

CS-PT300M Pressure Transmitter

(Product Specification)

XI'AN CHINASTAR M&C LIMITED

成为全球传感器界有影响力的创新型公司

To Be An Influential And Innovative Enterprise In Global Sensor Field

Revision History

Date	Rev	Revision Contents	Revisor
	A	First Release	
	B		
	C		
	D		
	E		
	F		
	G		
	H		
	I		
	J		
	K		

Note: The revised resume on this page is for internal viewing only.



CS-PT300M



Applications

- Industrial refrigeration unit
- Multi-line air conditioning
- Precision computer room air conditioning
- Interrow refrigeration air conditioning
- Air source heat pump

Features

- Silicon oil sensor
- Sealed Gage
- All welded construction, no O-rings, no leakage risk
- Anti-condensation water
- Forward and reverse overvoltage

Description

PT300M pressure transmitter for refrigeration with fully welded structure is widely used in air conditioning, refrigeration and heat pump systems. Industry standard 0.5~4.5V signal output, international electrical connectors and pressure ports, all-welded structure, anti-condensation, suitable for refrigerant pressure measurement. This product allows to control and ensure that the system operates under safe and stable conditions.



Performance Specifications

Temperature: 20~25℃; Power supply: 5VDC; Relative humidity: 45%~75%; ambient atmospheric pressure: 86KPa~106KPa;

Pressure range	-1~10...50bar (Sealed Gage)	
Standard Range	A: -1~12bar	
	B: 0~20bar	
	C: 0~46bar	
	D: 0~50bar	
Overload pressure	300%F.S (≤105bar)	
Burst pressure	500%F.S (≤175bar)	
Accuracy at 25℃	± 1%F.S (include no-linearity, hysteresis, repeatability, and calibration error) ^{Note1}	
Full temperature zone accuracy	± 2%F.S (include no-linearity, hysteresis, repeatability, and calibration error) ^{Note1}	
Long-term stability	±0.25 %F.S/year	
Response Time	(10%~90%)≤10ms	
Medium Temperature	-40℃~125℃	
Compensated Temperature	-35℃~105℃	
Storage Temperature	-35℃~105℃	
Output Signal	0.5~4.5VDC (Ratio) ^{Note2}	
Supply Voltage	5±0.25VDC	
Current without Load	≤ 8 mA	
Output Load	≥10KΩ	
Over voltage	18VDC	
Reverse Voltage	-18VDC	
Insulate Resistance	≥100MΩ@500VDC	
Dielectric Strength	1800VAC@1s or 1500VAC@1min (no spark, arc, no damage)	
ESD	Contact ±8kV, air ±15kV	
EMC	EN 61000-6-2, EN 61000-6-3	
IP Rating	IP67	
Random Vibration	10g, 5~2000Hz	
Shock	X/Y/Z, 20g, half-sine 11ms	
Drop (any Axis)	1m	
Pressure connector	7/16-20UNF-2B	
Shell Material	Brass connector + Pure copper housing ^{Note3}	316L SS connector + 304 SS shell



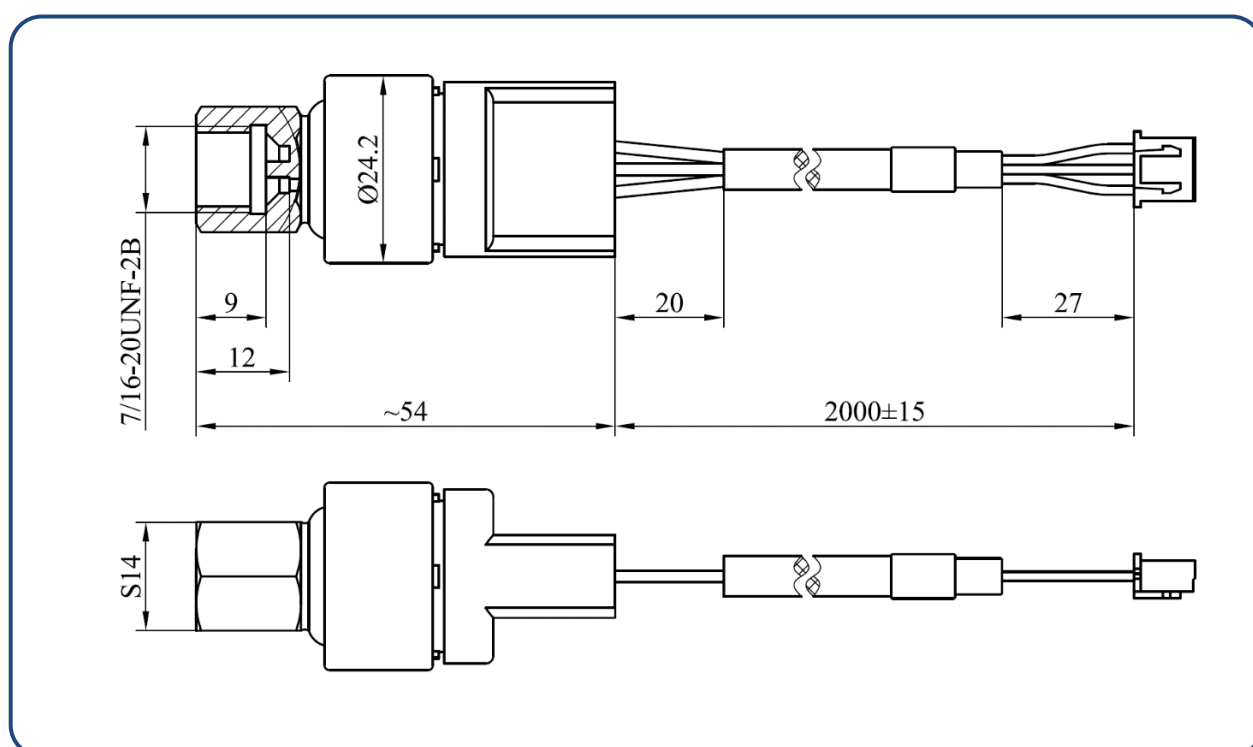
Electrical connection	Epoxy-encapsulated leads +XHP-3 connector	Packard
Seal material	Sam as connector material	

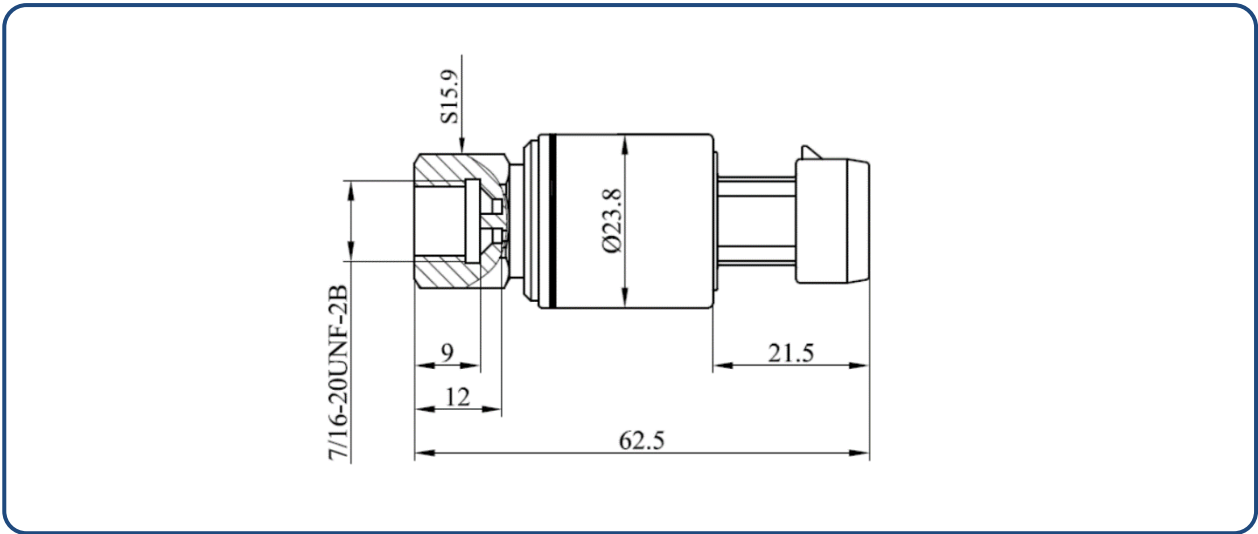
Note 1: 0barG=101.325kpaA (Define 1 atm as 0bar)

Note 2: The product defaults to full-scale output of 4.5VDC without clamping. That is, when the product is in normal use (the input pressure is not overloaded), the full-scale output is 4.5VDC. When the product is overloaded (the pressure exceeds the product's measurement range), the output voltage will exceed 4.5VDC, but it still maintains a linear relationship with the input pressure (that is, the output voltage increases proportionally with the increase of the input pressure, and the magnitude of the overload pressure can still be tested at this time). When the overload pressure continues to increase, the output cut-off voltage is 4.95VDC.

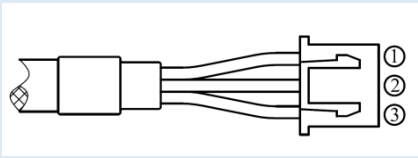
Note 3: High temperature & high humidity storage conditions will cause the Brass connector and pure copper housing oxidized & discolored, but this phenomenon does not affect the sensor's function or performance

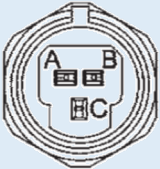
Structure and Dimension (mm)





Electrical Connection

XHP-3	PIN	Define	Color of wire
	①	Supply power (VCC)	Red
	②	Voltage output (Vout)	White
	③	GND	Black

Packard Metri-Pack	PIN	Define	Color of wire
	A	GND	Black
	B	Supply power (VCC)	Red
	C	Voltage output (OUT)	Green



Model Selection Tips

PT300M Series Pressure Transmitter						
Code		Measuring Range				
X		X stands for actual pressure measuring range				
Code		Pressure Connection				
7/16U(F)		7/16-20UNF-2B				
Code		Electrical Connection				
U		Epoxy-encapsulated leads				
P		Packard Metri-Pack				
Code		Output				
0545R		0.5~4.5V Ratio Voltage				
Code		Power Supply				
03		(5±0.25) VDC				
Code		Accuracy				
10		±1.0%				
15		±1.5%				
PT300M	-X	-7/16U(F)	-U	-0545R	-03	-15

Notes

1. The transmitter must be used in a medium that is not corrosive to the sealing material and housing material.
2. When the pressure-guiding hole of the transmitter is blocked, it is strictly forbidden to use a sharp tool to clear the pressure-guiding hole. The transmitter should be removed and the pressure-guiding hole should be immersed in a liquid that can dissolve the blockage. After the blockage is dissolved, remove it fall out.
3. It is strictly forbidden to open the transmitter for calibration or maintenance by yourself.
4. If you are not sure whether the transmitter is suitable for the measurement medium used, please contact the factory.
5. The installation location of the transmitter should be selected in a place that is not easy to be bumped and stepped on.
6. Use beyond transmitter overload pressure may cause permanent damage.
7. Where there may be lightning, customers should consider lightning protection measures.

Disposal methods of hazardous wastes such as waste circuit boards and their components after the end of product life.



After the end of the product life, each part shall be distinguished according to the “National hazardous waste list” to determine whether it is hazardous waste. Among them, the waste lithium battery not disassembled is not hazardous waste, and the waste circuit board (including components, chips, plug-ins, pins, etc. attached to the waste circuit board) belongs to hazardous waste.

The part that is not hazardous waste shall be treated as general industrial solid waste, and the lithium battery shall be handed over to the nearby renewable resource recovery department or sent to the product manufacturer for recycling.

Hazardous wastes must be handed over to legally qualified departments for disposal in accordance with national regulations, and shall not be dumped or stacked without authorization. If it is really necessary to store temporarily, protective measures meeting the national environmental protection standards must be taken, and the storage period shall not exceed one year. At the same time, the time and place of temporary storage and the protective measures taken shall be reported to the competent environmental protection department. Hazardous waste transfer activities can be arranged according to the actual production situation. The system shall be strictly implemented in the transfer process.

Statement

The company reserves the right to modify the specifications and contents of this manual. Subject to modification without notice. Due to the update of the product, the individual details of this document may not match the product, please refer to the actual product. The interpretation right of this document belongs to our company.

