

Ultra High Purity Pressure Transmitter Manual

| PT863 (Standard Type)

WISE® WISE Control Inc.
www.wisecontrol.com



Safety Manual Guide

For safe use, Please read this manual before operating the product.

Misuse of the product could cause the harm to users, and also could create the malfunction of the product.

Warnings

- (1) Do not apply over pressure or excessive voltage.
- (2) Please avoid excessive weight, Vibration, and impact to the transmitter.
It could cause the rupture, and the leaked fluid or material could be harmful to the environment.
- (3) Allowed Operating Temperature ($T_{amb} = -20 \sim 80 \text{ }^{\circ}\text{C}$)
Excessive temperature could cause the malfunction of the transmitter and measuring error.
- (4) If explosive gas is present, use corresponding environmental entity approved products,
and do not disassemble or assemble the transmitter in such area.
- (5) Before disconnecting the transmitter, user must make sure that the valve is closed so the measuring fluid would not leak.
The leakage could cause the suffocation and explosion.
- (6) Installation of transmitter must be performed according to this manual.
- (7) Do not temper transmitter to add new function to it.
- (8) For repairing Purpose, please consult the manufacturer.

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1. Outline

PT863 Series is a High Precision Transmitter to measure pressure in a various industry area. Especially, it is developed to serve the needs for high purity area such as Semiconductor and Pharmaceutical industry.

2. Characteristics

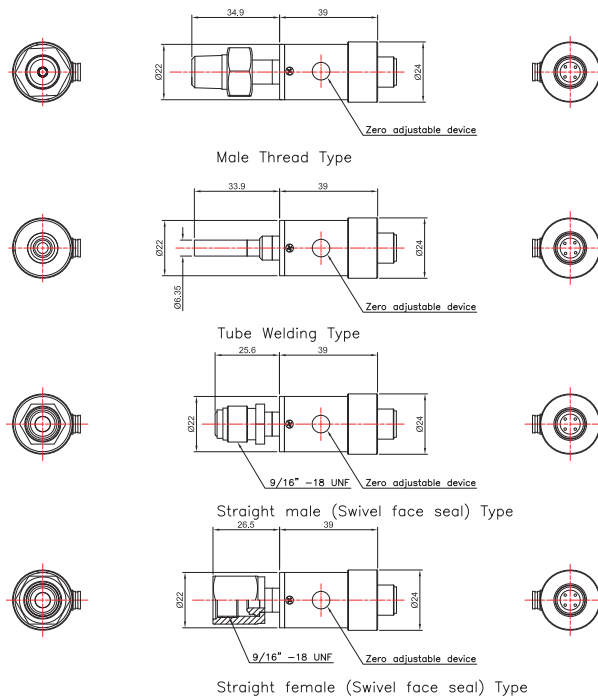
- 1) Reponsive time within 20ms of Output Current
- 2) Improved performance, Precision, and Reliability
- 3) 0.1 % Error rate during 1 Year
- 4) Slim Design
- 5) Accrracy within ± 0.25 %
- 6) 4-20 mA Output Current

3. Specification and Standard

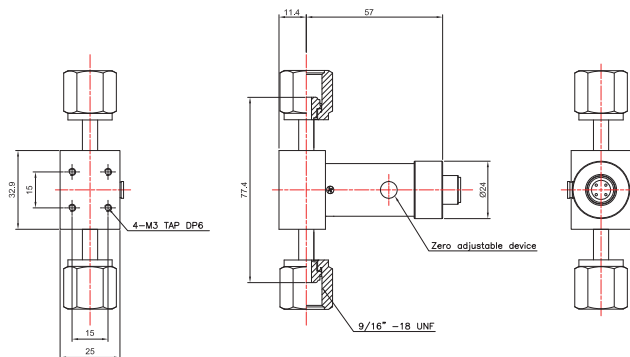
- 1) Power : 12 ~ 24 V DC
- 2) Working Temperature : -20 ~ 80 °C (PT863)
- 3) Temp. Compensation : -20 ~ 60 °C
- 4) Allowed Humidity : Below 85 %
- 5) Allowed Altitude : Below 1000 m
- 6) Power Consumption : 4 ~ 20 mA
- 7) Process Material : Fluid, Gas
- 8) Measuring Range : -15 ~ 30 psi (Min), -15 ~ 3000 psi (Max)
- 9) Accuracy : Span ± 0.25 %
- 10) Material : Process mdeia - Gases and liquid compatible with stainless steel 316L, 630
: Housing - Stainless steel 316L
- 11) Method to attach Label : On the side of Cylinder

4. Process Connection Type and Size

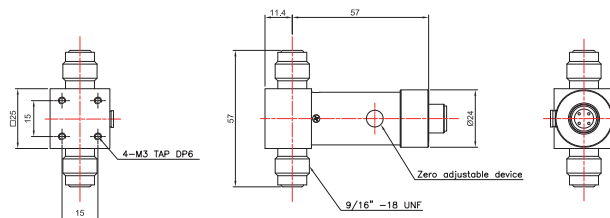
1-1) PT861, PT862, PT863



1-2) PT861, PT862, PT863



Flow Through Female (Swivel face seal) type



Flow Through male (Fixed face seal) type

5. Each Part Name and Working Principle

1) Each Part Name



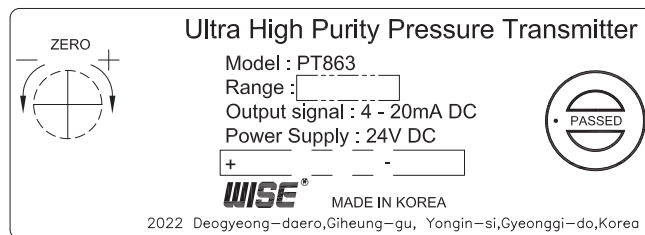
2) Working Principle

- ① Pressure applied to the pressure input section, and the pressure value will convert into an electronical singal.
- ② Measured pressure will be transferred after converting into 4 ~ 20 mA electrical current.
- ③ If requires zero adjustment, open the cap and turn with tool. (Zero trim : ± 1.0 %)

6. Ground Connection

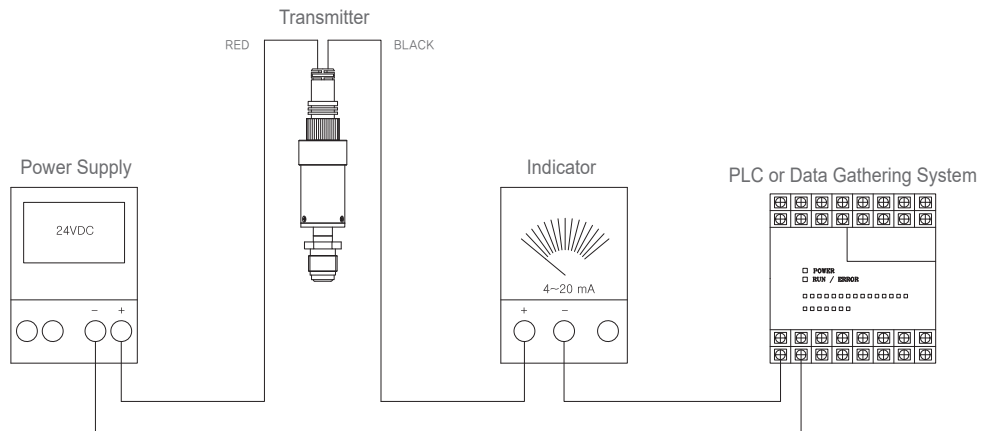
- 1) Shield Wire and outer surface is connected together, and Cable shield wire should be connected to Ground Terminal.
- 2) Ground Cable wire is AWG24, and in case of using Extension wire, the standard should be higher than Ground Wire standard.
- 3) In case of working on the terminal, to prevent the unwinding, use washer and to prevent the corrosion, use plated terminal and lug.
- 4) Ground point should be connected to rebar, floor, or Bus Bar.
(Ground Point should be considered with a local Industrial regulation, and Electric standards)

7. Name Plate



8. Diagram and Wiring

1) Diagram



2) Wiring



[M12]

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9. Transfer, Storage, and Cautions for Opening the Package

- 1) Transfer Caution
 - Avoid dropping of the PT, it will cause a performance degradation.
- 2) Storage Caution
 - Avoid humidity, vibration, and dust.
 - Avoid falling, and prevent the damage from the overload.
- 3) Opening Caution
 - Be careful when opening the package.
 - To prevent falling, open the package in a wide area.
- 4) Opening Steps
 - Removal of Box → Removal of Vinyl Cover → Removal of internal Vinyl inside Cleanroom

10. Connection Area

- 1) For safe use, avoid humid, vibration, and corrosive gas in the installation area.
- 2) Avoid area where it can exceed the temperature listed on the manual.
- 3) For choosing installation site, Please consider the possibility of Lightning and steam damage.
- 4) Avoid a direct sunlight.
- 5) In case of installing on the pipe, use a proper spanner.
- 6) Do not remove the protection cap from the Transmitter before installation.
- 7) If the Transmitter is detached, please place the protection cap back on the Transmitter.

11. Maintenance and Operating Cautions

- 1) Working pressure should not be over 100 % of its Maximum pressure.
- 2) Do not apply overpressure.
- 3) Avoid sudden pressure or sudden decompression.
- 4) Scheduled examination should be 1 or 2 times in every 6 months.
- 5) If measured pressure error is suspected, then detached the Transmitter for the examination.
If Transmitter is worn out, it is exposed to any other harsh environment, then the measuring error could be found, it is recommended to replace the Transmitter.
- 6) Consult licensed Technician for repair to avoid fire, electric shock, or injury.

12. Safety Measures

- 1) This product should not be treated as unclassified industrial waste.
- 2) To prevent the malfunction of the product, please use it within the defined usage.
- 3) Read all instructions carefully.
- 4) Between terminals or terminal surface area, do not apply more than normal voltage.
- 5) If the transmitter is damaged, disconnect the power and pressure from the transmitter to avoid any explosion.
- 6) If malfunction occurs, do not use the transmitter.
- 7) Use allowed normal electric cable only.

13. Limited Warranty and Limitation of Liability

- 1) Warranty Period is 1 year from the date purchased, the damage from Misuse and any other abnormal use caused issues will not be covered.
- 2) Warranty Period will not be extended by other resellers.
- 3) To receive Warranty Service, send the transmitter to WISE with the product issue stated.

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