Series W-F129-20T (DN15-DN25)

FCU Electric Valve

♦ Application

In HVAC water systems, the FCUs are usually controlled by two-way or three-way valves. The Series W-F129 FCU Electric Two-way or Three-way Valve is designed for FCU cooling or heating pipes. Through opening and closing the pipe, the valve can effectively regulate the room temperature. The valve's actuator has spring auto-reset function. If the actuator suddenly loses power, the spring will help the actuator to reset and shut down automatically.

♦ Features

- Forged brass valve body
- On/off control
- Both normally closed two-way structure and diverting three-way structure are available
- Fully enclosed one-way hysteresis synchronous motor drive with water-proof function
- Spring auto-reset function enables automatic shutoff when an emergent power loss happens
- Removable actuator for convenient repair and maintenance
- Rotary motion valve disc
- High shutoff pressure

♦ Operating Principles

The valve is normally closed when receiving no signals. If the room thermostat emits an opening signal to open the valve, cold / hot water will go through the FCUs to provide the room with cooling / heating capacity. When the room temperature reaches the set temperature, the room thermostat will send a closing signal to the actuator to close the valve, so that the cold / hot water in the pipe will not influence the room temperature any more. By opening and closing the valve, the room temperature is kept within the setting range.

♦ Technical Specification

Dimensions:	DN15-DN25
Working Temperature:	0~94℃
Working Pressure:	PN20
Fluid Medium:	Water / Ethylene glycol
Connection:	Threaded Connection
Connection Standard:	GB/T 7306.1-2000
IP Grade:	IP20
Working Voltage:	220VAC 50/60Hz
Power:	6W
Speed:	4r/min
Actuating Time:	Full Open: ≤ 18 s
	Full Close: ≤ 5 s
Control Characteristic:	On / off Control

Materials:
- Valve Body: Forged Brass HPB59-2
- Valve Stem: Nickel Plated Brass HPB60-2
- Valve Disc: NBR
- Sealing: NBR
- Actuator Shell: Aluminum
- Actuator Base: Stainless Steel

♦ Technical Parameters

Product Type:

Type	Structure	Size	Kv	Shutoff Pressure
W–F129215S–20T	Two-way Valve	DN15	2.2	180KPa
W–F129220S–20T		DN20	3.0	160KPa
W–F129225S–20T		DN25	6.9	140KPa
W–F129315S–20T	Diverting Three-way Valve	DN15	2.6	180KPa
W–F129320S–20T		DN20	3.4	160KPa
W–F129325S–20T		DN25	6.5	140KPa

Type	Structure	Size	Kv	Shutoff Pressure
W-F129215L-20T	Two-way Valve	DN15	1.7	450KPa
W-F129220L-20T		DN20	2.2	350KPa
W-F129225L-20T		DN25	3.0	200KPa
W-F129315L-20T	Diverting Three-way Valve	DN15	1.7	450KPa
W-F129320L-20T		DN20	2.6	350KPa
W-F129325L-20T		DN25	3.4	200KPa

Coding Rules:

W- F 12 9 2 15 S- 20 T

W	WATTS
F	FCU Electric Valve
12	Rotary Motion
9	Electric
Category	
2: Two-way	3: Three-way
Size	
15-DN15	20-DN20
25-DN25	
Shutoff Pressure	
S - Small Range of Shutoff Pressure	L - Large Range of Shutoff Pressure
Pressure Class	PN20
Body Material	Brass

◆ Installation

- When the valve is installed in a horizontal pipe, the included angle between the installation plane and the vertical plane should not be greater than 85°, as shown in Figure 1. When the valve is installed in vertical pipe, the enclosure should prevent dripping water from penetrating into the motor.
- The flow direction of normally closed two-way valve should be from B to A, as illustrated in Figure 2.
- When installing the normally closed actuator, the manual lever should be moved to "open" status.
- The manual lever will switch to "auto" status whenever the electric current first flows through the valve.
- Series W-F129-20T FUC electric valve is designed for fully closed systems. It is not suggested to apply this kind of valve to open systems. Excessive oxygen and chlorine in the open system will corrode the valve body.
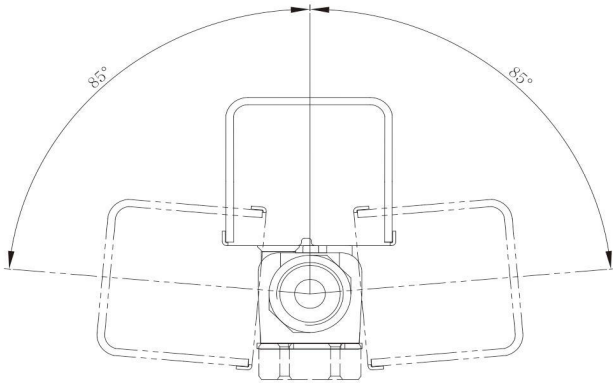
Pipe Connection Illustration:

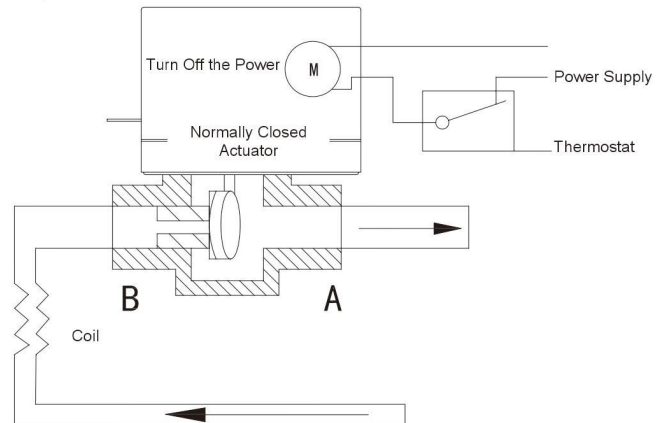Figure 1: Installation Position
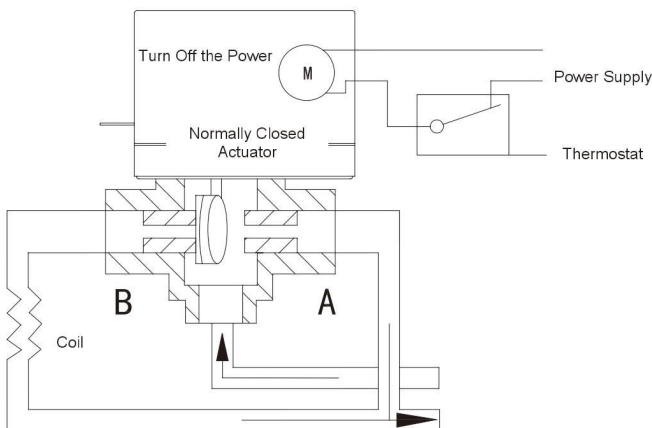

Figure 2: Normally Closed Two-way Valve

Figure 3: Diverting Three-way Valve (Normally Closed)

Figure 4: Mixing Three-way Valve(Normally Closed)
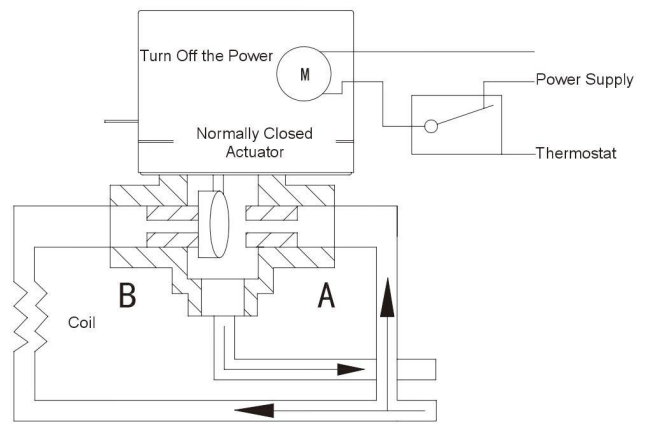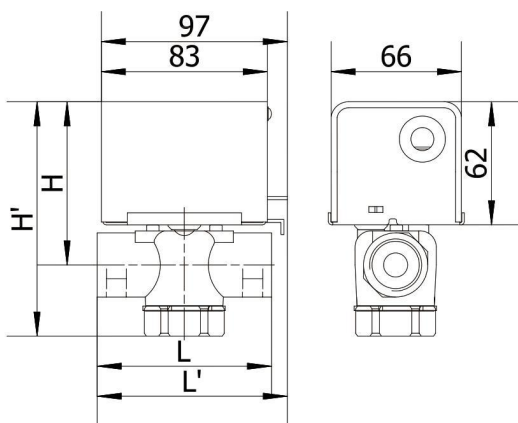
Installation Dimensions:

Size	L(mm)	L'(mm)	H(mm)	H'(mm)	Weight(Kg)
DN15 Two-way	70	82	86	105	0.70
DN15 Three-way	70	82	86	119	0.85
DN20 Two-way	87	82	93	105	1.00
DN20 Three-way	87	82	93	119	0.75
DN25 Two-way	94	82	95	107	0.90
DN25 Three-way	94	82	95	124	1.05