

Product information

Cyyz91 compact pressure transmitter



Cyyz91 pressure transmitter is carefully designed, with compact structure and excellent quality. It is very suitable for industrial equipment with limited installation space, and has high cost performance.

Range: 0 ~ 0.6 ~ 60MPa (see selection table for details)

Output: 4 ~ 20mA

Power supply: 9 ~ 36VDC

Accuracy: 0.5% FS

In addition, we can provide customized products to meet the application needs of customers in a short time according to their applications.

Typical application

- ▲Construction machinery.
- ▲Mobile devices.
- ▲Hydraulic system.
- ▲Industrial equipment with limited installation space, etc.

Instructions

Cyyz91 series pressure transmitter is applicable to the measurement of sealing pressure in liquid or gas and process industries. The operator is responsible for checking whether the equipment is suitable for the working conditions of the application. If you have any questions, please contact our sales department to ensure the correct application of the transmitter. The company does not assume any responsibility for the impact caused by improper model selection. The user must ensure that the measured medium is compatible with the contact material of the transmitter.

⚠ Warning!

Improper use can lead to danger!

Icon description

⚠ Danger! - A dangerous situation that could result in death or serious injury.

⚠ Warning! - A potentially hazardous situation that could result in death or serious injury.

! Be careful! - A potentially hazardous situation that may result in minor injury.

🧠 Reminder! - A potentially hazardous situation that may cause personal injury.

💡 Tips! - Tips and information to ensure trouble free operation of the equipment.

User

⚠ Warning! This information is applicable to technicians.

Product features

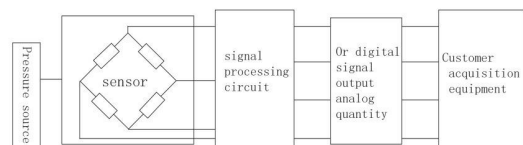
- a) Diaphragm isolation technology
- b) Integrated chip, wide voltage power supply
- c) Compact appearance and convenient installation
- d) High protection level
- e) Current limiting, voltage limiting and reverse connection protection
- f) Good stability and impact resistance

Product overview

Cyyz91 series pressure transmitter takes sealing pressure as the measurement method, and the internal sealing treatment improves the protection and seismic grade. Using diffused silicon core, through computer automatic test, the zero point and sensitivity temperature compensation in a wide temperature range are carried out by laser resistance adjustment process. The amplification circuit is located in the stainless steel shell, which converts the sensor signal into standard output signal, gives full play to the technical advantages of the sensor, and makes cyyz91 series pressure transmitter have excellent performance. It has strong anti-interference, overload and impact resistance, small temperature drift, high stability and small volume. It is an ideal pressure measuring instrument in the field of industrial automation.

Working principle

The pressure sensor diffuses a Wheatstone bridge on the monocrystalline silicon chip. The pressure of the measured medium (gas or liquid) changes the resistance value of the bridge wall (piezoresistive effect) to generate a differential voltage signal. This signal is transformed into a standard analog signal (as shown in the figure below) or digital signal through a special amplifier.



Technical parameter

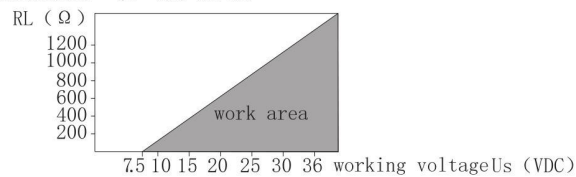
Measuring medium: liquid or gas (compatible with contact material)
 Pressure range: 0 ~ 0.6 ~ 60MPa
 Pressure mode: sealing pressure (with absolute pressure of 101.3kPa as zero point)
 Output signal: 4 ~ 20mA
 Power supply range: 9 ~ 36VDC
 Medium temperature: - 40 ~ 120 °C
 On time: 20ms
 Response frequency: analog signal output \leq 20Hz
 Accuracy grade: 0.5% FS (reference conditions: temperature 15 ~ 25 °C, atmospheric pressure 86 ~ 106kpa, humidity 45 ~ 75% RH)
 Temperature compensation: - 10 ~ 70 °C
 Stability: \pm 0.2% FS / year
 Temperature drift: \pm 0.02% FS / °C (within the temperature compensation range)
 Protection grade: IP67 note: the above protection grade refers to that achieved after the electrical connection is complete, and also depends on the electrical connection plug.
 Durability: 10×10^8 times (cycles from lower range to upper range)
 Overall weight: \approx 60g
 Maximum power: \leq 0.02us (W) Note: US = supply voltage.

Load characteristics

Voltage type: \geq 10K Ω

Current type: load \leq $\{(us-7.5) \div 0.02\}$ Ω (US = supply voltage)

Load resistance (4~20) mA DC



Environment condition

Ambient temperature: - 40 ~ 85 °C

Electromagnetic compatibility (EMC)

Serial number	Test items	Basic standards	Test conditions	Performance level
1	Radiated interference (enclosure)	GB/T 9254/CISPR22	30MHz-1000MHz	qualified
2	Conducted interference (DC power port)	GB/T 9254/CISPR22	0.15MHz-30MHz	qualified
3	Electrostatic discharge (ESD)	GB/T 17626.2/IEC61000-4-2	4kV(触点), 8kV(空气)	B(Note 2)
4	Radio frequency electromagnetic field immunity	GB/T 17626.3/IEC61000-4-3	10V/m(80MHz-1GHz)	A(Note 1)
5	Power frequency magnetic field immunity	GB/T 17626.8/IEC61000-4-8	30A/m	A(Note 1)
6	Electrical fast transient burst immunity	GB/T 17626.4/IEC61000-4-4	2kV(5/50ns, 100kHz)	B(Note 2)
7	Surge immunity	GB/T 17626.5/IEC61000-4-5	500V(Between lines) 1kV(Between ground wires)(1.2us/50us)	B(Note 2)
8	Immunity to conducted interference induced by RF field	GB/T 17626.6/IEC61000-4-6	3V(150kHz-80MHz)	A(Note 1)

Note 1: when the performance grade is a, the performance is normal within the limits of the technical specifications.

Note 2: when the performance level is level B, the function or performance is temporarily reduced or lost, but can be recovered by itself, and the actual operation status, storage and data will not change.

Overpressure and blasting

Pressure type	Range	Overload pressure	Burst pressure	Sealing element
S	$0.07 < FS \leq 1 \text{MPa}$	200%FS	500%FS	Laser welding
S	$1 < FS \leq 2.5 \text{MPa}$	200%FS	500%FS	Laser welding
S	$2.5 < FS \leq 7 \text{MPa}$	200%FS	400%FS	Laser welding
S	$7 < FS \leq 25 \text{MPa}$	150%FS	400%FS	Nitrile Rubber
S	$25 < FS \leq 60 \text{MPa}$	150%FS	300%FS	Nitrile Rubber

- ⚠ Tips! Note ①: overload pressure, no damage but abnormal operation;
- ⚠ DANGER! Note ②: burst pressure, damage or damage relief.
- ⚠ Tips! Note ③: G gauge pressure, a absolute pressure, s seal pressure.

Overall material

Diaphragm: 316L stainless steel (contact with the measured medium)

Process connection: 304 stainless steel (contact with the measured medium)

Shell: 304 stainless steel

Core seal: pressure and burst chart (contact with measured medium)

Thread seal: fluororubber (contact with measured medium)

Connector: ABS engineering plastics

Mechanical stability

Seismic performance: 20g (20... 2000Hz) in accordance with iec60068-2-6 standard

Impact resistance: 500g / MS, conforming to iec60068-2-27 standard

Electrical protection

Short circuit protection: permanent

Reverse pole protection: no damage, but does not work

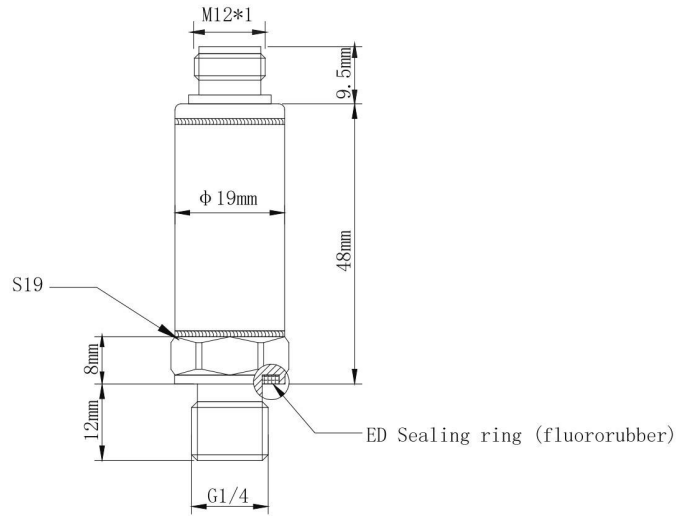
Insulation resistance: $\geq 100 \text{m} \Omega$ 500VDC

Insulation strength: 500VAC

Output limit

	Output minimum	Maximum output
4-20mA	4mA	20mA

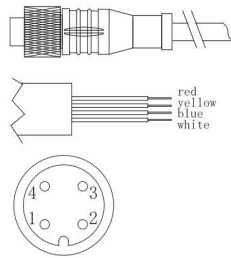
Outline and dimensions



Wiring diagram

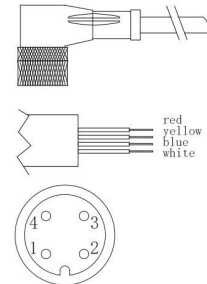
Aerial straight head belt line

Marking	Two wire system
1/red	Power supply+
2/yellow	
3/blue	Power supply-
4/white	



Aerial inserting elbow strip line

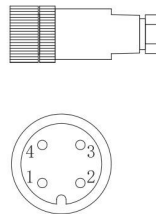
Marking	Two wire system
1/red	Power supply+
2/yellow	
3/blue	Power supply-
4/white	



Aerial straight head

Marking	Two wire system
1/red	Power supply+
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3/blue	Power supply-
4/white	

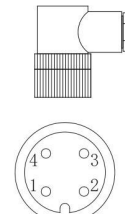
Note: the diameter of lock wire is 4 ~ 5mm



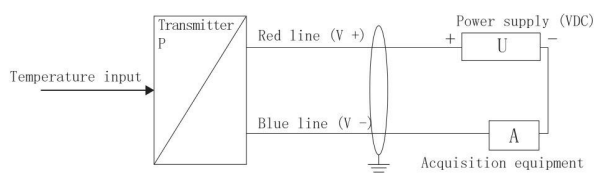
Aviation plug elbow


Marking	Two wire system
1/red	Power supply+
2/yellow	
3/blue	Power supply-
4/white	


Note: the diameter of lock wire is 4 ~ 5mm



Current output wiring diagram (two-wire system)



 Represents shielded wire, and all marked grounding points must be effectively grounded. It is recommended to select shielded twisted pair signal cable for the best effect. In order to avoid grounding loop, the shielding layer adopts single end grounding, insulated floating grounding at the transmitter end and grounding at the control cabinet end.

 The transmitter shell is grounded by default, so the field equipment shall be effectively grounded. If the field equipment cannot be grounded, the marked grounding point shall be effectively grounded.

Parameter selection

CYYZ	Pressure transmitter						
Code	Transmitter type						
91	Compact (no connector by default)						
Code	Electrical connection						
M	Aviation connector note: without butt plug, accessories shall be purchased separately						
Code	Range						
11	0-0.6MPa						
12	0-1MPa						
13	0-1.6MPa						
14	0-2.5MPa						
15	0-4MPa						
16	0-6MPa						
17	0-10MPa						
18	0-16MPa						
20	0-25MPa						
23	0-40MPa						
24	0-60MPa						
67	customized						
Code	signal output						
A1	4-20mA two-wire system						
DZ	customized						
Code	Connection mode						
17	G1 / 4 external thread						
44	customized						
Code	Supply voltage						
G5	9-36VDC						
DZ	customized						
Code	customized						
D	Other customization requirements						
No	routine						
CYYZ	91	M	12	A1	17	G5	Selection example

For example: cyyz91-m-12-a1-17-g5 (exquisite pressure transmitter, aviation plug, measuring range 0-1mpa, output 4-20mA, connection G1 / 4 external thread, power supply 9-36vdc).

Ordering instructions

⚠ Warning!

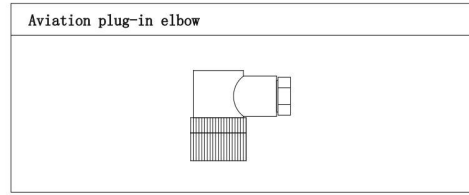
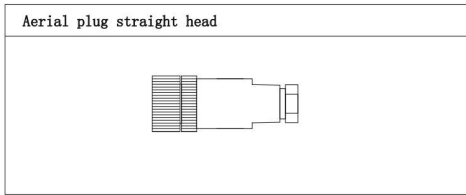
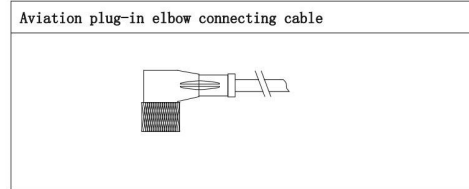
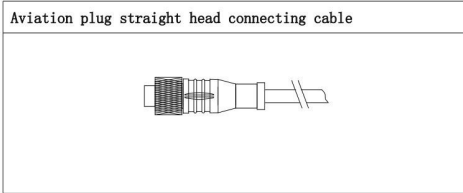
When ordering pressure transmitters, users should pay attention to selecting appropriate specifications according to the pressure, temperature and environmental conditions of the medium.

Ordering information

Model / electrical connector / measuring range / output signal / connection mode / accuracy level / power supply voltage / Customization

Enclosure (to be purchased separately)

Electrical connection plug



Please scan the code for more information
Go to the official website to get