

Zensor

ZR10002

DIGITAL PRESSURE TRANSMITTER

Product Operating Instructions



OVERVIEW AND PARAMETERS

The ZR10002 digital pressure transmitter uses a high-performance ceramic core or oil-filled silicon core, with advanced processing circuit and temperature compensation technology to convert pressure changes into linear current, voltage or RS-485 signal. The product is small in size, easy to install, with digital display gauge head and stainless steel housing, suitable for measuring media such as gases and liquids that are compatible with the material of the contacting part, real-time monitoring and display of The current value of the measured pressure is monitored and displayed in real time.

Parameters

1. Oil-filled silicon core

Range	-100kPa...0~1kPa...60MPa(Oil-filled silicon)		
Overload pressure	1.5 times the rated pressure		
Accuracy①	±1.0%F.S; ±0.5%F.S		
Stability	<0.5%F.S/year		
Display method	4-digit LCD (current, voltage) / 5 digit LCD (RS485)		
Medium temperature	-20~75℃		
Storage temperature	-30~80℃		
Measured medium	Gases or liquids compatible with S304 and 316L, fluoroelastomers or Buna N		
Electrical performance	2-wire	3-wire	4-wire
Output signal	4~20mA	0~10V	RS485
Power supply	12~30VDC	12~30VDC	12~30VDC
Electrical connection	Greater Hirschmann		
Enclosure protection level	IP54		
Pressure interface	G1/4、NPT1/4、R1/4、M12*1、M10*1、M20*1.5、G1/2		

CONNECTIONS AND DIMENSIONS

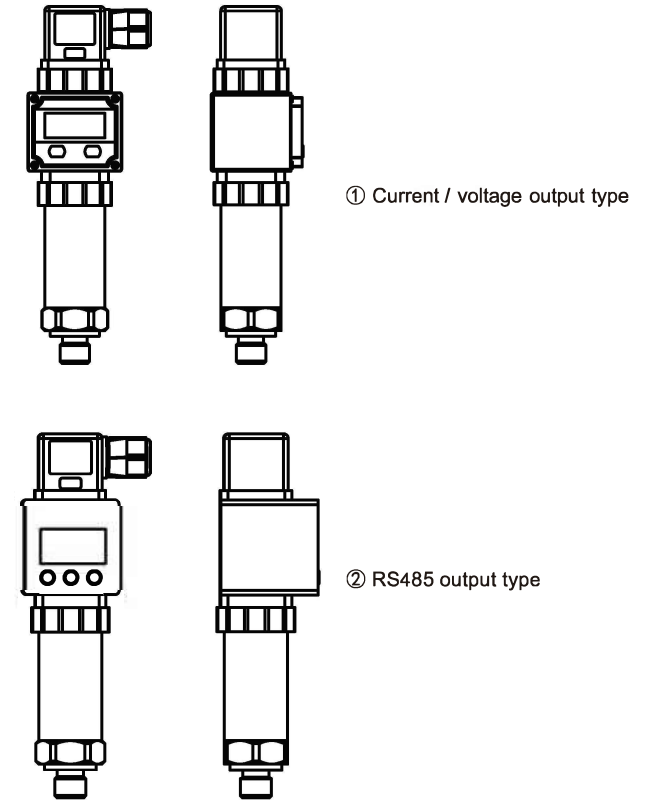
2. Ceramic cores

Range	-100kPa...0.3kPa...60MPa(Ceramics)	
Overload pressure	1.5 times the rated pressure	
Accuracy①	±1.0%F.S; ±0.5%F.S	
Stability	<0.5%F.S/year	
Display method	4-digit LCD	
Medium temperature	-20~75℃	
Storage temperature	-30~80℃	
Measured medium	Gases or liquids compatible with 1Cr18Ni9Ti, S304, fluoroelastomer or NBR.	
Electrical performance	2-wire	3-wire
Output signal	4~20mA	0~10V
Power supply	12~30VDC	12~30VDC
Electrical connection	Greater Hirschmann	
Enclosure protection level	IP54	
Pressure interface	G1/4、NPT1/4、R1/4、M12*1、M10*1、M20*1.5、G1/2	

Electrical Connections

Foot position	Foot 1	Foot 2	Foot 3	Foot	Wiring terminals
Output Type	Red Line	Black Line	Green Line	White Line	
4~20mA Output type	Power "+"	Power "L"			
0~10V Output type	Power "+"	Power "L"	VOUT		
RS485 Output type	Power "+"	Power "L"	A	B	

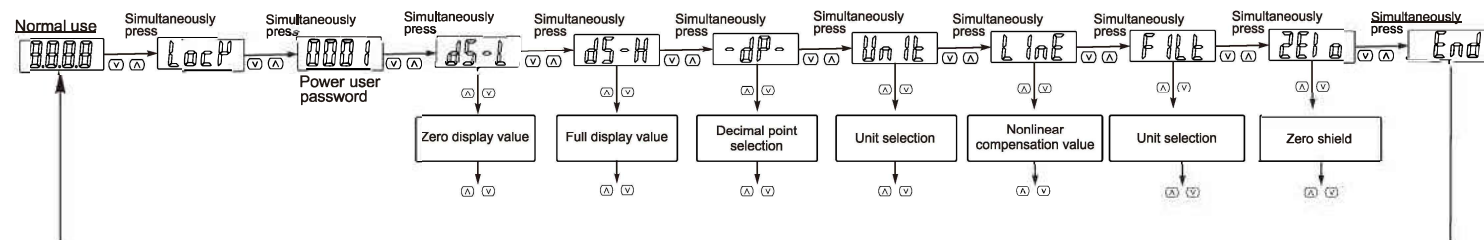
Product Size (mm)



OPERATION DIAGRAM

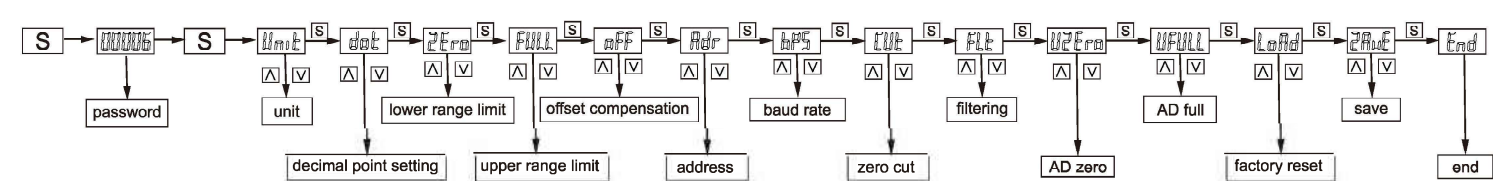
Operation Diagram

1.Current, voltage type - operation diagram



- In the normal interface, press the up and down keys at the same time to enter the password input interface, enter 0001 and press the up and down keys at the same time to enter the setting interface
- dS-L: Range lower limit setting, used to change the lower limit of the range
- dS-H: Range upper limit setting, used to change the upper limit of the range
- dP: Decimal point setting, 0~3 digits optional
- LnE: Non-linear compensation value setting, plus midpoint pressure, corrected by inputting the inverse value of the difference between the theoretical value and the displayed value
- Unit: Unit setting, there are 7 types in total: MPa, kPa, psi, bar, pa, mPa
- FiL: Filter coefficient setting, filter coefficient: prevent the display from jumping due to current fluctuations. Select 0~9, the larger the coefficient, the more stable the display, but the more lagging
- ZElo: Zero shield setting, remove useless small signals, set according to the percentage of the range, 0.0~2.0
- End: Exit settings, exit the setting interface after setting

2. RS485 type - operation diagram



- Press the S key in the normal interface to enter the password input interface, enter 00006 and press the S key to confirm and enter the setting interface
- Unit: Unit setting, there are 7 kinds of KPa; MPa; Pa; Bar; mBar; PSI; °C; mA
- Dot: Decimal point setting, 0~4 digits optional
- Zero: Range lower limit setting, range symbol -1 means the lower limit of the range is negative, and range symbol 1 means the lower limit of the range is positive
- FULL: Range upper limit setting, range symbol -1 means the upper limit of the range is negative, and range symbol 1 means the upper limit of the range is positive
- OFF: Deviation compensation setting, setting the opposite number of the deviation value between the displayed value and the actual value can compensate the displayed deviation
- bPS: Baud rate setting, default address: 9600; 1200, 2400, 4800, 9600 optional
- Adr: Communication address setting, default address: 001
- Cut: Zero point cut setting, turn on the zero point and cut off by 0.25%
- FiL: Filter coefficient setting, increasing the filter value can reduce the fluctuation of the displayed measurement value
- Uzero: AD zero point fine-tuning setting, zero point calibration AD value fine-tuning, do not change this parameter easily
- UFULL: AD full-point fine-tuning setting, full-point calibration AD value fine-tuning, do not change this parameter easily
- Load: Restore factory settings, restore product default settings, need to re-calibrate, do not modify easily
- Save: Save the settings, any modification of any parameter needs to be saved or it will be invalid, and YES must be selected in the save interface to be officially saved
- End: Exit setting, exit the setting interface after setting

①: The product address can only be changed on the table header