

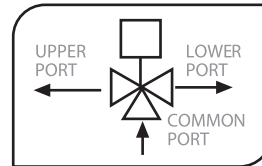
3-WAY DIVERTING IRON 2 1/2" - 6"

► APPLICATION:

Control of Water; Water & Glycol Solutions. Valves divert one flow into two directions (Diverting).
Seat Leakage ANSI Class II.

► VALVE CONSTRUCTION:

Body: Size 2-1/2, 3, 4, 5 & 6 inch
ANSI B16.1 Iron 125lb. Flange or 250lb Flange
Trim: Linear, Bronze or 300 Series Stainless Steel
Stem: 316 Stainless Steel
Bonnet: Brass
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



O-Ring: EPR +20 to 300°F (2-1/2 thru 5 in); +20 to 150°F (6 in)
Agency Approval: CRN # CSA - OC20496 (Excludes 250# Type 22/32)

► TRIM LIMITS (Flowing Differential Pressure):

Brz Trim: Liquids to 40 PSID
S/S Trim: Liquids to 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 Lower Port/ Closes Upper Port,
Loss of Signal Closes Lower Port/ Opens Upper Port (Default Setting)
Reversible with Switch. Can be specified when ordering.
Feedback Signal: 2-10 Vdc
Power Supply: 24 VAC/DC
Loss of Power: **E029** (FAIL LAST POSITION)
E031 (E029 w/ VMS-50 BCM, FAIL SAFE TO LOSS OF SIGNAL POSITION)
E026 (ELECTRONIC FAIL SAFE)
Fail Lower Port Closed/ Upper Port Open (Default Setting)
Reversible with Switch. Can be specified when ordering.
Power Consumption
Running: **E026** 5W; **E029** 6W;
E031 Battery Charging 12.84W; Battery charged 7.2W
Holding: **E026** 2W; **E029** 1.5W;
E031 Battery Charging 8.34W; Battery charged 2.7W
Transformer sizing: **E026** 9.5VA; **E029** 11VA;
E031 N/A
Switching Power Supply **E031** 24 Vdc 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



VA3213CA-E029

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.
- 4) The difference between the upper port and the lower port pressure must not exceed 50 PSID.



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.

ELECTRICALLY ACTUATED

3-WAY DIVERTING IRON 2 1/2" - 6"

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

Fail Safe					ACTUATOR CODE	E026		
Cv	Size (IN)	Thd NPT	Trim	Valve Code	SHUT-OFF (PSID)	Max Timing (SEC)		
					CL II	Motor	Fail Safe	
68	2.5	125	BRZ	VA3210CA	125	90	35	
68	2.5	125	S/S	VA3210CC	125	90	35	
68	2.5	250	BRZ	VA3210DA	125	90	35	
68	2.5	250	S/S	VA3210DC	125	90	35	
85	3	125	BRZ	VA3211CA	125	90	35	
85	3	125	S/S	VA3211CC	125	90	35	
85	3	250	BRZ	VA3211DA	125	90	35	
85	3	250	S/S	VA3211DC	125	90	35	

Fail Last Position/ Fail Safe							ACTUATOR CODE	E029/E031	
Cv	Size (IN)	Thd NPT	Trim	Valve Code	Fail Last Position (Actuator Code)	Fail Safe w/VMS50 (Actuator Code)	SHUT-OFF (PSID)	Max Timing (SEC)	
							CL II	Motor	
160	4	125	BRZ	VA3213CA	E029	E031	125	90	
160	4	125	S/S	VA3213CC	E029	E031	125	90	
160	4	250	BRZ	VA3213DA	E029	E031	125	90	
160	4	250	S/S	VA3213DC	E029	E031	125	90	
195	5	125	BRZ	VA3214CA	E029	E031	125	90	
195	5	125	S/S	VA3214CC	E029	E031	125	90	
195	5	250	BRZ	VA3214DA	E029	E031	125	90	
195	5	250	S/S	VA3214DC	E029	E031	125	90	
270	6	125	BRZ	VA3215CA	E029	E031	125	90	
270	6	125	S/S	VA3215CC	E029	E031	125	90	
270	6	250	BRZ	VA3215DA	E029	E031	125	90	
270	6	250	S/S	VA3215DC	E029	E031	125	90	

► Dimensions (IN):

Component	Variable	Dimension by Valve Size (IN)				
		2-1/2	3	4	5	6
A	125 FLG	9	10	13	12	14-1/8
A	250 FLG	9-5/8	10-3/4	13-5/8	12-7/8	14-1/2
B	125 FLG	7-1/16	7-15/16	9-7/8	10-1/2	11-1/16
B	250 FLG	7-3/8	8-5/16	10-3/16	10-15/16	11-1/2
C	E026/E029/E031	17-3/4	18-5/8	19-3/8	20	20-5/8
H	E026/E029/E031 125 FLG	25	26-3/4	29-3/8	30-5/8	31-7/8
H	E026/E029/E031 250 FLG	25-1/4	27-1/8	29-3/4	31-1/8	32-1/4
R*	E029/E031	7-1/2	7-1/2	7-1/2	7-1/2	7-1/2
R*	E026	8-3/4	8-3/4	-	-	-

ACTUATED ASSEMBLY BODY PRESSURE TEMPERATURE RATINGS VALVES: 2-1/2"-6"

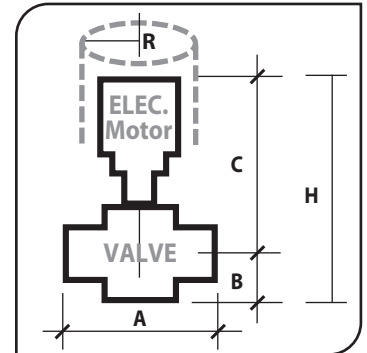
TEMP.	125 FLG (PSIG)	250 FLG (PSIG)
+20 to 150° F	175	400
300° F	140	310

Ratings are PSIG
Pressure boundary meets ANSI B16.1

WEIGHTS

VALVE SIZE (IN)	125 FLG	250 FLG
2-1/2	59	73
3	78	94
4	138	157
5	152	213
6	203	284
ACTUATOR	LBS	
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