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P300 SERIES

All-metal sealed gas pressure controller

The P300-series pressure controllers (Pressure controller, PC) are designed to measure and control the pressure within a chamber, specifically developed for fields requiring high-purity all-metal flow path pressure control such as semiconductor, photovoltaic, and other fields. Typical application scenarios include epitaxy furnaces, diffusion furnaces, CVD, etching machines, ion implanters, etc. The product is equipped with corrosion-resistant stainless steel pressure sensors and valve seats, as well as highly reliable all-metal sealed proportional control valves, which have the advantages of long-term stable and reliable operation, high control precision, and good environmental adaptability.

To meet different application needs, the P300-series pressure controllers offer two versions for customers to choose from:

P300-MR

Connector Types:

M8 aviation plug (left side)

RJ45 dual network port (top)

Communication Methods:

EtherCAT digital communication

RS485 digital communication

P300-DR

Connector Types:

RJ45 dual network port (left side)

DB9M (top)

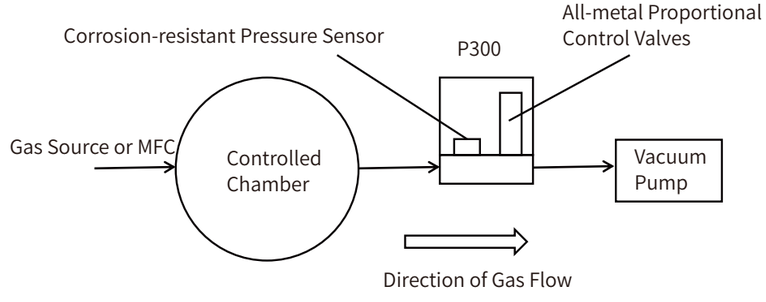
Communication Methods:

RS485 digital communication

PRODUCT SPECIFICATIONS

Indicator Parameter	P300-MR	P300-DR
Pressure Type	Absolute Pressure	
Full-scale Control Pressure	1200mBar	
Pressure Resistance	3MPa	
Control Method	Upstream	
Full-scale Valve Flow Rate	2, 3, 5SLM	
Response Time	<1s	
Temperature Coefficient	<0.02%FS/℃	
Pressure Resolution	0.1mBar	
Pressure Control Accuracy	±1%SP（≥10%FS），0.2%FS（＜10%FS）	
Operating Temperature Range	10℃ ~ 50℃	
Mechanical Interface	1/4 inch ferrule, 1/4 inch VCR	
Electrical Interface	M8 or RJ45 dual network port (with indicator light)	RJ45 dual network port (without indicator light) or DB9M
Communication Methods	RS485, EtherCAT	RS485
Valve Type	Normally Closed	
External Leakage Rate	<1×10^-12 Pa m^3/s (He)	
Internal Leakage Rate	<0.1%FS	
Power Supply Voltage	15~24VDC	

The P300-series pressure controllers are mainly used for controlling the pressure in the upstream equipment chamber. The connection method is shown in the figure below:



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