ACU20PCD

Double valve pressure controller

Introduction

ACU20PCD dual-valve pressure controller integrates two solenoid valves. The intake valve introduces the process gas into the cavity to maintain the pressure in the enclosed space. When the pressure is too high, the pressure relief valve opens to relieve the pressure, quickly and accurately controlling the pressure. Stability, while avoiding gas waste.

The ACU20PCD comes standard with a pressure sensor and digital circuit board to provide high-precision, fast, stable and reliable pressure control. The PC digital board has all the functions required to control pressure. In addition to the standard RS485 output signal, the ACU20PCD also provides analog input/output signals, which can accurately control the entire process by adjusting the set value. At the same time, the touch display makes the operation more convenient.



ACU20PCD dual valve pressure controller can be equipped withan integral control valve or a split control valve.

It is the 1 proportional electromagnetic control valve with ultra-fast and smooth control characteristics. We have different series of control valves corresponding to specific application areas. Standard direct-operated valves are used for regular applications, pilot valves for high flow rate applications, and dual valves for surge and relief applications.

Measuring principle

ACU20PCD pressure sensor is a piezoresistive bridge on the surface of a silicon chip. The chip is drilled from its back to form a pressure diaphragm inside the chip, the thickness of which determines the pressure range. When pressure is applied to the chip, the pressure film bends, and the resistance value of the resistance bridge changes in proportion to the pressure. The measuring element is separated from the external pressure by an ultra-thin sensitive stainless steel diaphragm, and the sealed cavity between the diaphragm and the measuring element is filled with oil.

Product Application

Application areas: semiconductor production, scientific research experiments, biomedicine, energy and chemical industry, leak testing, fuel cells, vacuum coating and process control.

Specification

	ACU20PCD Double valve pressure controller
Accuracy	± 0.5% F.S
pressure span ratio	1：100
Repeatability	± 0.1% F.S
Sensor response time	0.2s
control stability	≤±0.05% F.S（Determination conditions：：1 L/min N2）
Operating temperature	-10~+70℃
Temperature sensitivity	0.1%F.S/℃
leakage rate	1×10^{-9} Pa m^3/S
Influence degree of azimuth	＜0.03KPa（Abs/gauge pressure sensor）
Preheating time	Neglect
Overvoltage	102%（Full scale）
ultimate pressure	≥3X（Full scale）
zero drift	0.02%
Full Scale Drift	0.02%

机械部件

Material	Stainless Steel
Process connection	G3/8″
Sealing material	Viton/Teflon/Neoprene/Metal Seal/Other
Degree of protection	IP40

电气特性

Power	24Vdc
Digital output	RS485\232 MODBUS protocol, profibus protocol, Devicenet protocol
Electrical connection	DB9

产品选型

ACU20PCD	L	A	M	N	001M	007	A1	B1	5	8	V	B
Serial number												

Ranges

L	Low
M	Middle
B	Big

Pressure type

A	Absolute pressur
G	e Gage pressure

Pressure type

M	3MPA
E	10MPA
Z	25MPa

Display Status

N	Without LCD display
X	With LCD display

Pressure range

-100K	-100 KPa
100K	100 KPa
300K	300 KPa
500K	500 KPa
001M	1 MPa
005M	5 MPa
010M	10 MPa
020M	20MPa
000M	User Specified

Measured medium

Code	See Media Reference Table for details

Input signal

A1	0~5VDC
A2	4~20mA
A3	1~5VDC

Output signal

B1	0~5VDC
B2	4~20mA
B3	1~5VDC

Power supply

5	±15VCD
4	24VDC

Communication

8	RS485
2	RS232

Sealing material

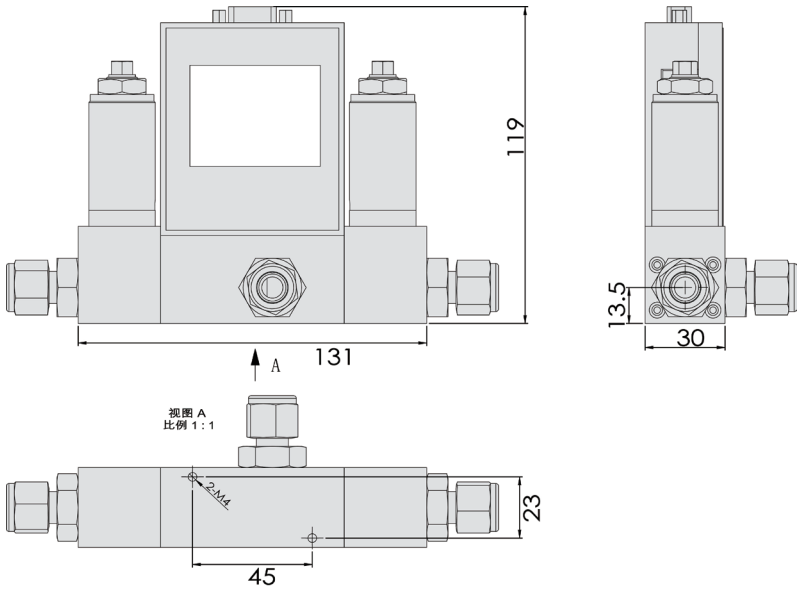
V	Vilton
T	NBR
N	Neoprene
G	Metal
Y	Others

Connectors

A	φ3
B	φ6
C	φ8
D	φ10
E	φ12
F	1/8″
G	1/4″
L	Flange
Y	others

Dimensions(mm)

ACU20PCD-LC



ACU20PCD-MC

