

## Digital Auto Pressure Regulator

**UR-Z702 series**  
Digital/Analog Communication Model

**UR-Z704 series**  
DeviceNet™ Communication Model

◆ **Eliminates the effects of cross talk caused by swithing of high flow lines**

- For advanced fluid vaporization systems
- Gas panel with a simple design made possible by efficient layout

◆ **High-flow control**

- Equipped with newly developed high-flow control valves

◆ **Ultra clean**

◆ **Complies with RoHS regulations**



**RoHS compliant product**

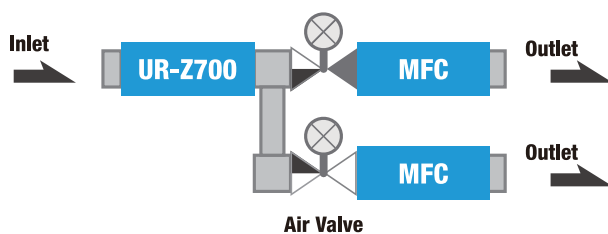
RoHS regulations:

RoHS stands for "Restriction of Hazardous Substances" and is a set of regulations enforced in the EU to limit the use of six hazardous substances: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBBs) and polybrominated diphenyls (PBDEs), in electric and electronic components.

### ▶ Application example

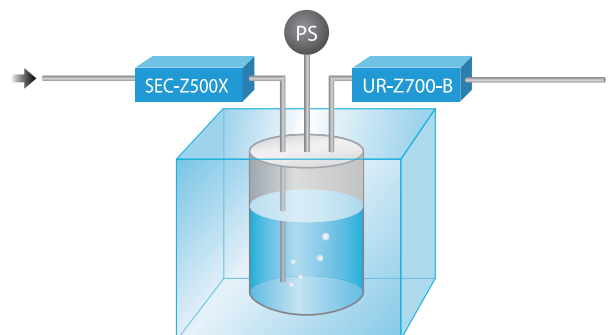
① **For the development of intelligent systems**

When gas is split by a large unit such as an MOCVD or LCD sputter CVD, and controlled by a mass flow controller, sudden changes in the flow rate can have an impact on other lines. The UR series, however, quickly and accurately adjusts the pressure even in these circumstances, enabling stable control and ensuring that the various mass flow controllers do not affect each other.



② **For the development of fluid vaporization systems**

Controlling internal tank pressure of bubbling system for MOCVD (or High-k CVD) and other precursors. (Mainly atmospheric condition)



Digital/Analog communication model *1	UR-Z712 (-UC) (-B)		UR-Z722 (-UC) (-B)		UR-Z732 (-UC) (-B)	
DeviceNet™ communication model *1	UR-Z714 (-UC) (-B)		UR-Z724 (-UC) (-B)		UR-Z734 (-UC) (-B)	
Sealing material	Metal					
Valve state when there is no electric current (Normal valve state)	O: Open	C: Close	O: Open	C: Close	O: Open	C: Close
Types of fluids	Gas					
Pressure control range	Gauge pressure type: 20 to 950 kPa (G) 10 to 500 kPa (G) Absolute pressure type: 10 to 300 kPa (A)	Gauge pressure type: 20 to 950 kPa (G) 10 to 500 kPa (G) ● The type with the 10 to 500 kPa (G) range is the only type available for models with a primary pressure regulator (B-type). Absolute pressure type: 10 to 300 kPa (A)	Gauge pressure type: 20 to 950 kPa (G) 10 to 500 kPa (G) Absolute pressure type: 10 to 300 kPa (A)	Gauge pressure type: 10 to 500 kPa (G) Absolute pressure type: 10 to 300 kPa (A)		
Pressure adjustment valve flow rate N <sup>o</sup> equivalent F.S. flow rate	Pressure conditions: Primary pressure 50 kPa (G); secondary atmospheric pressure [1,013 hPa (A)] 1 LM (0.0032)/5 LM (0.016) under the above conditions ● The value within parentheses is the Cv value.		Pressure conditions: Primary pressure 50 kPa (G); secondary atmospheric pressure [1,013 hPa (A)] 10 LM (0.032) under the above conditions ● The value within parentheses is the Cv value.		Pressure conditions: Primary pressure 100 kPa (G); secondary atmospheric pressure [1,013 hPa (A)] 50 LM (0.1) under the above conditions ● The value within parentheses is the Cv value.	
Accuracy	±0.5% F.S.					
Max. one-dimensional pressure	Gauge pressure type: 1 MPa (G) Absolute pressure type: 400 kPa (A) for the 300 kPa (A) model	Gauge pressure type: 1 MPa (G) ● Up to 550 kPa (G) for models with a primary pressure regulator Absolute pressure type: 400 kPa (A) for the 300 kPa (A) model	Gauge pressure type: 1 MPa (G) Absolute pressure type: 400 kPa (A) for the 300 kPa (A) model	Gauge pressure type: 550 kPa (G) Absolute pressure type: 400 kPa (A) for the 300 kPa (A) model	Gauge pressure type: 550 kPa (G) Absolute pressure type: 400 kPa (A)	
Minimum differential pressure	Gauge pressure type: 50 kPa (d) Absolute pressure type: 100 kPa (d)				100 kPa (d)	
Pressure resistance	Gauge pressure type: 1.5 MPa (G) for the 950 kPa (G) model 1 MPa (G) for the 500 kPa (G) model Absolute pressure type: 450 kPa (A) for the 300 kPa (A) model			Gauge pressure type: 1 MPa (G) for the 500 kPa (G) model Absolute pressure type: 450 kPa (A) for the 300 kPa (A) model	Gauge pressure type: 1 MPa (G) Absolute pressure type: 450 kPa (A)	
Leak integrity	5 × 10 <sup>-12</sup> Pa·m <sup>3</sup> /s (He) or less					
Operating temperature	5°C to 50°C (accuracy-guaranteed temperature range: 15°C to 45°C)					
Wetted material	SUS-316L, SPRON150					
Standard fitting	1/4 VCR type			3/8 VCR type		
Mounting orientation	Free					

● Digital/Analog communication model

Pressure setting/output signal	0 to 5 V DC (0% to full scale)
Digital interface	Equipped with address function : RS-485 (transmission speed: 38,400 bps)
Power supply	+15V ±5% 150 mA / -15V ±5% 150 mA

● DeviceNet™ communication model

Digital interface	DeviceNet™ Protocol
Power supply	Product compliant with ODVA standards 24 V DC, 4 VA

\*1: (-UC): models with electrical polish; (-B): models with a primary pressure regulator (back-pressure type)  
● (A): absolute pressure; (G): gauge pressure; (d) differential pressure; LM is a unit of measurement used to represent gas flow rates (L/min at 25°C and 101.3 kPa).

**External dimensions**

**Dimensions of joint connection**

**UR-Z732/734 series**

Type	H	H1	H2	H3	T	T1	W	I VCR type		A	B	C	D
								1/4	3/8				
● Digital/Analog communication model													
UR-Z712	126±1	132±1	-	-	28.5±0.5	-	63.8	106±1	-	20±0.1	21.9	15±0.1	12.7
UR-Z722	126±1	132±1	-	-	28.5±0.5	-	63.8	106±1	-	20±0.1	21.9	15±0.1	12.7
UR-Z732	145±1	151±1	-	-	38.3±0.5	-	66	-	124±1	See above figure.		12.7	
● DeviceNet™ communication model													
UR-Z714	126±1	-	142±1	113±1	28.5±0.5	14.25	63.8	106±1	-	20±0.1	21.9	15±0.1	12.7
UR-Z724	126±1	-	142±1	113±1	28.5±0.5	14.25	63.8	106±1	-	20±0.1	21.9	15±0.1	12.7
UR-Z734	145±1	-	161±1	132±1	38.3±0.5	14.3	66	-	124±1	See above figure.		12.7	

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Please read the operation manual before using this product to ensure safe and proper handling of the product.

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