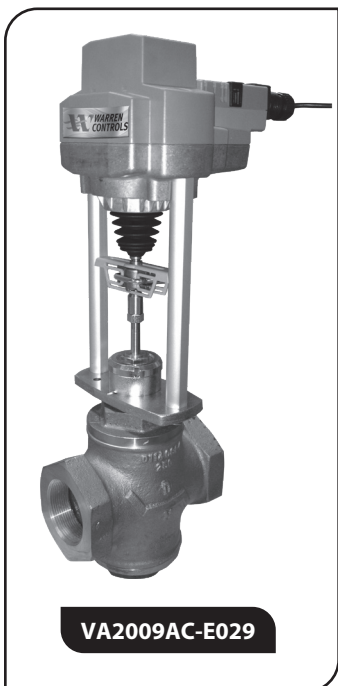
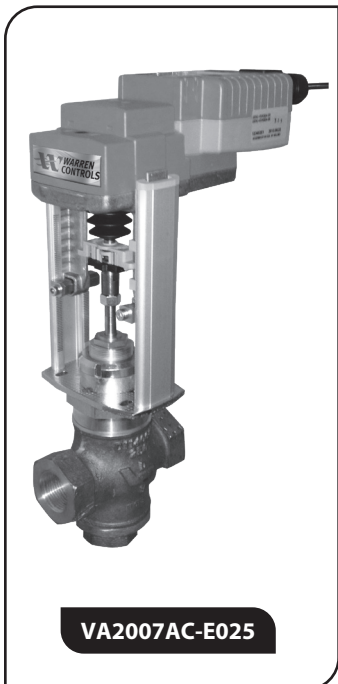


ELECTRICALLY ACTUATED

SINGLE SEATED BRONZE AND STAINLESS STEEL- 1/2" - 2"



► APPLICATION:

Control of Saturated Steam; Water; Water & Glycol Solutions. Seat Leakage Class ANSI III & IV.

► VALVE CONSTRUCTION:

Body: ANSI B16.15 Bronze 250lb. Threaded (NPT), or Stainless Steel (CF8M) 300 lb. Threaded (NPT)
Trim: EQ%, 316 Series Stainless Steel
Stem: 316 Stainless Steel
Bonnet: Brass / Bronze or 316 Stainless Steel
Packing: EPDM Lip Packing (+20 to 350°F) Standard (EPDM is **not** suitable for use with oils, hydrocarbons, or acids.) PTFE V-Ring, (+60 to 350°F) Optional, must be specified on order
Agency Approval: CRN # CSA - OC18997 (Bronze Body Only)

► TRIM LIMITS (Flowing Differential Pressure):

S/S Trim: Liquid or Steam 100 PSID

► ACTUATOR SPECIFICATIONS:

Control Signal: 2-10 Vdc
(4-20 mA DC with 500 ohm resistor Kit KR500-supplied with motor)
Control Action, Loss of Signal: Increasing Signal Opens Valve, Loss of Signal Closes Valve (Default Setting)
Reversible with Switch. Can be specified when ordering.

Feedback Signal: 2-10 Vdc

Power Supply: 24 VAC/DC
Loss of Power: **E024 & E029** (FAIL LAST POSITION)
E031 (E029 w/ VMS-50 BCM, FAIL SAFE TO LOSS OF SIGNAL POSITION)
E025 & E026 (ELECTRONIC FAIL SAFE) Fail Closed (Default Setting)
Reversible with Switch. Can be specified when ordering.

Power Consumption
Running: **E024** 2W; **E025** 3W; **E026** 5W; **E029** 6W;
E031 Battery Charging 12.84W; Battery charged 7.2W
Holding: **E024** 1.5W; **E025** 2W; **E026** 2W; **E029** 1.5W;
E031 Battery Charging 8.34W; Battery charged 2.7W

Transformer sizing: **E024** 4VA; **E025** 7VA; **E026** 9.5VA; **E029** 11VA;
E031 N/A;

Switching Power Supply **E031** 24Vdc 2.0A

Timing: See Configuration Tables

Manual Override: Hex crank (supplied with actuator)

Construction: Aluminum Die Cast and Plastic Housing

Locations: NEMA Type 2 / IP54, UL enclosure type 2

Temperature Limits: +32°F to 122°F Ambient

Mounting: Vertical above centerline of valve

Safety Agency Listing: CE, cULus

► VMS-50 BCM (BACK-UP CONTROL MODULE) SPECIFICATIONS:

Required for Fail Safe Operation with fail last position (Actuators E024 & E029)
(One VMS-50BCM can operate one, two or three actuators at a time)

The E031 includes a VMS-50 BCM. The VMS-50 BCM does not include a VMS-50 PS.

Fail Direction: Fail Safe to Loss of Signal Position

Power Requirement: 24 Vdc 2.0 A from Separate External Switching Power Supply

Power Output: 24 Vdc 48W Total

Construction: Battery w/Circuit Board & Transformer in the Nema 4x Enclosure

Mounting: Wall Mount

Dimensions: 8.75" (W) x 6.97" (H) x 5.19" (D) (See page 34)

Safety Agency Listing: Not Listed

► VMS-50 PS (SWITCHING POWER SUPPLY) SPECIFICATIONS:

Required to supply 24Vdc power to the VMS-50 BCM Back-up Control Module
The VMS-50 BCM does not include a VMS-50 PS.

Input: 115 VAC 50/60 Hz 1.5A

Power Output: 24 Vdc 2.0 A

Input Connector: Three Pin Input Plug

Construction: Molded Plastic

Dimensions: 4.31" (L) x 2.16" (W) x 1.62" (H)

Safety Agency Listing: UL Listed

Note: If the building already has a 24 Vdc circuit rated at or above 2.0 Amps that is available for use with the VMS-50 BCM, then the VMS-50 PS is not required.

NOTES:

- 1) Inlet Pressure cannot exceed Body Pressure-Temperature Rating.
- 2) Shut-off pressures listed are with respect to stated ANSI Leakage Classes.
- 3) Flowing PSID for water service should be no greater than 2/3 of Inlet Pressure unless verified for absence of cavitation with Warren Valve Sizing Program.



SINGLE SEATED BRONZE AND STAINLESS STEEL - 1/2" - 2"

► **ACTUATOR & VALVE CONFIGURATIONS:** Select Valve & Actuator Code in Tables:

Fail Last Position										ACTUATOR CODE E024	
Cv	Size (IN)	Thd NPT		Trim	Bronze Valve Code	Stainless Steel Valve Code	SHUT-OFF (PSID)		Max Timing (SEC)		
		Bronze	ST STL				CL III	CL IV	Motor		
4.9	0.5	250	300	S/S	VA2004AC	VA2004EC	400	400	90		
7.2	0.75	250	300	S/S	VA2005AC	VA2005EC	400	400	90		
10	1	250	300	S/S	VA2006AC	VA2006EC	283	247	90		
22.2	1.25	250	300	S/S	VA2007AC	VA2007EC	120	96	90		
24	1.5	250	300	S/S	VA2008AC	VA2008EC	120	96	90		
40	2	250	300	S/S	VA2009AC	VA2009EC	70	52	90		

Fail Safe										ACTUATOR CODE E025	
Cv	Size (IN)	Thd NPT		Trim	Bronze Valve Code	Stainless Steel Valve Code	SHUT-OFF (PSID)		Max Timing (SEC)		
		Bronze	ST STL				CL III	CL IV	Motor	Fail Safe	
4.9	0.5	250	300	S/S	VA2004AC	VA2004EC	400	400	90	35	
7.2	0.75	250	300	S/S	VA2005AC	VA2005EC	400	400	90	35	
10	1	250	300	S/S	VA2006AC	VA2006EC	283	247	90	35	
22.2	1.25	250	300	S/S	VA2007AC	VA2007EC	120	96	90	35	
24	1.5	250	300	S/S	VA2008AC	VA2008EC	120	96	90	35	
40	2	250	300	S/S	VA2009AC	VA2009EC	70	52	90	35	

Fail Safe										ACTUATOR CODE E026	
Cv	Size (IN)	Thd NPT		Trim	Bronze Valve Code	Stainless Steel Valve Code	SHUT-OFF (PSID)		Max Timing (SEC)		
		Bronze	ST STL				CL III	CL IV	Motor	Fail Safe	
10	1	250	300	S/S	VA2006AC	VA2006EC	395	360	90	35	
22.2	1.25	250	300	S/S	VA2007AC	VA2007EC	171	147	90	35	
24	1.5	250	300	S/S	VA2008AC	VA2008EC	171	147	90	35	
40	2	250	300	S/S	VA2009AC	VA2009EC	102	83	90	35	

Fail Last Position/ Fail Safe										ACTUATOR CODE E029/E031		
Cv	Size (IN)	Thd NPT		Trim	Bronze Valve Code	Stainless Steel Valve Code	Fail Last Position (Actuator Code)	Fail Safe w/VMS50 (Actuator Code)	SHUT-OFF (PSID)		Max Timing (SEC)	
		Bronze	ST STL						CL III	CL IV	Motor	
22.2	1.25	250	300	S/S	VA2007AC	VA2007EC	E029	E031	400	400	90	
24	1.5	250	300	S/S	VA2008AC	VA2008EC	E029	E031	400	400	90	
40	2	250	300	S/S	VA2009AC	VA2009EC	E029	E031	260	242	90	

► **Dimensions (IN):**

Component	Variable	Dimension by Valve Size (IN)							
		1/2 & 3/4		1		1-1/4 & 1-1/2		2	
		250THD	300THD	250THD	300THD	250THD	300THD	250THD	300THD
A	—	4-7/8	5	4-7/8	5	5-3/4	6-1/8	6-1/2	6-1/2
B	—	2-3/4	3	2-3/4	3	3-1/4	3-1/2	3-5/8	3-7/8
C	E024	11-1/8	11-1/8	11-1/8	11-1/8	11-3/4	11-3/4	12	12
C	E025	11-7/8	11-7/8	11-7/8	11-7/8	12-1/2	12-1/2	12-3/4	12-3/4
C	E026/E029/E031	N/A	N/A	15-3/8	15-3/8	16	16	16-1/4	16-1/4
H	E024	13-7/8	14-1/8	13-7/8	14-1/8	15	15-1/4	15-5/8	15-7/8
H	E025	14-5/8	14-7/8	14-5/8	14-7/8	15-3/4	16	16-3/8	16-5/8
H	E026/E029/E031	N/A	N/A	18-1/8	18-3/8	19-1/4	19-1/2	19-7/8	20-1/8
R*	E024/E029/E031	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2
R*	E025/E026	8-3/4	8-3/4	8-3/4	8-3/4	8-3/4	8-3/4	8-3/4	8-3/4

ACTUATED ASSEMBLY BODY PRESSURE TEMPERATURE RATINGS

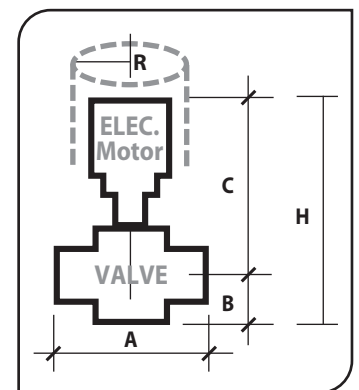
TEMP.	BRONZE	ST STL
	250 THD	300 THD
+20 to 100° F	400	720
150° F	400	670
350° F	300	537

Ratings are PSIG
250 THD pressure boundary meets ANSI B16.15
300 THD pressure boundary meets ANSI B16.34

WEIGHTS

ITEM	WEIGHT (LBS)	
VALVE SIZE (IN)	BRONZE	ST STL
1/2, 3/4, 1	8-1/2	8
1-1/4 & 1-1/2	14-1/2	15-1/2
2	18-1/2	19
ACTUATOR	LBS	
E024	4	
E025	4-1/2	
E026	8-1/2	
E029/E031	8-1/2	
BCM	LBS	
VMS-50	4-1/2	

Actual shipping weights may vary.



Allow 6 inch clearance above actuator for removal / service.

*Center line of Valve to Outside Actuator