Honeywell

# MCV2000 SERIES

## 2-WAY HYDRONIC VALVES

**PRODUCT SPECIFICATION SHEET**

## FEATURES

- Control by a low or line voltage SPST or SPDT controller
- 100~130 VAC or 200~240VAC actuators available
- Minimal actuator power consumption
- Pressure differential up to 3.5bar
- Versatile valve(1/2" ~ 1 1/4") selection
- 1~90 °C fluid temperature
- 0~65 °C ambient temperature

## APPLICATION

The MCV2000 series are designed for residential hydronic heating and cooling control applications.

The MCV2000 series 2-position hydronic valves are used in residential and small commercial applications to control the flow of hot and/or cold water. They consist of actuator and valve.

Contents

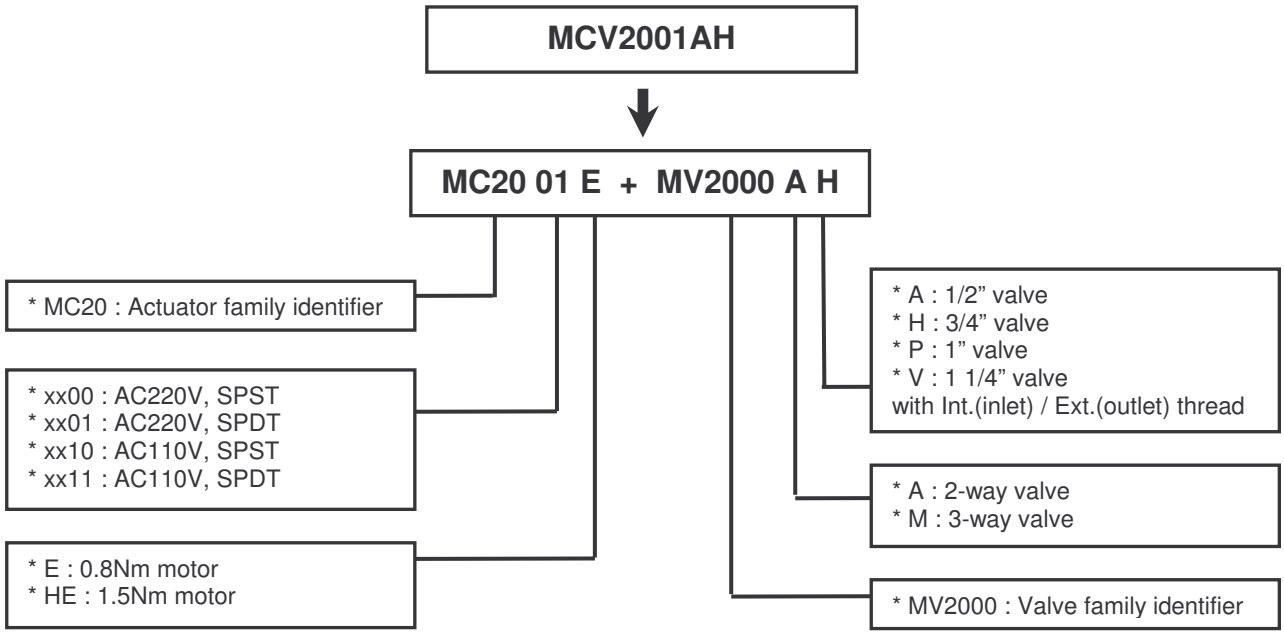


## SPECIFICATION

| | | |
|---|---|---|
| Voltage | : | AC110/220V±10%, 50/60Hz |
| Colour-coded label | : | Green, Black, White |
| Control Performance | : | SPST/SPDT control |
| Power consumption | : | 6W at nominal voltages (during valve position change only) |
| Operational life | : | Greater than 60,000 cycles (all loads) for motor and valve contacts at 110/220V |
| Timing | : | 7.5sec (20sec in case 1 1/4" valve) |

| | | |
|---|---|---|
| Pipe connection | : | PT |
| Maximum pressure | : | 10bar max. |
| Electrical termination | : | with integral 1000mm lead-wire cable |
| Ambient Temperature | : | 0 ~ 65 °C |
| Ambient Humidity | : | 10 ~ 95%RH (no condensing) |
| Storage temperature | : | -25 ~ 65 °C |
| Storage Humidity | : | 10 ~ 95%RH (no condensing) |

**Table 1. Model Selection Guide**




* MCV2001AH = MC2001E + MV2000AH : AC220V, SPDT, 0.8Nm, 3/4", 2-way valve
(with int.(inlet) / Ext.(outlet) thread & PT fitting)

**Table 2. Model Assembly Guide**

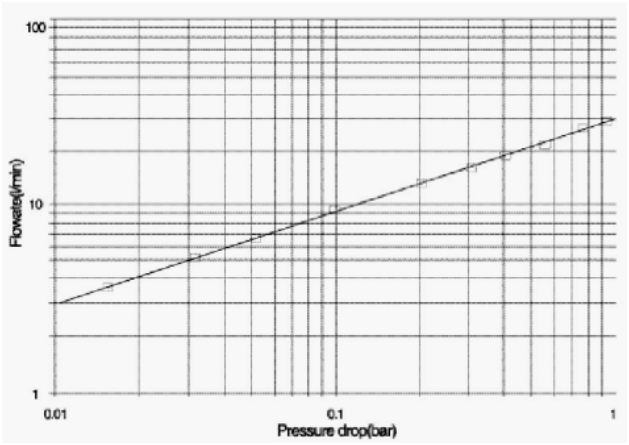
| Model (Assembly) | Model(Motor) | Model(Valve) |
|---|---|---|
| MCV2000AA | MC2000E | MV2000AA |
| MCV2000AH | | MV2000AH |
| MCV2000AP | | MV2000AP |
| MCV2000AV | MC2000HE | MV2000AV |
| MCV2001AA | MC2001E | MV2000AA |
| MCV2001AH | | MV2000AH |
| MCV2001AP | | MV2000AP |
| MCV2001AV | MC2001HE | MV2000AV |

| Model (Assembly) | Model(Motor) | Model(Valve) |
|---|---|---|
| MCV2010AA | MC2010E | MV2000AA |
| MCV2010AH | | MV2000AH |
| MCV2010AP | | MV2000AP |
| MCV2010AV | MC2010HE | MV2000AV |
| MCV2011AA | MC2011E | MV2000AA |
| MCV2011AH | | MV2000AH |
| MCV2011AP | | MV2000AP |
| MCV2011AV | MC2011HE | MV2000AV |

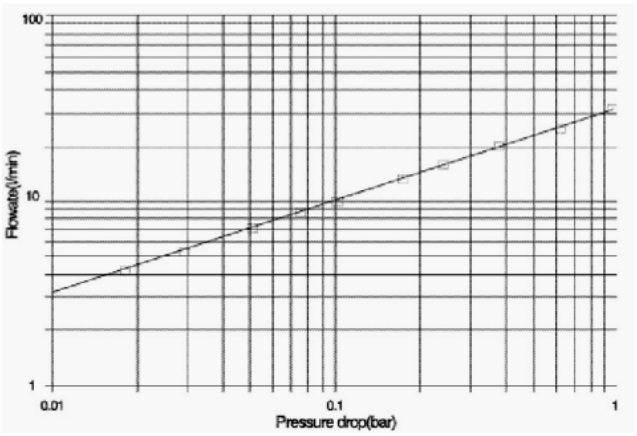
* Product Examples
- MC20xxE/HE : Actuator only, Egg crate with 15 actuators
- MV20xxAA/AH/AP/AV : Valve only, Egg crate with 40 valves(1/2"), 30 valves(3/4"), 21 valves(1"), 10 valves(1 1/4")

**Table 3. Kv & Differential Pressure**

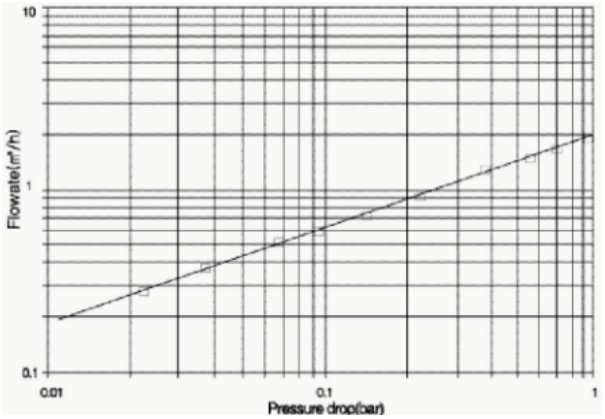
| Valve size | Kv | Max. operating differential pressure |
|---|---|---|
| **1/2"** | **1.7** | **3.5 bar** |
| **3/4"** | **1.9** | **3.5 bar** |
| **1"** | **2.1** | **3.5 bar** |
| **1 1/4"** | **5.5** | **2.8 bar** |



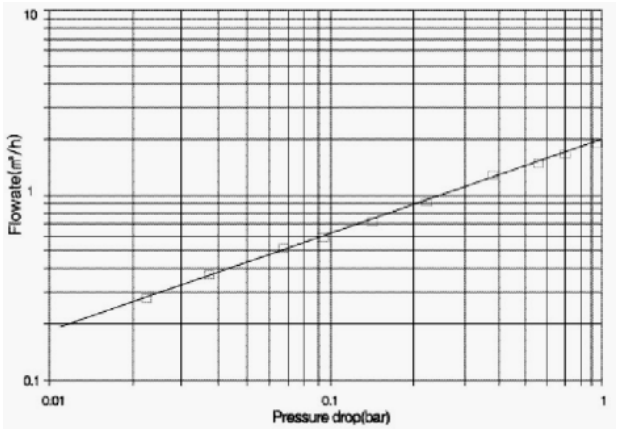

< 1/2" valve >




< 3/4" valve >



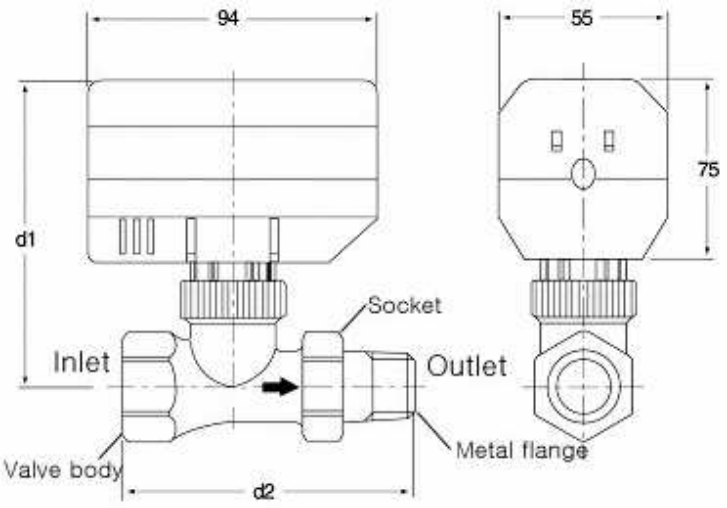

< 1" valve >




< 1 1/4 " valve >

**Fig. 1 Valve Pressure Loss Characteristic for 2-way Valves**

# DIMENSIONS




| Valve Size | d2(mm) | d1(mm) |
|---|---|---|
| 1/2" | 95 | 100(in 1") |
| 3/4" | 106 | |
| 1" | 125 | |
| 1 1/4" | 150 | |

**Fig. 2 MCV Valve Dimensions (in mm)**

**WARNING**

- Take care that installer is a trained experienced service person.

When installing this product:

- Read these instructions carefully.

  Failure to follow them could damage the product or cause a hazardous condition.
- Check the ratings given in the instructions and on the product to make sure it is suitable for your application.
- Always conduct a through checkout after installation.

**CAUTION**

- Disconnect Power Supply before making electrical connections to prevent electrical shock and equipment damage.

# INSTALLATION

1. The valve may be plumbed in any angle but preferably not with the actuator head below the horizontal level of the valve body. Make sure there is enough room around the actuator head for servicing or replacement.
2. The valve body can be mounted directly onto the inlet pipe. Mount the metal flange inserted in socket to outlet pipe. And then tighten the socket enough to make a seal. See Figure 2 for the detail dimension.
3. Mount the valve directly in the tube or pipe. Do not grip actuator head while making and tightening plumbing connections. Either hold valve body in your hand or attach adjustable spanner across the hexagonal or flat faces on the valve body.

# WIRING DIAGRAM

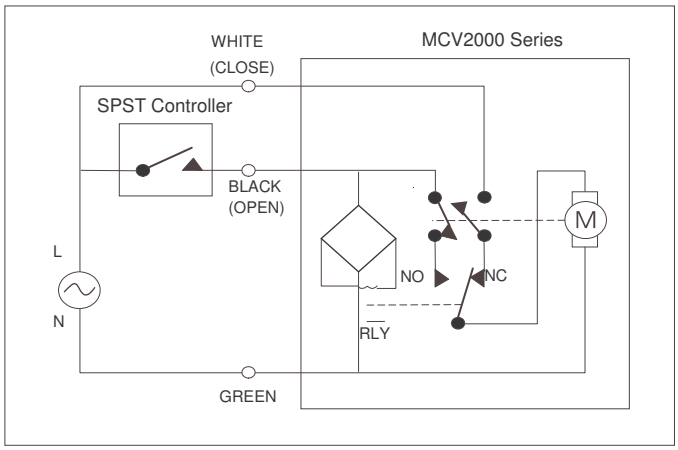



**Fig. 3 Diagram with 3-wire Actuator for SPST Controller**

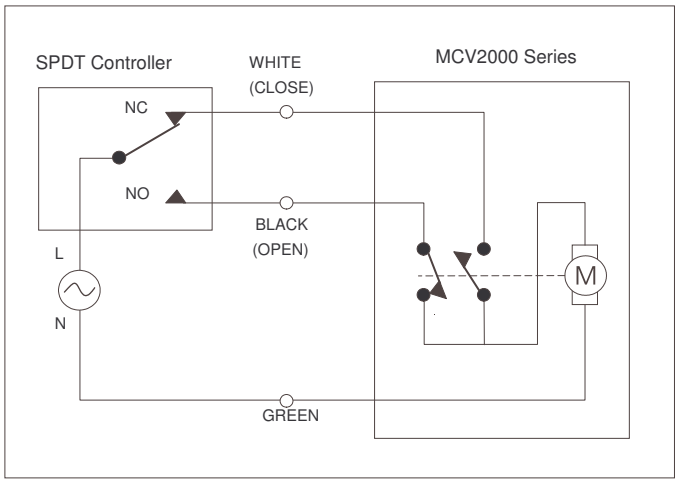



**Fig. 4 Diagram with 3-wire Actuator for SPDT Controller**

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