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# **AI-TD pressure transmitter Explosion-proof digital display model Manual**





## Product overview

The explosion-proof digital display AI-TD pressure transmitter uses a silicon pressure sensor with a stainless steel diaphragm as the signal measurement element and employs a dedicated IC circuit for zero-point and temperature performance compensation over a wide temperature range. This pressure transmitter features an LCD digital display and is explosion-proof certified.

This product is used for pressure measurement in industrial processes such as petroleum, chemical, metallurgy, power, and hydrology.

## Features

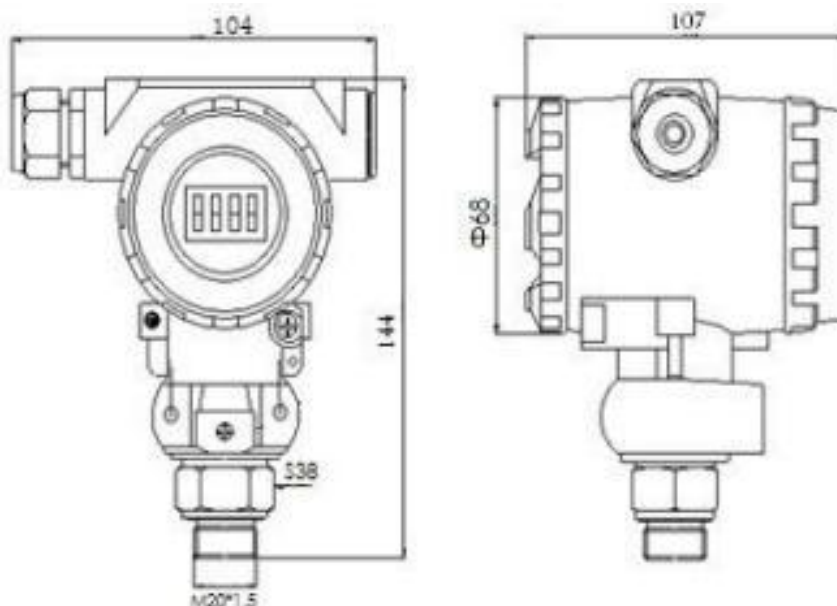
- ✓ Measuring range: -0.1MPa...0MPa~0.01MPa...100MPa.
- ✓ With display, real-time pressure value is shown.
- ✓ Zero-point and full-scale calibration are convenient.
- ✓ Reverse polarity protection and current limiting protection.
- ✓ Resistant to lightning strikes and pressure shocks.
- ✓ High precision, high stability, and high reliability.

## Application areas

- ✓ Industrial process control
- ✓ Hydraulic measurement
- ✓ Pressure measurement in various harsh environments

## External structure: (unit: mm)

This image is for reference only; the actual product shall prevail. Pressure interfaces can be customized.





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## Technical parameters:

Pressure parameters			
Range	-0.1 MPa...0 MPa~0.01 MPa...100 MPa		
Overload	2 times full scale or 110MPa (whichever is lower)		
Type of pressure	Gauge pressure, absolute pressure, sealed gauge pressure		
Electrical parameters			
Power supply	12~32V DC		
Output signal	4mA~20mA DC (two-wire system)		
Load resistor	$\leq (U-12) / 0.02\Omega$		
Structural parameters			
Enclosure	Explosion-proof cast aluminum housing		
Sensor	316L stainless steel		
Sealing ring	Fluororubber		
Protection level	IP65		
Environmental conditions			
Media suitability	Various fluids that do not corrode 316L stainless steel and fluororubber		
Compensation temperature	- 10°C~80°C		
medium temperature	-30°C~80°C (LCD display type: -20°C~80°C)		
Storage temperature	-40°C~125°C (LCD display type: -20°C~80°C)		
Performance indicators			
Accuracy	$\leq \pm 0.1\%FS$ (Minimum)	$\leq \pm 0.25\%FS$ (Typical)	$\leq \pm 0.5\%FS$ (Maximum)
Zero-point temperature coefficient	$\pm 0.03\%FS/^\circ C (\leq 100kPa)$		$\pm 0.02\%FS/^\circ C (> 100kPa)$
Full-scale temperature coefficient	$\pm 0.03\%FS/^\circ C (\leq 100kPa)$		$\pm 0.02\%FS/^\circ C (> 100kPa)$
Long-term stability	$\pm 0.2\%FS/year$ (maximum)		



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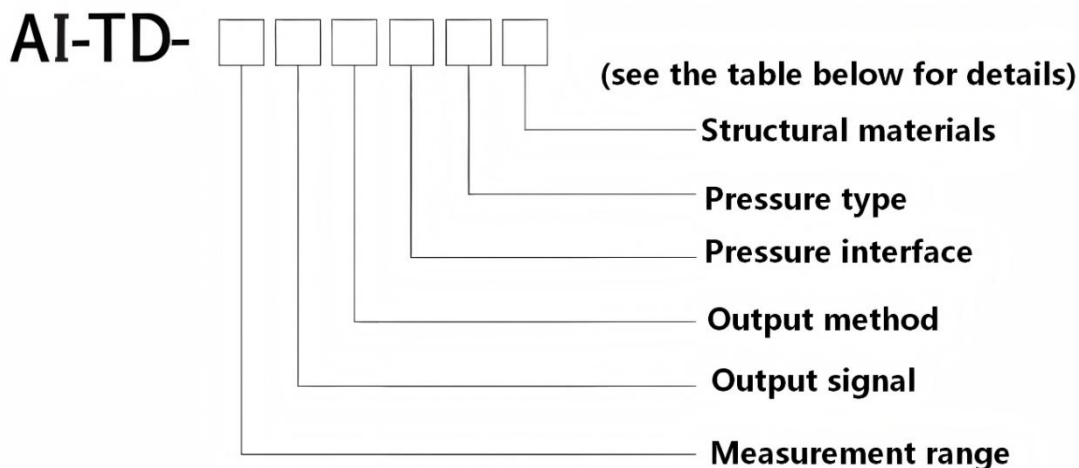
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## Electrical connection

	Terminal block definition	
	Terminal	Definition
	OUT+	Power supply positive/+V
	OUT-	Output positive/+OUT

## Selection Guide



Item number	Range ability	Output signal	Display usage	Pressure interface	Pressure datum
AI-TD	[0~100]kPa	E	M3	C5	G

Illustrate:

**Item number:** AI-TD-[0~100]kPa–E-M3C5G

**Product model:** AI-TD Explosion-proof pressure transmitter; **Range ability:** [0~100]kPa **Output signal:** 4-20mA;

**Display usage:** 32-bit LCD digital display head; **Pressure interface:** M20×1.5 external thread pressure connection interface; **Pressure datum:** Gauge Type;



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Range ability	Measurement range: -0.1MPa~0MPa~0.01 MPa~ 100MPa [0~X] kPa or MPa X: Actual measurement range	
Output signal	E	4mA~20mA DC
Display usage	N	No display
	M3	32-bit LCD digital display head
	M4	32-bit LED digital display head
Pressure interface	C3	G1/2 External thread pressure interface
	C5	M20×1.5 External thread pressure interface
Pressure datum	G	Gauge Type
	A	Absolute pressure type
	S	Seal gauge pressure

## Selection Tips:

### Selection Tips:

1: Please try to fully understand the medium conditions, pressure range, and other operating status of the pressure detection point. Avoid unnecessary losses caused by improper use of the product.

2: This product can reach a maximum frequency of 20kHz in high-frequency response applications, but you still need to communicate with our company about the installation and application so that the product provided can meet your normal needs.

3: Although the product is designed with various protective measures, for extreme applications, such as applications with strong lightning strikes, it is necessary to ensure that the power supply is reliably grounded and to install lightning protection devices to minimize the probability of product failure.

4: For products with special applications, our company can provide special design and manufacturing services. Customers are welcome to inquire and discuss.



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\*This information product images and technical data is for reference only, if subject to update without prior notice, the specific content of the right to interpret ASY Electronics (Jiaxing) Co., Ltd.