

V4044C, V4044F Motorized Zone Valves

3-PORT HYDRONIC VALVES

PRODUCT DATA



Design

V4044C and V4044F zone valves consist of:

- 3-way valve housing with BSPP internal threads
- Control ball assembly
- Actuator assembly with cable
- V4044F1000 with SPDT end switch
- V4044F1034 with SPST end switch

Materials

- Valve housing made of forged brass
- Spindle shaft made of brass
- O-ring seals made of EPDM rubber
- Ball plug made of NBR rubber
- Actuator cover and base made of zinc-plated steel

Application

Honeywell V4044C and F 3-port hydronic valves are used in domestic and small commercial heating and cooling applications to control the flow of hot or cold water.

They are designed for on-off zone control of domestic systems and can be used to control individual fan coil, radiator, space heater or convector applications. They can be controlled by a line voltage SPST controller such as a room thermostat, aquastat or flow switch.

The actuator head is removable without affecting the integrity of the water system.

Features

- Rugged design
- Control by a line voltage SPST controller
- Actuator head installation does not require draining of the system
- High flow rate capacity
- Indifferent to dirt in system

Specifications

| | |
|-----------------------------------|--|
| Medium | Water or water-glycol mixture (max. 50% glycol content), quality to VDI 2035 |
| pH-value | 8...9.5 |
| Operating temperature | 5...88°C (41...190°F) |
| Ambient temperature | max. 50°C (122°F) |
| Operating pressure | max. 8.6 bar (125 psi) static |
| Differential pressure | see chapter "Dimensions" below |
| k_{vs} (cv)-values | see chapter "Dimensions" below |
| Flow | AB →A or B |
| Starting position | port A normally closed |
| Voltage | 220-240V, 50Hz |
| Power consumption | 6W / 0.042A |
| Auxiliary switch rating | 2.2A at 230Vac, 50Hz |
| Nominal timing | On: 30 seconds under power Off: 12 seconds under spring return |
| Electrical termination | 1m flying lead, heat resistant cable |
| Shipping temperature | -40...65°C (-40...149°F) |
| Humidity rating | 5...95% RH (non-condensing) |
| Atmosphere | non-corrosive, non-explosive |

Function

V4044C and V4044F 2-position hydronic valves are used in domestic and small commercial applications to control the flow of hot or cold water. They consist of an actuator and a valve.

With the manual opener set to AUTO and the actuator energized, port A of the valve is opened and port B is closed. When the actuator is de-energized, a spring-return mechanism drives the ball to close port A, opening port B. Port A can also be opened with no electrical power by moving the manual opening lever over the stop and pushing slowly and firmly to the MAN. OPEN position. The stop permits the valve to be locked with port A in the open position. The valve returns to the automatic position when the valve is energized. A power failure will leave the valve at the spring-returned position. When power is restored, the valve will respond to controller demand.

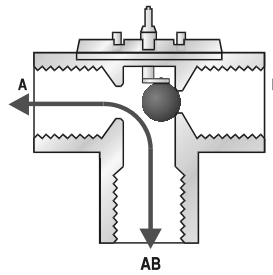


Fig. 1. V4044C/F in energized position (AB-A)

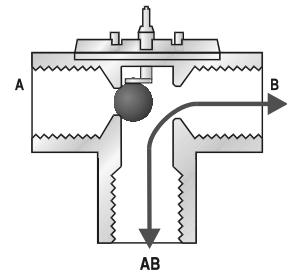


Fig. 2. V4044C/F in de-energized position (AB-B)

NOTE: Port AB is always open

Wiring

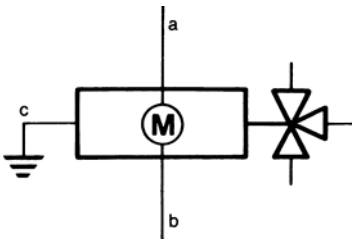


Fig. 3. Wiring diagram for V4044C

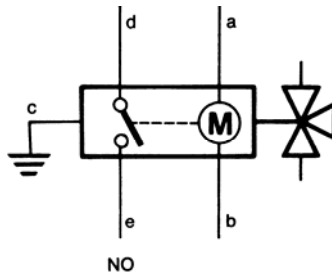


Fig. 4. Wiring diagram for V4044F1034

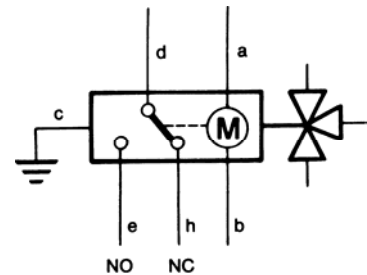


Fig. 5. Wiring diagram for V4044F1000

Table 1. Cable colour coding

| a | b | c | d | e | h |
|-------|------|--------------|--------|------|-------|
| brown | blue | green/yellow | orange | grey | white |

NOTE: The V4044C has no end switch. It is equipped with a 3 wire cable (line, neutral, earth)
 The V4044F1034 has an SPST end switch. It is equipped with a 5-wire cable (line, neutral, earth, end switch). The end switch closes when the valve is in position AB – B
 The V4044F1000 has an SPDT end switch. It is equipped with a 6-wire cable (line, neutral, earth, end switch NO, end switch NC)
 The length of all cables is 1m

Dimensions

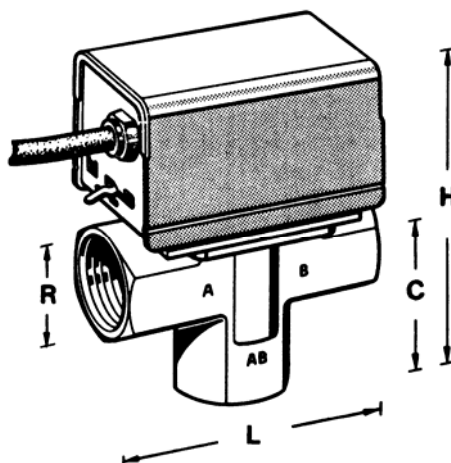


Fig. 6. V4044C, V4044F 3-way zone valve

Table 2. Main dimensions and other values

| Body | k _{vs} -value | max. close-off pressure | Dimensions | | | |
|----------------------|------------------------|-------------------------|------------|----|----|-----|
| | | | R | L | C | H |
| 1/2" BSPP (internal) | 3.0 | 1.4 bar | 1/2" | 96 | 46 | 128 |
| 3/4" BSPP (internal) | 6.0 | 0.7 bar | 3/4" | 96 | 46 | 128 |
| 1" BSPP (internal) | 8.1 | 0.55 bar | 1" | 96 | 46 | 128 |
| 3/4" BSPP (internal) | 6.0 | 0.7 bar | 3/4" | 96 | 46 | 128 |
| 1" BSPP (internal) | 8.1 | 0.55 bar | 1" | 96 | 46 | 128 |

NOTE: All dimensions in mm if not otherwise stated

Ordering Information

Table 3. Order information and OS-Nos. (OS=Ordering System)

| Order text | Size | End switch | Packing unit | OS-No. |
|---|------|------------|--------------|-------------|
| V4044C motorized zone valve | 1/2" | — | 1 pc | V4044C1452 |
| | 3/4" | — | 1 pc | V4044C1460 |
| | 1" | — | 1 pc | V4044C1478 |
| V4044F motorized zone valve with end switch | 3/4" | SPST | 1 pc | V4044F1000 |
| | 1" | SPDT | 1 pc | V4044F1034 |
| V4044F motorized zone valve with end switch – bulk pack of 10 | 3/4" | SPST | 10 pcs | V4044F1000B |
| | 1" | SPDT | 10 pcs | V4044F1034B |

NOTE: Valves in bulk packs are not packed individually. Only one installation and operating instruction is supplied with the bulk pack.

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