

XGZP61xx SERIES PRESSURE TRANSMITTER

(Ceramic Customized Series)

FEATURES

- Pressure Range(0~1/1.6/2.5/.../40MPa)
- Ceramic Diaphragm, Corrosion-resistant
- Stainless Steel Structure, Firm and Durable
- Advanced Anti-interference, High Insulation
- Anti-overload&Shock&Vibration
- Anti-water-hammer, Anti-leak
- Optional Pressure Port and Electric Port
- Optional Output(analog signal or I2C interface)



APPLICATIONS

- HVAC and Refrigeration System
- Hydraulic/Pneumatic
- Automotive
- Pumps and Compressor
- Industrial Process Control and Monitoring
- Agriculture, Metallurgy, Hydrology, Energy etc.,

INTRODUCTION

XGZP61xx series Pressure Transmitter is high performance and low cost products. It is structured by Piezo-resistive ceramic sensor as signal sensing element and the customized conditioning circuit, then assembled by stainless steel housing with various pressure port such as G1/4 or NPT1/4 or M12*1.5 etc., and various electric connector such as Aviation plug or Packard or DIN43650 or cable lead etc.,

XGZP61xx series Transmitter is integrally temperature compensated and linearity corrected that can meet the requirement of measure and control under complex environment. Relying on advanced manufacturing technology, scientific production management system, strict inspection and aging standards, the transmitter is extremely stable and reliable to meet high-performance requirement in different application fields.

XGZP61xx series Pressure Transmitter also provide an OEM service for customers according to specific requirement.

PERFORMANCE PARAMETER

Unless otherwise specified, measurements value as below were taken with a a temperature of $25 \pm 1^\circ\text{C}$ and humidity ranging from 25% ~ 85%RH.

ITEM	MIN.	TYP.	MAX	UNIT OR NOTE	
Pressure Range ¹	0~5...10/16/25...100...400			Bar	
Supply Voltage	Voltage Output	3	5	5.5	Vdc
	Current Output	10	24	30	Vdc
	I2C Interface	1.8	3.3	3.6	Vdc
Output Signal	Voltage Output	10%Vcc ~ 90%Vcc		V(Ratio-voltage Output)	
	Current Output	4 ~ 20		mA	
	I2C Interface	10%AD ~ 90%AD		Bits	
Accuracy ²			± 1.0	%FSS(0 ~ 60°C)	
			± 3.0	%FSS(-40~0°C&60 ~ 125°C)	
ESD Protection		$\pm 2\text{kV}$			
Operating Temp.	-40		125°C		
Storage Temp.	-40		125°C		
Over Pressure ³		2x		FSS	
Burst Pressure ⁴		3x		FSS	
Housing Material	304 Stainless Steel			Available for SS316, 316L	
Electrical Port	Packard/Cable/DIN43650/Aviation etc.,				
Pressure Port	G1/4,G1/2,G3/8,NPT1/4,NPT3/8, M12*1.5 etc.,				
Protection Grade	IP65				

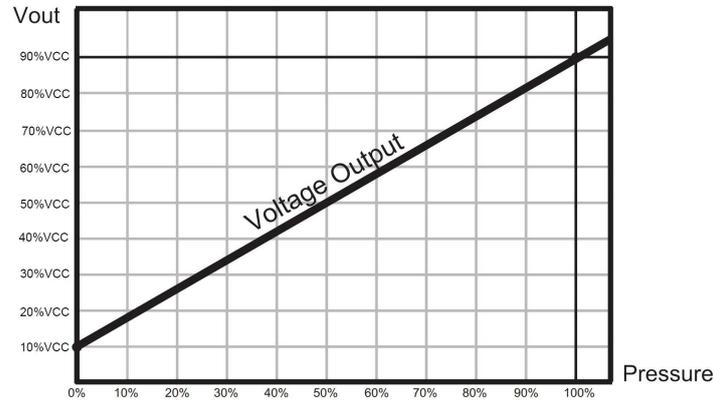
Table 1 Performance Parameter

1 **Pressure Range**: ATM Pressure(101.3kPa) is defined as 0 Bar, namely the lower range value"0" in pressure range.

2 **Accuracy**: The max. deviation in output from ideal transfer function at any pressure or temperature over the specified ranges, units are in percent of full scale span (%FSS)

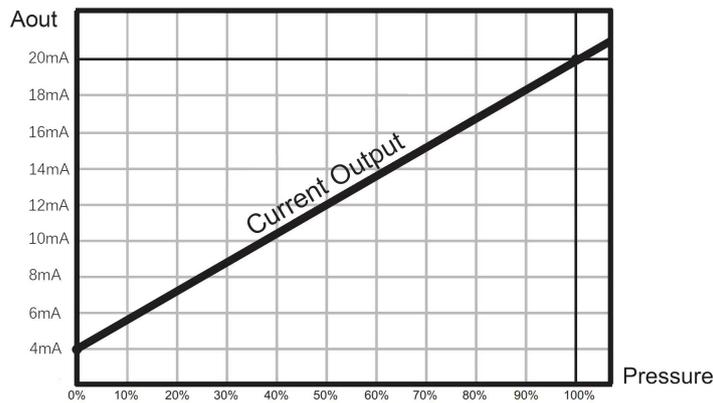
3. **Over Pressure**: the maximum pressure which may be applied without causing durable shifts of the electrical parameters of the sensing element and remain the specification once pressure is returned to the operating pressure range. The over pressure is not identical according to different specified pressure range. Contact factory for more information.

4. **Burst Pressure**: the maximum pressure which may be applied without causing damage to the sensing die or leaks; The sensor should not be expected to recover function after exposure to any pressure beyond the burst pressure. The over pressure is not identical according to different specified pressure range. Contact factory for more information.

OUTPUT CURVE


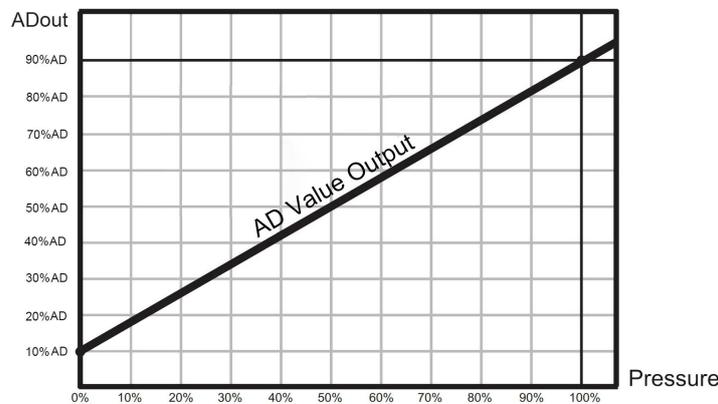
$$\text{Voltage Output} = \frac{(V_{cc} * 80\%)}{\text{Pressure Range(Bar)}} \times \text{Pressure Applied(Bar)} + (V_{cc} * 10\%)$$

Figure 1 Voltage output curve and formula



$$\text{Current Output} = \frac{\text{Pressure Applied(Bar)}}{\text{Pressure Range(Bar)}} \times 16 \text{ (mA)} + 4\text{mA}$$

Figure 2 Current output curve and formula



$$\text{Pressure} = \frac{(P_{\text{max}} - P_{\text{min}})}{(AD_{\text{max_P}} - AD_{\text{min_P}})} \times (AD_{\text{applied_P}} - AD_{\text{min_P}}) + P_{\text{min}}$$

Figure 3 I2C Interface AD output curve and formula

DIMENSION (Unit:mm)

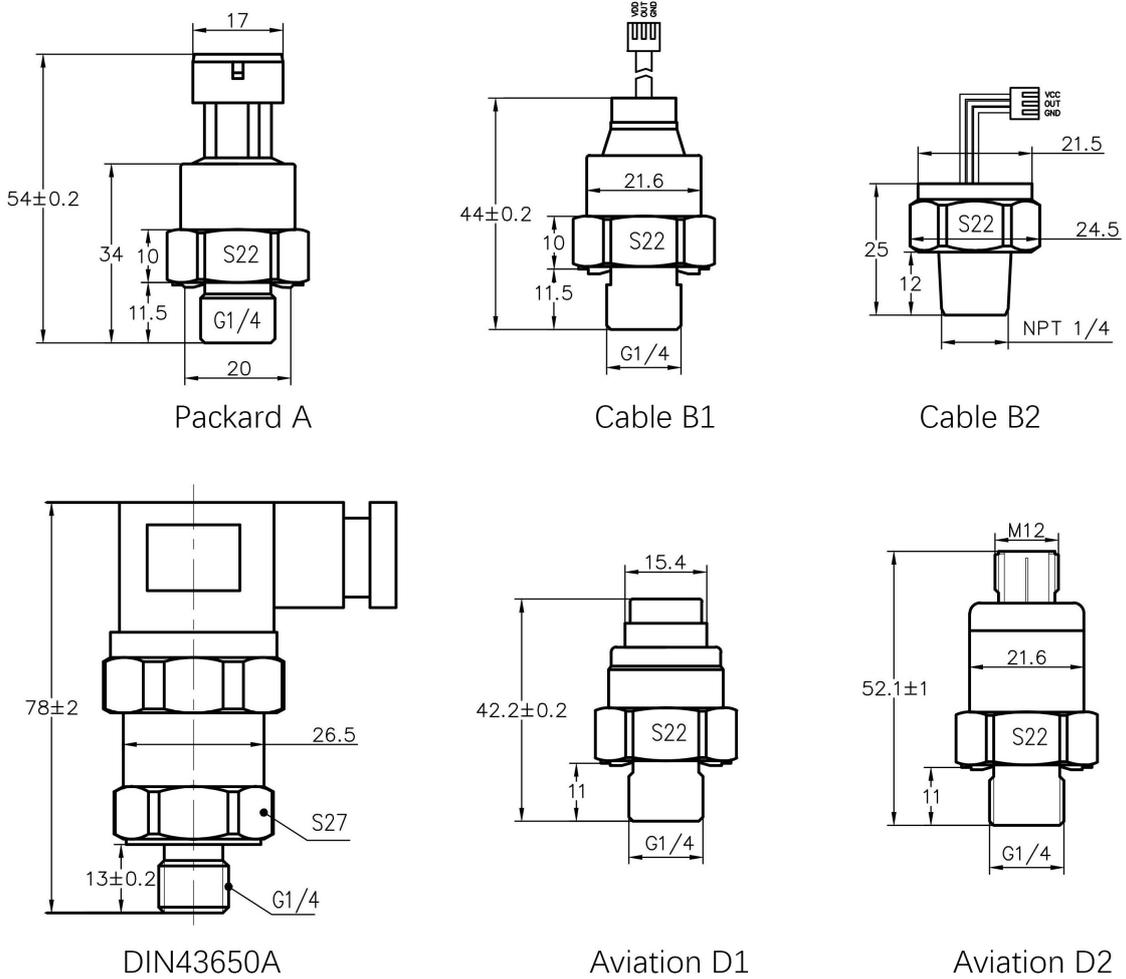


Figure 4 Structure Dimension

APPLICATION CIRCUIT

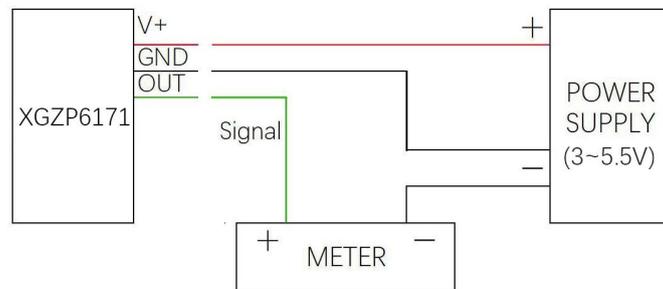


Figure 5 Application Circuit (Voltage Output)

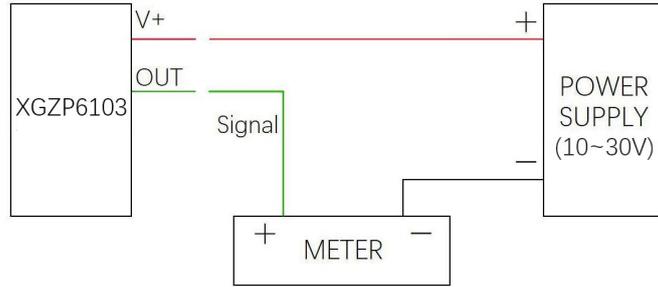


Figure 6 Application Circuit (Current Output)

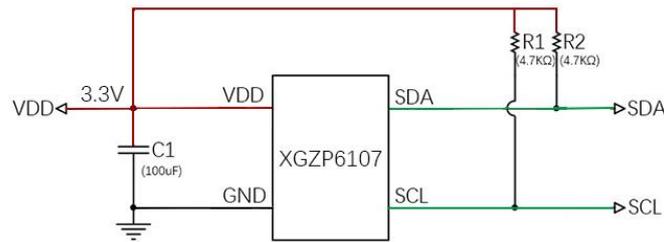


Figure 7 Application Circuit (I2C Interface)

ORDER GUIDE

XGZP61	71	B1	6	102	B	100	
							— Cable/Wire Length(000: None cable 015: 15CM 100:100CM 200:200CM 350:350CM ----)
							— Pressure Unit(B: Bar)
							— Pressure Range(102:10 162:16 252:25 502:50 103:100 403:400 ----)
							— Pressure Port(0:M12*1.5 4: G1/2 5:G3/8 6:G1/4 7:NPT3/8 8:NPT1/4 ----)
							— Electrical Connection(A: Packard B:Cable(B1:Cable B2:Wire) C:DIN43650 (C1:DIN43650A C2:DIN43650B C3:DIN43650C) D:Aviation Plug(D1:GX12-3 D2:M12-4) ----)
							— Output Type(71: 0.5~4.5V(Ratio-Voltage) 03: 4-20mA 07: I2C Interface ----)
							— Product Model

Note: Custom requirement or parameter(e.g pressure range, output etc.), consult with CFSensor on Part Number

Table 2 Order Guide

NOTE

Contact CFSensor for Electric Definition; I2C protocol(code) and other information that not shown on the document.

【 SAFETY NOTES 】

Using these sensors products may malfunction due to external interference and surges, therefore, please confirm the performance and quality in actual use. Just in case, please make a safety design on the device (fuse, circuit breaker, such as the installation of protection circuits, multiple devices, etc.), so it would not harm life, body, property, etc even a malfunction occurs.

To prevent injuries and accidents, please be sure to observe the following items:

- The driving current and voltage should be used below the rated value.
- Please follow the terminal connection diagram for wiring. Especially for the reverse connection of the power supply, it will cause an accident due to circuit damage such as heat, smoke, fire, etc.
- In order to ensure safety, especially for important uses, please be sure to consider double safety circuit configuration.
- Do not apply pressure above the maximum applied pressure. In addition, please be careful not to mix foreign matter into the pressure medium. Otherwise, the sensor will be discarded, or the media will be blown out and cause an accident.
- Be careful when fixing the product and connecting the pressure inlet. Otherwise, accidents may occur due to sensor scattering and the blowing out of the media.
- Because the Pressure sensor body is sold, please be careful not to hurt your body when using it.

【 WARRANTY 】

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. CFSensor reserves the right to make changes without further notice to any product herein. CFSensor makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does CFSensor assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. CFSensor does not convey any license under its patent rights nor the rights of others.

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