

## I. Product Features

- The product conforms to GB3836.1-2010 "Explosive environment Part 1: General requirements for equipment" and GB3836.4-2010 "Explosive environment Part 4: Equipment protected by intrinsically safe type" standards.
- The explosion-proof mark of the product is ExiaIICT6 Ga, which is suitable for zone 0, zone 1, zone 2, containing IIA ~ IIC class, T1 ~ T6 explosive gas mixture places.
- The products have passed the inspection by the National Explosion-proof Electrical Product Quality Inspection Center and obtained the explosion-proof certificate.
- Product protective shell design.
- Products using international advanced technology imported sensors.

## II. Uses

Suitable for industrial field process control pressure measurement.

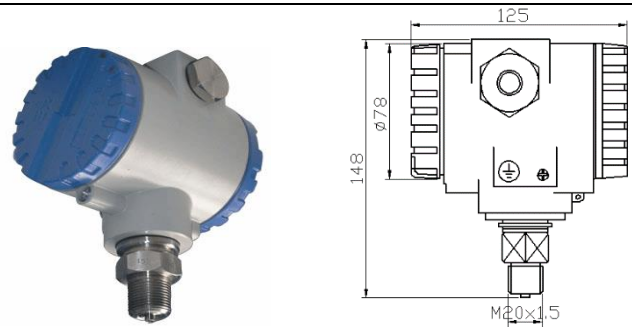
## III. Technical parameters

1. Output form: (4~20) mA
2. Power supply: DC 24V (Safety barrier power supply)
3. Accuracy Level: 0.5 level  
□ 0.2 level
4. Medium temperature:  $-30^{\circ}\text{C} \sim 60^{\circ}\text{C}$
5. Ambient temperature:  $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$
6. Response time:  $\leq 50\text{ms}$
7. Load capacity: Current type  $\leq 500\Omega$
8. Reproducibility:  $\pm 0.1\% \text{F} \cdot \text{S}$
9. Long-term stability:  $\pm 0.1\% \text{F} \cdot \text{S}/\text{y}$
10. Nonlinear:  $\pm 0.2\% \text{F} \cdot \text{S}$
11. Thermal zero temperature drift per degree:  $\pm 0.02\% \text{F} \cdot \text{S}/^{\circ}\text{C}$
12. Overload pressure: 2 times the range
13. Electrical connection: Terminal block
14. Measurement media: All kinds of non-corrosive gases or liquids
15. Explosion proof mark: ExiaIICT6 Ga
16. Intrinsic safety parameter:  
 $U_i = 28\text{VDC}$     $I_i = 93\text{mA}$     $P_i = 0.65\text{W}$   
 $C_i = 0.03\mu\text{F}$     $L_i = 0.1\text{mH}$
17. Explosion-proof associated equipment: Safety barrier
18. Protection level: IP65
19. Product weight: about 1150g

## Working conditions:

Avoid installation in environments with mechanical vibration and strong electromagnetic interference.

## Shape and Dimensions:



## IV. Installation

1. The installation shall strictly comply with the relevant provisions of GB3836.15-2000 "Electrical equipment for Explosive gas Environment Part 15: Electrical installation in dangerous places (excluding coal mines)"

2. Ensure that the transmitter is installed perpendicular to the ground. During the installation process, the wrench should be used to tighten the transmitter from the hexagonal nut at the bottom of the transmitter to avoid directly rotating the upper part of the transmitter.

3. When measuring the pressure with fast changing speed, a pressure buffer device should be installed at the outlet of the connection between the transmitter and the measured medium to avoid the instantaneous pulse high pressure directly impacting the measuring element of the transmitter, resulting in the failure of the transmitter.

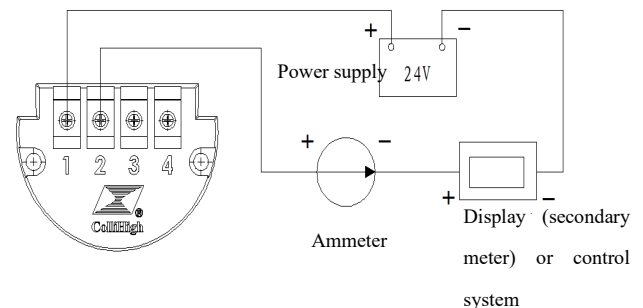
## V. Wiring

(This wiring diagram is a schematic, the site wiring to the actual product shall prevail)

### Two-wire current 4mA ~ 20mA output wiring diagram

(JYB-KB-PA\*\*\*)

- 1: Power +
- 2: Current output
- 3: Empty
- 4: Shield ground

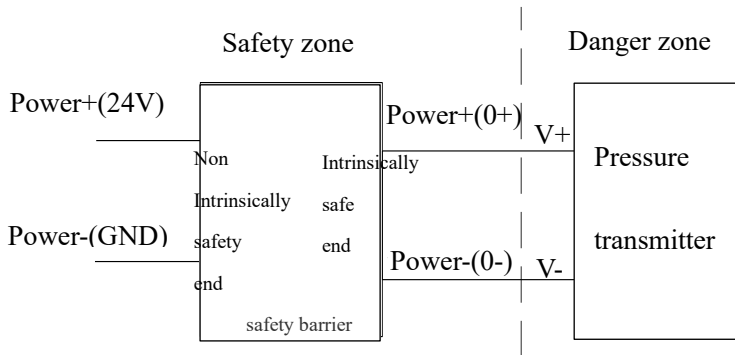


1. Note that when installing the transmitter, the selected cable should not be lower than the protection level of the transmitter, and the diameter of the cable should be 6mm ~ 8mm to ensure the protection level of IP65.

2. The cable should be connected correctly according to the wiring diagram. If shielding cable is used, the shielding layer

should be connected to the shielding ground end, and ensure reliable connection.

## Explosion proof transmitter and safety barrier wiring diagram



Explosion-proof mark: ExiaIICT6 Ga

Parameters of the safety barrier:

Um:250VAC/DC Uo:28V Io:93mA  
Co:0.083μF Lo:4.2mH Po:0.65W

Transmitter intrinsic safety parameters:

Ui:28VDC Ii:93mA Pi: 0.65W  
Ci:0.03μF Li:0.1 mH

The distribution parameters of the connecting cable between the safety gate and the transmitter should be satisfied:

$C_c \leq C_o - C_i$   $L_c \leq L_o - L_i$   
 $U_i \geq U_o$   $I_i \geq I_o$   $P_i \geq P_o$

Note:

- Uo: Maximum output voltage of safety gate
- Io: Maximum output current of safety gate
- Po: Maximum output power of safety gate
- Co: Maximum external capacitance of safety gate
- Lo: Maximum external inductance of safety gate
- Ui: Maximum input voltage of transmitter
- Ii: Transmitter maximum input current
- Pi: Maximum input power of transmitter
- Ci: Maximum internal capacitance of the transmitter
- Li: Maximum internal inductance of the transmitter
- Cc: Maximum allowable distributed capacitance of the connection cable
- Lc: Maximum allowable distributed inductance of the connection cable

## VI. Trial run

To ensure that the transmitter can work properly with stability and accuracy, the pressure should be tested before Power on and preheat for 15min.

In the process of pressure measurement, the pressure should be slowly added and removed, avoiding instantaneous addition to high pressure or to low pressure.

## VII. Safety instructions

1. During the installation process, it should be ensured that the transmitter is tightened firmly before the pressure measurement can be performed. Before disassembly, the power

supply should be disconnected and the valve of the measured medium should be closed to make the pressure drop to normal pressure before disassembly, so as to avoid the accident of the medium ejection.

2. For explosion-proof workplaces, the cable can be installed in dangerous situations and powered to measure pressure after the connection is completed, to avoid live operation in dangerous situations, incorrect operation will cause serious personal injury and significant material loss.

3. Explosion-proof products are not allowed to replace components or structures, so as not to affect the explosion-proof performance.

4. The installation and wiring of the safety barrier shall be carried out in accordance with the operation manual of the safety barrier, and the safety barrier shall obtain the explosion-proof certificate.

5. When this product is used in the "0" zone, the power transformer that supplies power to the safety gate must meet the requirements of 8.1 of the GB3836.4-2010 standard

6. The transmitter is aluminum alloy housing, when used in zone 0, measures should be taken to prevent ignition hazards due to impact or friction

7. This product is an electronic product, and it will cause environmental pollution when scrapped. It should follow the relevant standards of national electronic devices when scrapped.

## VIII. Product maintenance and troubleshooting

If there is a fault in the transmitter, please contact our after-sales service. Please attach the following information when you need to send the transmitter back to our company for maintenance after confirming the problem:

- Scene environment description;
- Fault phenomenon;
- Description of the measurement medium and its physico-chemical properties;

When the transmitter needs to be repaired or calibrated, please be sure to clean up the residual media before sending it back, especially materials that are harmful to human health, such as corrosive, toxic, carcinogenic or radioactive materials.

## Common fault analysis and elimination

Failure phenomenon	Cause Analysis	Exclusion method
The transmitter has no display or output signal	The transmitter is not powered Wiring error	Power the transmitter correctly according to the wiring

		diagram
Display or output irregular jumps at constant pressure	The ground end of the transmitter housing is not grounded The radio frequency interference is strong in the field No shielded cable is used	Use shielded cables and the shield is grounded The ground end of the transmitter housing is reliably connected to the ground
The transmitter does not receive pressure but the display is not 0KPa or its corresponding output value	The transmitter is not operating in its required environment	Move the transmitter to work in the specified environment or take measures to make the environment conform to the requirements
The transmitter display or output does not match the measured pressure	The supply voltage is not correct External load is too large	Make the supply voltage DC 24V Adjust external load

### Packing list:

- |   |           |
|---|-----------|
| 1. Pressure transmitter   | 1 set     |
| 2. Instructions for use   | 1 serving |
| 3. Certificate of Conformity (Factory test data)  | 1 serving |
| 4. Top seal Teflon gasket (M20X1.5 and G1/2 threads are standard, other non-standard threads are not available) | 1 pc      |

If the failure phenomenon does not fall into the above scope, please contact our after-sales service.

## IX. Maintenance

Only use neutral reagents to clean the transmitter, avoid the use of corrosive reagents cleaning, such as acid, alkaline solvents, household detergents, etc.

The transmitter is a precision instrument and should be stored in a dry and ventilated indoor environment to avoid direct sunlight.

## X. Cautions

1. When receiving the product, please check whether the packaging is in good condition, and check whether the transmitter model is consistent with the product you choose to buy;

2. Confirm whether the power supply output voltage is correct; The positive and negative of the power supply correspond to the positive and negative wiring of the product; The maximum pressure of the pressure source is within the range of the product;

3. Please keep the verification certificate and qualification certificate, and return it with the product during maintenance.

4. This product is an electronic product, scrap will produce pollution, scrap should follow the relevant national standards of electronic products;