

# Technical Datasheet

PRESSURE MEASUREMENTS | DATA SHEETS | DS-WK PT700-EN- REV.A-23

## Pressure transmitter WX-PT700



### Pressure Measurement

## Measurement made easy

The low-power, high-performance transmitter

Wellkonix provides the widest selection of pressure measurement products globally. The WK-PT700

family offers goods that are especially made to fit the broadest range of applications, from harsh environments in offshore oil and gas to the pharmaceutical industry's laboratory setting.

## Pressure transmitter WX-PT700/PT300

WX-PT700 Series pressure transmitter is kind of device based on pressure layer, which inside expert integrate circuit can transform sensor milli-volt signal to standard far distance transmission current signal, and it can be directly joined with computer joint clip, control instrument ,aptitude instrument or PLC etc. conveniently. The series' product is applied extensively in the professions, such as the industry process control, petroleum, chemical engineering and metallurgy etc. Carry the distance delivers and can adopt electric current exportation method.

### Applications

- Dyeing industry
- Air tightness test
- HVAC
- Water supply
- Agricultural irrigation
- Food industry
- Mud measurement
- Vacuum equipment
- Medical equipment

### Features

- Compact structure and easy installation
- Advanced Diaphragm/Oil Filled Isolation Technology
- High stability, high reliability
- Anti-vibration, anti-radio frequency interference.
- 316L stainless steel isolation diaphragm structure.
- High precision, all stainless steel structure.
- Micro amplifier, voltage, current, RS485 signal output.
- Wide range with multiple pressure measurement
- Vibration and shock resistance.

### Principle

Pressure Transmitter are devices that convert the mechanical force of applied pressure into electrical energy. This electrical energy becomes a signal output that is linear and proportional to the applied pressure. And a transmitter sends signals in milliamps (mA). At present, various types of pressure sensors, such as diffused silicon, capacitive, silicon sapphire, ceramic thick film, metal strain electric type are widely used in various industries. WX-PT700 is a diffused silicon type pressure transmitter.

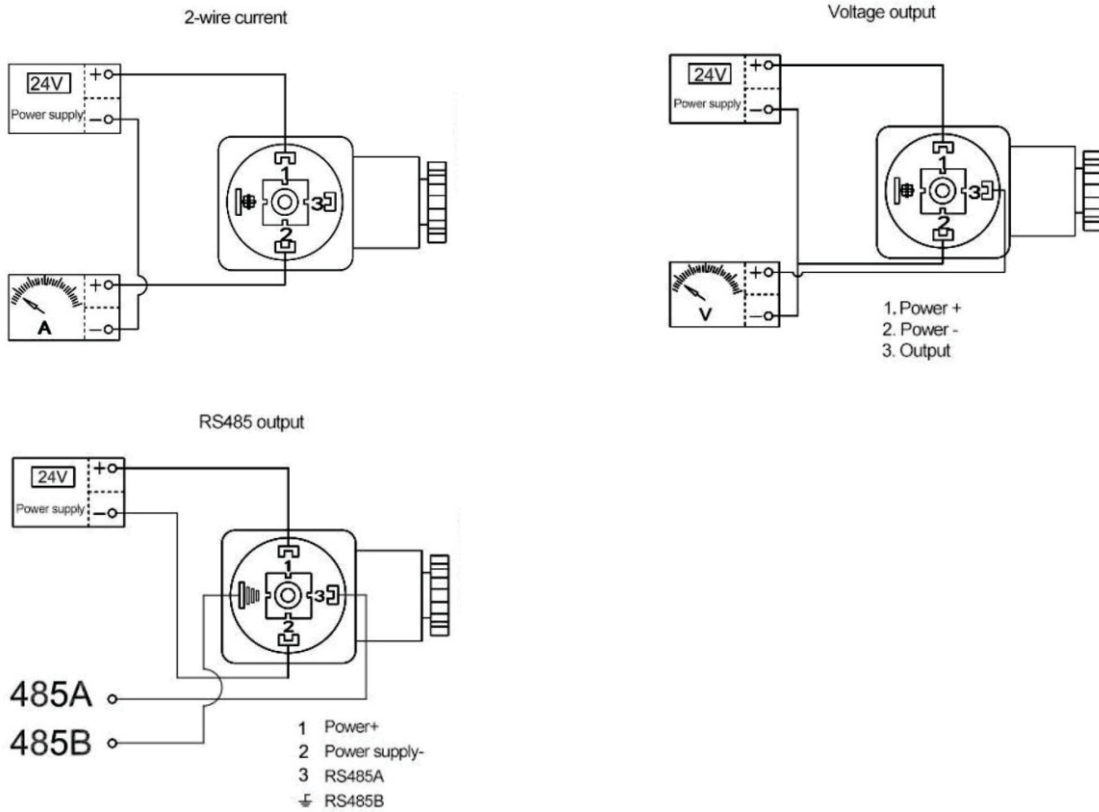


WX-PT700 /P300

Parameters	
Output and power supply	(4~20)mA output (10~32)V (0~10)V output (12~32)V (0~5)V,(1~5)V,RS485 output (8~32)V (4~20)mA output with LCD 4-digit display meter (17~32)V RS485 output with 8-segment digital tube 4-digit display meter (5~28)V
Accuracy	0.2%F.S, 0.25%F.S, 0.5%F.S(Optional)
Measuring Range	-0.1MPa...0~10kPa...60MPa
Pressure Type	Gauge pressure, Absolute pressure, Sealing pressure
Temperature compensation	-10~70°C
Operating temperature	-20~85°C
Medium temperature	-20~85°C
Storage temperature	-40~85°C
Ingress Protection	IP65
Overloading pressure	0.035~10MPa(150%FS),10~60MPa(125%FS)
Zero output temperature drift	±0.3%FS/10°C
Full-Scale output temperature drift	±0.3%FS/10°C
Long-term stability:	±0.2%FS/year
Response time	Current and voltage output type pressure≤10ms (up to 90%FS); RS485 output type pressure≤100ms (up to 90%FS)
Insulation resistance	20MΩ/250VDC
Dielectric strength	50Hz, 500VAC
Load Resistance	4~20mA output: $\leq(U-10V)/0.02A$ , U is the power supply voltage 4~20mA output with display: $\leq(U-14V)/0.02A$ , U is the power supply voltage V output: $\geq 5k\Omega$

## Wiring

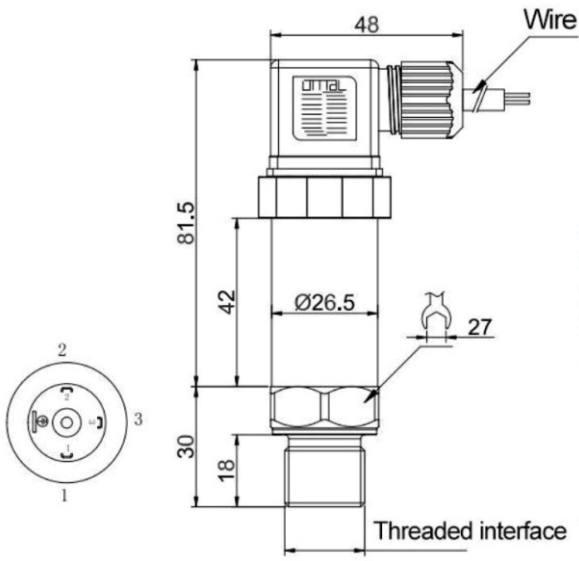
### Electrical connection diagram of Hersman structure



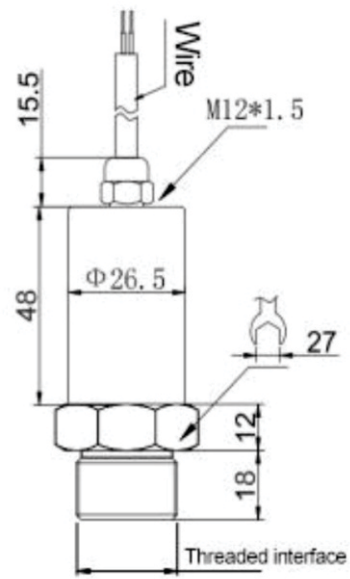
### Direct lead structure electrical connection

Output	Color	Description
Current	Red	Power+
	Green	Current output
Voltage	Red	Power+
	Green	Power supply-
	Yellow	Voltage output
RS485	Red	Power+
	White	Power supply-
	Green	RS485+
	Yellow	RS485-

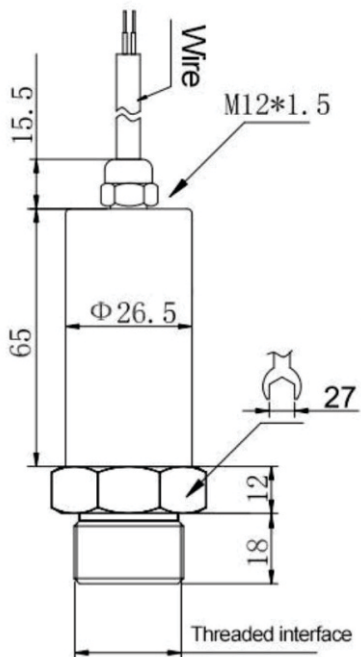
## Dimensions



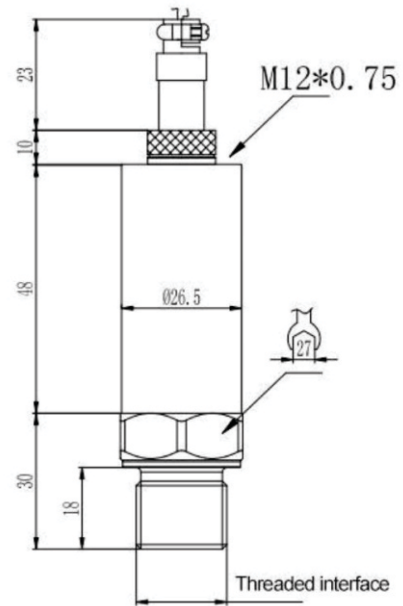
Herssman joint



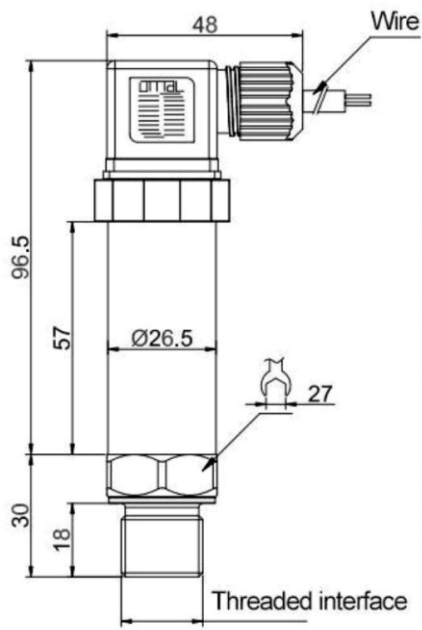
Direct lead



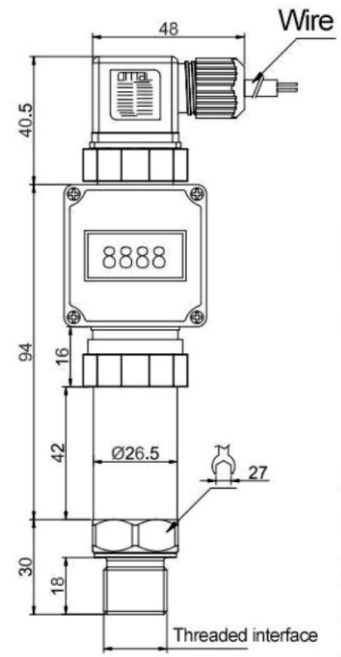
Direct lead with RS485 output



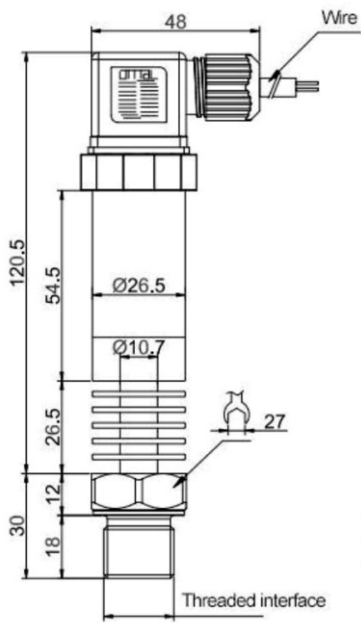
Aviation plug



Herssman joint with RS485 output



Herssman joint with display



Hessman high temperature type

## Ordering code

WX-PT700-G-RT (0-1)-J3-01-D2-I2-EI1-V1-DM1-E1-GQ1-IP1-HM1-TM1-CS2														Description		
WX-PT700	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Pressure Type	G															Gauge pressure
	A															Absolute pressure
	S															Sealed gauge pressure
Measuring range	RT(XX - XX)															-0.1MPa...0 - 10kPa...60MPa
Accuracy			J3													0.2%
			J4													0.25%
			J5													0.5%
Transmit output			00													No
			01													4~20mA output
			02													1~5V output
			03													0~10V output
			04													0~5V output
			OZ1													20~4mA output
			OZ2													0.5~4.5V output
		OZ3													0.5~2.5V output	
Communication			D0													No
			D2													RS485
Installation				I1												M20*1.5
				I2												G1/4
				I3												G1/2
				I4												M14*1.5
				I5												NPT1/4
				I6												NPT1/2
				I7												Others
Electrical Interface					EI1											Herssman joint
					EI2											Herssman direct lead
					EI3											Direct lead
					EI4											Round seat aviation plug
					EI5											Square seat aviation plug
Power supply						V1										24VDC
						V5										5VDC
Ingress Protection							DM1									316L stainless steel diaphragm



Seal ring material	GQ1				Nitrile rubber seal (20°C~100°C)
	GQ2				Fluorine rubber sealing ring (-20°C~200°C)
Ingress Protection		IP1			IP65
Shell material			HM1		304(Standard)
			HM2		316L
Thread material				TM1	304(Standard)
				TM2	316L
Cable length				CS2	2m(Standard)
				CSXX	Xm

Note: Communication output and transmission output cannot be selected at the same time

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