

Series W-DPA912-16/25T (DN25-DN50)

Pressure Independent Control Valve

◆ Application

The Series W-DPA912 Pressure Independent Control Valve is designed for terminal equipment in AHU, PAU or MAU systems and for terminal equipment such as plate heat exchanger in heating systems. It is used to regulate the flow and simultaneously keep the differential pressure at both ends of the valve constant. Since the valve avoids flow fluctuation caused by the opening or closing of other equipment, the system is able to be stable, efficient and energy-saving.

◆ Features

- Equal percentage control characteristic
- Constant differential pressure is achieved
- Self-balancing valve core realizes easy shutoff
- V-ring sealing and self-compensating spring result in higher abrasion resistance and longer service life
- Electronic preset of maximum flow facilitates on-site commissioning
- Fault auto-detection and alarm function
- Overload protection for power supply
- Stroke auto-detection
- Manual lever for convenient on-siting commissioning and troubleshooting

◆ Operating Principles

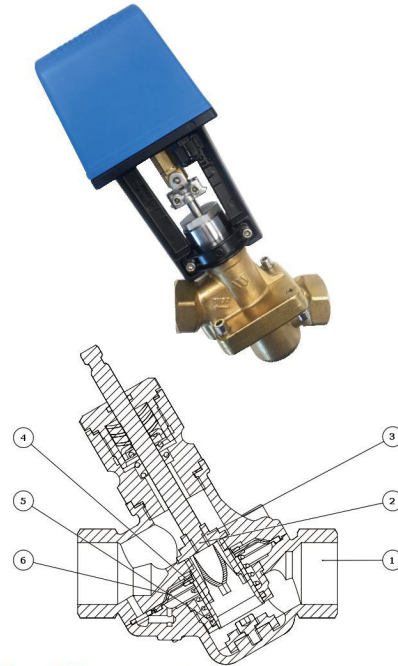
The Series W-DPA912 Pressure Independent Control Valve is a two-in-one valve that plays the roles of both a differential pressure balancing valve and an electric control valve. No matter how the system's differential pressure changes, the valve will keep the differential pressure at both ends of it constant. In other words, the flow goes through the valve will not change with the pressure fluctuation of the system. This enables the valve to have an accurate equal percentage control characteristic. Consequently, the whole system remains stable when the valve is regulating the flow.

◆ Technical Specification

Dimensions:	DN25-DN50
Working Temperature:	-10~120°C
Working Pressure:	PN16/PN25
Fluid Medium:	Water / Ethylene Glycol
Connection:	Threaded Connection
Connection Standard:	ISO7/1
Flow Deviation:	±5%
Working ΔP:	35KPa-350KPa
IP Grade:	IP54
Control Characteristic:	Equal Percentage

Materials:

- Valve Body:	Brass
- Valve Stem:	Stainless Steel
- Valve Core:	Stainless Steel
- Spring:	Stainless Steel
- Sealing:	FPM
- Membrane:	EPDM



◆ Technical Parameters

Product Type:

PN16 Valve Body:

Valve Type	Size	EDP Code	Rated Flow (m³/h)	Stroke (mm)	Actuator Force (N)
W-DPA912AW025-16T	DN25	616P2201	2.0	20	500
W-DPA912AW032-16T	DN32	616P2202	3.5	20	500
W-DPA912AW040-16T	DN40	616P2203	6.0	20	500
W-DPA912AW050-16T	DN50	616P2204	8.0	20	500

PN16 Actuators:

Actuator Type	Size	EDP Code	Rated Output Force (N)	Actual Output Force (N)	Working Voltage	Control Signal	Actuating Time (s/mm)
W-A11A1X	DN25	616P2241	500	500-700	24VAC	0(2)~10V, 0(4)~20mA	3.85
	DN32						
	DN40						
	DN50						

PN25 Valve Body:

Valve Type	Size	EDP Code	Rated Flow (m³/h)	Stroke (mm)	Actuator Force (N)
W-DPA912AW025-25T	DN25	616P2111	2.0	20	500
W-DPA912AW032-25T	DN32	616P2112	3.5	20	500
W-DPA912AW040-25T	DN40	616P2113	6.0	20	500
W-DPA912BW050-25T	DN50	616P2114	8.0	20	1000

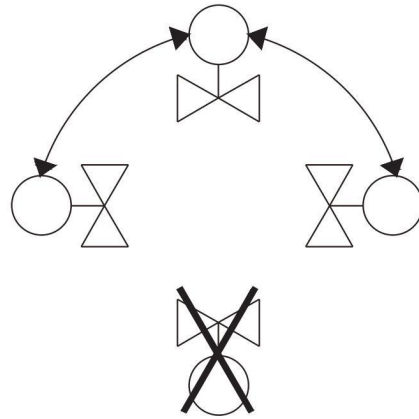
PN25 Actuators:

Actuator Type	Size	EDP Code	Rated Output Force (N)	Actual Output Force (N)	Working Voltage	Control Signal	Actuating Time (s/mm)
W-A11A1X	DN25	616P2241	500	500-700	24VAC	0(2)~10V, 0(4)~20mA	3.85
	DN32						
	DN40						
W-A11B1X	DN50	616P2242	1000	1000-1200			

Coding Rules:

	W- DPA 9 1 2 A W 025- 16 T
W	WATTS
DPA	Pressure Independent Control Valve
9	Electric
1	Threaded Connection
2	Two-way
A	Suitable for 500N Actuator
W	Suitable for Water
Size	
025-DN25	032-DN32
040-DN40	050-DN50
Pressure Class	PN16
Body Material	Brass

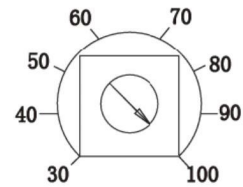
Installation Direction:



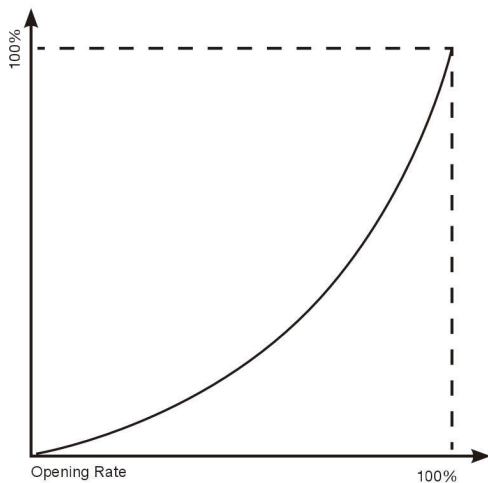
Downward Installation Prohibited

Electronic Preset of Maximum Flow:

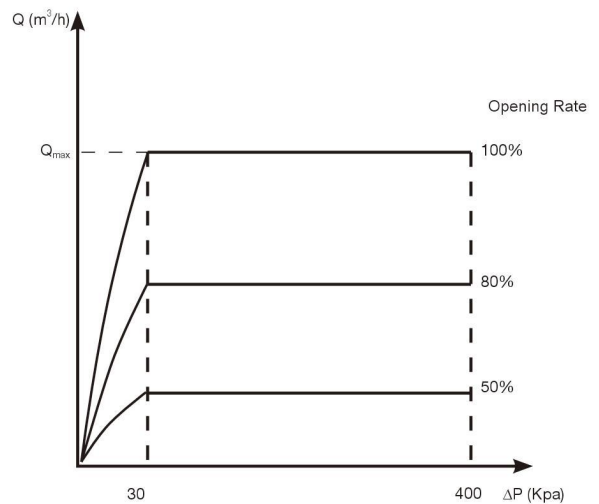
Any opening rate ranging from 30% to 100% (maximum flow) can be preset by regulating the potentiometer in the actuator. The factory presetting value is 100%. This function satisfies the special demand of customers and increases the control precision.



Maximum Opening

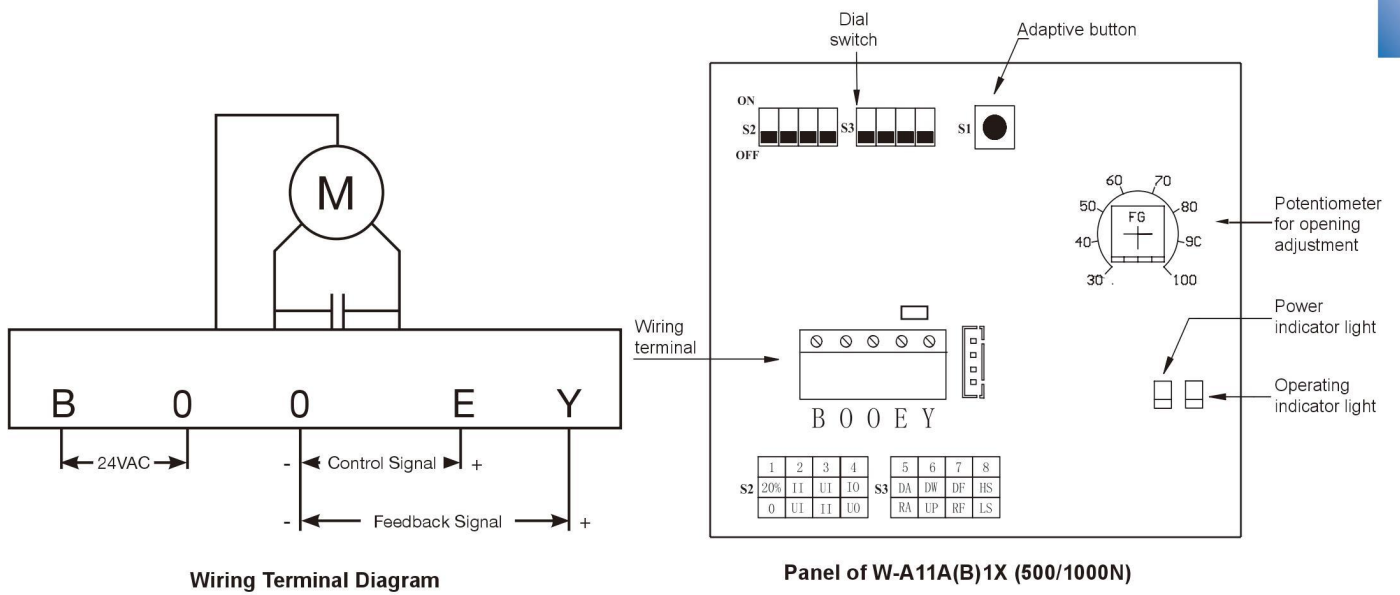


Equal Percentage Control Characteristics



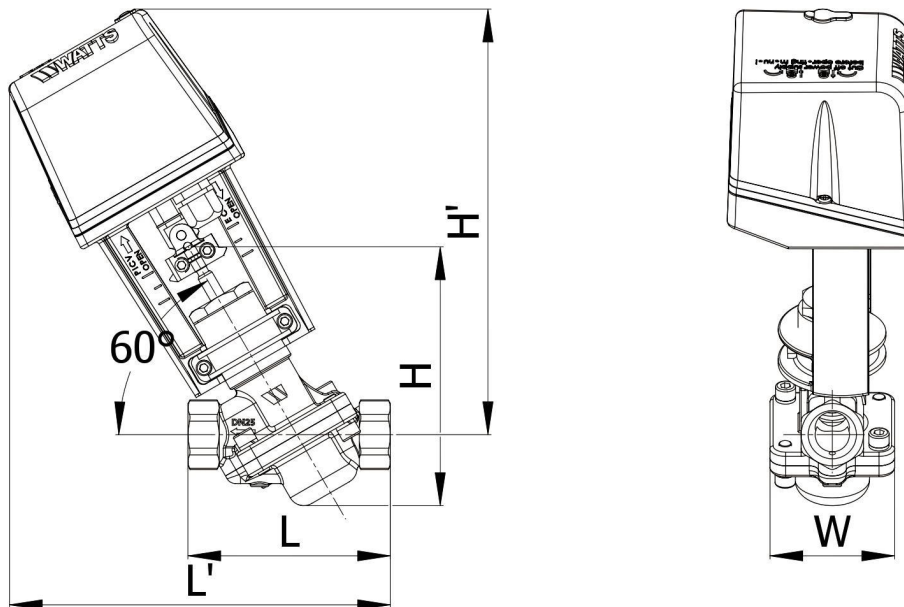
Differential Pressure-Flow Characteristics

Wiring and Panel Diagrams of Electric Actuator:



◆ Installation

Installation Dimensions:



Size	L(mm)	L'(mm)	H(mm)	H'(mm)	W(mm)	Weight(Kg)
DN25	130	245	166.5	274	80	3.9
DN32	146	260	175	277	90	4.5
DN40	165	271	177	280	100	5.2
DN50	190	293	203	295	120	7.1