

## VC2, VC4, VC60, VC8

### ON-OFF ACTUATOR FOR VC SERIES BALANCED HYDRONIC VALVES

#### INSTALLATION INSTRUCTIONS



These 2-position (open/close) control actuators are used with VCZ1000, 1100, 6000 and 6100 series hydronic valves in a normal indoor environment to provide quick opening/closing to control the flow of hot and/or chilled water or glycol solution to 60% concentration. They are designed for on-off "zone" control of heating/cooling systems, or to control individual fan coil, baseboard radiator or convector applications.

Depending on the model selected, the actuator can be controlled by a low or line voltage SPST or SPDT controller, such as a room thermostat, aquastat or flow switch.

VC80 series valve actuators are designed to be used with hard-wired electronic thermostats with series anticipator or power-stealing thermostats. Recommended control thermostats include T8601D, T8401C, T8380 and T8360 families.

VC actuators use cam-operated cartridge travel to resist water hammer. Internal limit switches prevent motor overrun.

## SPECIFICATIONS

*The specifications following are nominal and conform to generally acceptable industry standards. Honeywell is not responsible for damages resulting from misapplication or misuse of its products*

#### Supply Voltage:

24V, 50Hz Model  
24V, 60Hz Model  
100-130V, 50-60Hz Model  
200-240V, 50-60Hz Model

#### Colour coded label

Blue  
Blue  
Black  
Red

**Power consumption:** 6 Watts Max. at nominal Voltage (during valve position change). Use 24 V Class 2 transformer and provide 6 VA for transformer and connection wire sizing.

**Maximum Duty Cycle:** 15%

#### Nominal timing:

Valve opens in 6 seconds @ 60Hz (20% longer @ 50Hz).  
VC8040 Series opens in 12 seconds @ 60Hz (20% longer @ 50Hz).

#### Electrical termination: 3 versions available:

- (1) Molex™ (header # 39-30-1060). Requires mating connector (receptacle/housing # 39-01-2060). OR
- (2) With integral 1 meter [nominal 39"] leadwire cable. OR
- (3) With 5 feet (1.5 meter) plenum-rated leadwire cable per UL94-5V. Includes plastic adapter for use with 3/8" flexible conduit.

#### End Switch Rating:

2.2 A inductive from 5 to 110 Vac,  
1.0 A inductive above 110 to 277 Vac.  
Min. DC switching capability: 5mA @ 24 Vdc.

**Operating ambient temperature:** 0 to 65°C [32 to 150°F]  
Except VC2114, VC2714, VC8114 & VC8714 are 0 to 60°C [32 to 140°F]

**Humidity Rating:** 5-95% RH (non-condensing)

**Fluid temperatures:** 1 to 95° C [34 to 203° F]

**Shipping & storage temperature:** -40 to +65°C [-40 to +150°F]

#### Atmosphere:

Non-corrosive, non-explosive.

#### Nominal Dimensions (Actuator Only):

3-23/32" width x 2-11/16" depth x 2-3/4" height  
94 mm width x 68 mm depth x 70 mm height

**Accessories:** 272866B Valve Flushing Cap

#### Models:

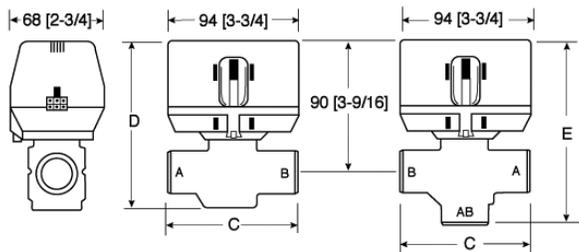
**Actuator Only:** VC2, VC4, VC60, VC8 (See Table 1)  
**Bodies (Order Separately):** VCZ... (See 95C-10919)



**Table 1. Actuator Model Identifiers**

Model No.	Power	Control Input	Auxiliary Switch	Special Features
<b>INTERNATIONAL MODEL [3]</b>				
VC2010zz00	24V~50Hz	SPDT	—	Molex™
VC2011zz00	24V~50Hz	SPDT	—	Cable
VC2012zz00 [1]	24V~50Hz	SPDT	—	Molex™
VC2611zz00	24V~50Hz	SPDT	Yes	Cable
VC4012zz00	200-240V~ 50-60Hz	SPST	—	Molex™
VC4013zz00	200-240V~ 50-60Hz	SPST	—	Cable
VC4013zz11	200-240V~ 50-60Hz	SPST	—	Cable
VC4613zz00	200-240V~ 50-60Hz	SPST	Yes	Cable
VC6012zz00	200-240V~ 50-60Hz	SPDT	—	Molex™
VC6013zz00	200-240V~ 50-60Hz	SPDT	—	Cable
VC6013zz11	200-240V~ 50-60Hz	SPDT	—	Cable
VC6612zz00	200-240V~ 50-60Hz	SPDT	Yes	Molex™
VC6613zz00	200-240V~ 50-60Hz	SPDT	Yes	Cable
VC8011zz00	24V~50Hz	SPST	—	Cable
VC8611zz00	24V~50Hz	SPST	Yes	Cable
<b>NORTH AMERICA MODELS [3]</b>				
VC2114zz11	24V~60Hz	SPDT	—	Plenum [2]
VC2714zz11	24V~60Hz	SPDT	Yes	Plenum [2]
VC4011zz11	120V~60Hz	SPST	—	Cable
VC4013zz11	200-240V~ 50-60Hz	SPST	—	Cable
VC8111zz11	24V~60Hz	SPST	—	Cable
VC8114zz11	24V~60Hz	SPST	—	Plenum [2]
VC8711zz11	24V~60Hz	SPST	Yes	Cable
VC8714zz11	24V~60Hz	SPST	Yes	Plenum [2]

- [1] with Snubber circuit
- [2] Plenum rated with 5 meter cable
- [3] Some models are not available in all countries. Not all VC Actuator modes are shown.



**Fig. 1. Nominal Dimensions in inches and millimeters**

**Table 2. VC Valve assembled dimensions**

Dimension [4] Pipe Fitting Sizes	C		D		E	
	mm	inches	mm	inches	mm	inches
1/2" BSPP (int.) [2]	98	3-7/8	111	4-3/8	136	5-11/32
1/2" BSPT (int.)						
3/4" BSPP (int.)	94	3-11/16	113	4-7/16	130	5-1/8
3/4" BSPT (int.)						
3/4" BSPP (ext.)						
22mm Compression [3]	112	4-7/16			140	5-1/2
1" BSPP (int.)	94	3-11/16			136	5-11/32
1" BSPP (ext.)	95	3-11/17	114	4-7/17	137	5-11/33
1" BSPT (int.)	94	3-11/16	113	4-7/16	136	5-11/16
28mm Compression [3]	116	4/9/16			147	5-13/16
<b>North America Standard Models</b>						
3/8" Flare [1]	98	3-7/8	111	4-3/8	136	5-11/32
1/2" Sweat	89	3-1/2			130	5-1/8
1/2" Flare [1]	98	3-7/8			136	5-11/32
1/2" Inverted Flare [1]						
1/2" NPT (int.)						
3/4" NPT (int.)	94	3-11/16	113	4-7/16	130	5-1/8
3/4" Sweat					132	5-3/16
1" NPT (int.)					136	
1" Sweat						5-11/32
1-1/4" Sweat	110	4-5/16	118	4-5/8	142	5-5/8
1-1/4" NPT (int.)						

- [1] No adapters
- [2] Suitable for use as 15 mm compression fitting
- [3] Dimensions shown with nuts and olives installed
- [4] **Some models not available in all countries**

**MANUAL OPENER**

The manual opener can be manipulated only when in the up position. The "A" port can be opened by firmly pushing the white manual lever down to midway and in. In this position both the "A" and "B" ports are open, and with auxiliary switch models the switch is closed. This "manual open" position may be used for filling, venting, or draining the system, or for opening the valve in case of power failure. The valve can be restored manually to the closed position by depressing the white manual lever lightly and then pulling the lever out. The valve and actuator will return to the automatic position when power is restored.

**NOTE:** If the valve is powered open (the lever is down), it can not be manually closed unless actuator is removed.