code	Range
X~Y	0150mH <sub>2</sub> O
Code	Process connection
G1	M20 x 1.5 male
G8	DN50 standard flange
G10	Submersible type
G0	Other on request
Code	Wetted parts material
C1	SS304
C2	SS316L
C3	PTFE
C0	Other on request
Code	Output signal
S1	4~20 mA (2-wire)
S2	4~20 mA + HART (2-wire)
S3	RS485 / Modbus (4-wire)
Code	Accuracy
J2	± 0.1%FS
J3	± 0.25 % FS
J4	± 0.5 % FS
Code	Display
X1	Without display
X2	LCD display
Х3	LED display
Code	Electrical connection
D2	Gland cable
D5	Terminal
D0	Other on request
Code	Explosion proof grade
T4	Exib II CT4 Gb
Example	PT124B-220-(0~5mH20)G10C2S1J4X1D2T4



PT124B-223	Low power consumption type
PT124B-224	Anti-corrosion type
PT124B-225	Capacitive type
S4	0.5~4.5 V DC (3-wire)
S5	0~10 V DC (3-wire)
S0	Other on request
X4	Percentage display
X0	Other on request
Т6	Exib II CT6 Gb

# PT124B-229 Wireless Level Transmitter



# Specifications

Measuring range	0~1~50mH <sub>2</sub> O	
Output signal	GPRS, LoRa, NB-IoT, ZigBee, WiFi	
Accuracy	0.25%FS,0.5%FS	
Overload	150%FS	
Operating temperature	-20~80°C	
Power supply	3.6V Li battery or 24V or 12V DC optional	
Process connection	Submersible type	
Electrical protection	Anti-electromagnetic interference	
Display and backlight	LCD display and white backlight	
Sampling rate	1~600s/time Settable	
Data configuration	Button setting or remote setting	
Upload rate	1-1440 minute settable	
Explosion proof grade	Exib II CT4 Gb , Exib II CT6 Gb	
Response frequency	3.2KHz (-3dB)	
Long-term stability	$\leqslant$ $\pm$ 0.2% FS / year	
Certificate	CE, ROHS, ATEX, SIL, CMC, EX	

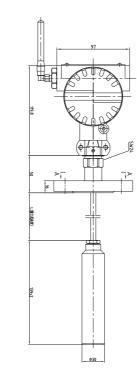
#### Features

- Low power design, battery powered, long battery life
- Battery power or 24VDC power supply Optional
- Various wireless transmission type optional
- Various pressure unit switching
- Mating with gateway ,efficient pressure monitoring in the LAN

#### Applications

- Mine well, pipe-network water supply
- Extinguishing pipe network
- Petroleum, coal and automatic control
- Water works, hydro plant
- High pool level and hydrology monitoring

# Dimension



## Ordering Guide

Model	Transmitter type			
PT124B-229	Wireless level transmitter			
Code	Range			
Х~Ү	0 ~ 1 ~ 50mH <sub>2</sub> O			
Code	Process connection			
G1	M20 x 1.5 male			
G8	DN50 standard flange			
G10	Submersible type			
G0	Other on request			
Code	Server type			
V1	ZHYQ server	V3	Third server	
V2	Custom server			
Code	Protocol type			
A1	ZHYQ protocol	A3	Third protocol	
A2	Custom protocol			
Code	Wetted parts material			
C1	SS304	C3	PTFE	
C2	SS316L	C0	Other on request	
Code	Output signal			
S10	GPRS	S13	ZigBee	
\$11	LoRa	S14	WiFi	
\$12	NB-IoT			
Code	SIM card type (only for GPRS & NB-IoT)			
K1	ZHYQ card	K2	Custom card	
Code	DTU / gateway (only for LoRa, ZigBee & WiFi)			
W1	ZHYQ DTU / gateway	W2	Custom DTU / gateway	
Code	Accuracy			
J3	± 0.25 % FS	J4	$\pm$ 0.5 % FS	
Code	Electrical connection			
D5	Terminal	D0	Other on request	
Code	Explosion proof grade			
T4	Exib II CT4 Gb	Т6	Exib II CT6 Gb	
Code	Power supply			
P2	24V DC			
P4	3.6V Li battery			
P5	12V DC			
Example	PT124B-229-(0~5mH <sub>2</sub> O)G10V1A1C2S12K1J4D5T4P4			







# WR Series Temperature Transmitters









#### Features

- Wide range -200°C ~ 1600°C
- Easy assembly and replacement
- Good seismic performance, high measurement accuracy
- Fast thermal response time
- High mechanical strength, pressure resistance, wear resistance

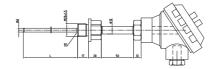
#### Specifications

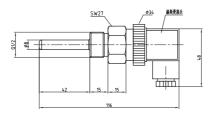
Sensor type	Thermal resistance, thermocouple	
Measuring components	PT100, CU50, C, S, B, E, K, R, J, T	
Range	-200°C ~ 1600°C	
Output signal	4-20mA, RS485 ,HART, PT100 optional	
Accuracy	0.25%FS , 0.5%FS, Grade A, Grade B	
Power supply	24(12~36)VDC	
Process connection	M20x1.5, G1/4, Flange optional	
Probe length	25~2000mm optional	
Probe diameter	6mm, 8mm, 12mm, 16mm optional	
Electric connector	Hirschman (DIN), Gland cable, Terminal	
Long-term stability	$\leq\pm$ 0.1% FS / year	
Probe Material	SS304, SS316L, PTFE (customized)	
Response frequency	3.2KHz (-3dB)	
Explosion proof grade	Exib II CT4 Gb , Exib II CT6 Gb	
Certificate	CE, ROHS, ATEX, SIL, CMC, EX	
Protection grade	IP65, IP67	

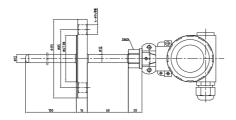
# Applications

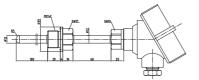
- Petrochemical
- Electric power
- Water plantFood and drink
- Pharmaceutical
- Boiler

# Dimension







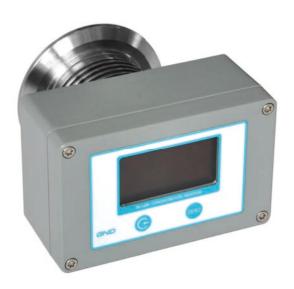


# Ordering Guide

Model	Transmitter type		
VR-202	Armor type	WR-205	Explosion proof type with LCD display
VR-203	Compact type	WR-207	Explosion proof & intelligent type
Code	Measuring components		
Р	Pt100 (-200°C~500°C)	С	Copper thermal resistor ( -50 $\sim$ 50°C )
S	Platinum rhodium thermocouple ( $0{\sim}1100^\circ$ C )	В	Platinum rhodium thermocouple ( $0{\sim}1600^\circ$ C )
К	Nickel thermocouple ( 0~800°C )	R	Platinum rhodium thermocouple ( 0~1200°C )
J	Iron constantan thermocouple ( $0{\sim}500^\circ$ C )		
Code	Range		
Х~Ү	-200°C ~ 1600°C		
Code	Process connection		
G1	M20 x 1.5 male	G6	G3/8" male
G3	G1/4" male	G8	DN50 standard flange
G4	1/2" NPT male	G0	Other on request
Code	Wetted parts material		
C1	SS304	C6	Corundum
C2	SS316L	C7	TA(1-3)
C3	PTFE	C0	Other on request
Code	Probe length		
L	25mm~2000mm	LO	Other on request
Code	Probe diameter		
B1	6mm	B4	16mm
B2	8mm	B0	Other on request
B3	12mm		
Code	Output signal		
S1	4~20 mA (2-wire)	S8	PT100
S2	4~20 mA + HART (2-wire)	S9	Double branch type
S3	RS485 / Modbus (4-wire)	S0	Other on request
Code	Accuracy		
J3	± 0.25 % FS	J6	Grade A
J4	± 0.5 % FS	J7	Grade B
Code	Display		
X1	Without display	Х3	LED display
X2	LCD display		
Code	Electrical connection		
D1	Hirchsman connector	D5	Terminal
Code	Protection grade		
F1	IP65	F2	IP67
Code	Explosion proof grade		
T4	Exib II CT4 Gb	Т6	Exib II CT6 Gb



# **GND-15 On-line Refractometer**



#### Specifications

Measurement scale	Brix (%) , Automatic Temperature Compensation	
Measurement range	Brix 0~90%	
Minimum indication	Brix 0.1%	
Measurement accuracy	Brix $\pm 0.5\%$ , Temperature $\pm 0.2\%$	
Measurement temperature	-20~70°C Auto temperature compensation	
Operating temperature	-20-60°C	
Power supply	24VDC	
Output	4-20mA	
Protection grade	IP65	
Wetted parts material	Prism: sapphire , Prism stage : SS304	
Temperature sensor	Thin film platinum sensor	
Resistible pressure on the prism unit	0.98MPa (10kgf/cm <sup>2</sup> )	
Environmental conditions	Ambient temperature : -20~60°C Relative humidity :30~90%	

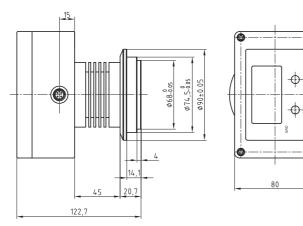
#### Features

- Lightweight, compact and easy to install on site.
- LED display, 4-20mA output, easy to connect with other devices for automatic control.
- Easy to operate, only one transmission line solves power and data transmission.
- It has the function of automatic temperature compensation according to the temperature of the tested medium . When the tested medium temperature changes, the Brix value (soluble solids) after temperature compensation is displayed, and the output changes accordingly.

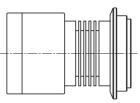
#### Applications

- Suitable online real-time monitoring and control of liquid substance concentration in various industries
- Cutting oil, mold release agent, quenching liquid, cleaning liquid, emulsion in the machining industry
- Food, chemical, paper, tobacco, environmental protection

#### Dimension

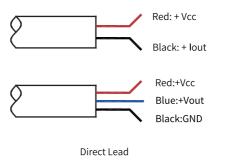


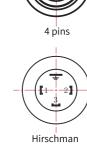
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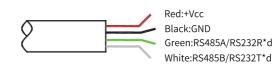
# **Electrical Connection & Wiring**

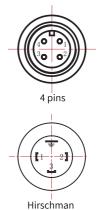
# 1. Analog signal output





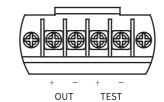
# 2. Digital signal output



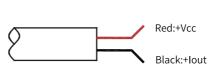


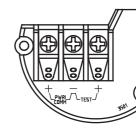
#### 3. Explosion-proof pressure transmitter wiring





#### 4. Differential pressure transmitter wiring







Туре	Function	Color	Pin
4 pins 0-5V; 0-10V	+Vcc	Red	1
	+Vout	Blue	3
	GND	Black	4
4 pins 4-20mA	+Vcc	Red	1
	+lout	Black	3
Hirschman 0-5V; 0-10V	+Vcc	Red	1
	+Vout	Blue	2
	GND	White	3
Hirschman 4-20mA	+Vcc	Red	1
	+lout	Black	2

Туре	Function	Color	Pin
Hirschman 4 pins MODBUS (RS485/RS232)	+Vcc	Red	1
	RS485A/RS232R*d	Green	2
	GND	Black	3
	RS485B/RS232T*d	White	4 (±)

Туре	Function	Color	Terminal
4-20mA	+Vcc	Red	OUT+
	+lout	Black	OUT-



Туре	Function	Color	Terminal
4-20mA	+Vcc	Red	OUT+
	+lout	Black	OUT-

