maxi-therm™

EBV

Electronic Blending Valve

DOMESTIC HOT WATER TEMPERATURE CONTROL WITH SAFEGUARD

CONFORMS TO THE FOLLOWING

ASSE 1017

California Lead Free Plumbing Law

CSA B 125.3 (NSF/ANSI 61 Section 8)

THE ELECTRONIC BLENDING VALVE CAN OPERATE IN ONE OF THE FOLLOWING MODES:

- EBV (temperature control)
- TMC (alarm condition safeguard)
- EBV Combo (temperature control with alarm condition safeguard)

DESIGNED FOR CRITICAL TEMPERATURE APPLICATIONS

- Accurately maintains set point from 0.5 gpm domestic draw to full flow
- Accurately maintains set point within +/-2 °F
- Domestic hot water temperature control
- Heating and cooling or industrial applications

STAINLESS STEEL VALVE BODIES

- Conforms to lead free requirements
- Rugged body design
- Minimizes scale build up
- External mounted actuator

SAFEGUARD AGAINST HIGH TEMPERATURE CONDITIONS

- Optional safety valve output
- Dual alarm outputs

REMOTE COMMUNICATION OPTIONS

- BACnet (IP or MSTP)
- ModBus

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ADVANTAGE

DIGITAL TEMPERATURE CONTROL

- Accurately maintains set point from 0.5 gpm domestic draw to full flow per ASSE 1017

QUICK STARTUP

- Single set point input, no multiple valve settings or balancing required

MULTIPLE VALVE SIZES

- 7 Valve Sizes allow proper size selection for desired flow rates
- Multiple valves setup option for larger systems

MAINTENANCE FREE

- The stainless valve body design reduces scale build up
- The external mounting of the actuator provides easy access
- There are no gaskets to maintain or replace as there are no motor to water contact concerns

CONTROL SETTINGS & MENU FIELD ACCESSIBLE

- No laptop or dedicated software required

FLEXIBILITY OF INSTALLATION

- HOT and COLD valve connections are interchangeable

SINGLE CONTROL—MULTIPLE VALVES

- A single control module can control multiple valves in high flow applications

7 DAY SCHEDULING WITH 4 DAILY SETBACKS

- Capability to lower outlet set point during low usage periods
- Weekly schedule with 4 daily setbacks for maximum energy efficiency

REMOTE COMMUNICATION OPTIONS

- BACnet (IP or MSTP)
- ModBus

ACTUATOR

EXTERNAL MOUNTING TO VALVE BODY

- Eliminates the potential of motor to water contact
- Eliminates the need for gasket maintenance or replacement

SMART CALIBRATION

- Prevents motor damage due to over-torque conditions
- One motor fits all sizes

REVERSE DIRECTION CAPABILITY

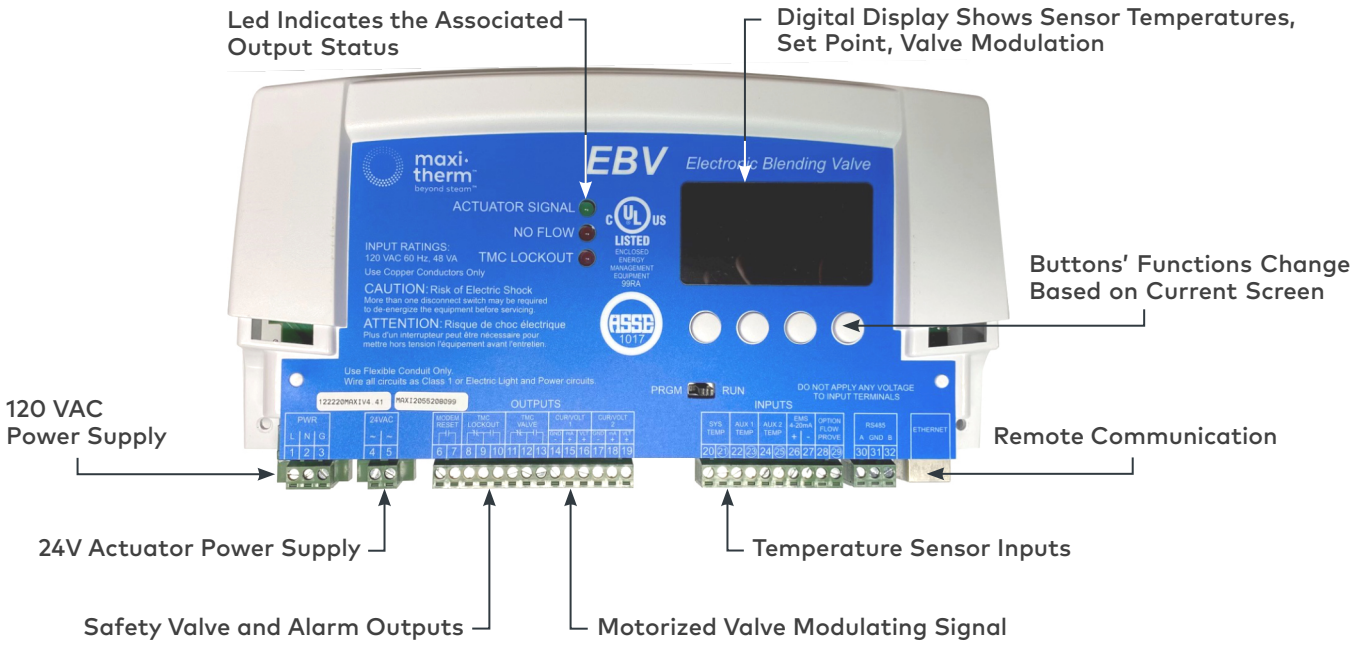
- Allows the HOT and COLD inlets of the valve to be interchangeable

REMOTE COMMUNICATION OPTIONS

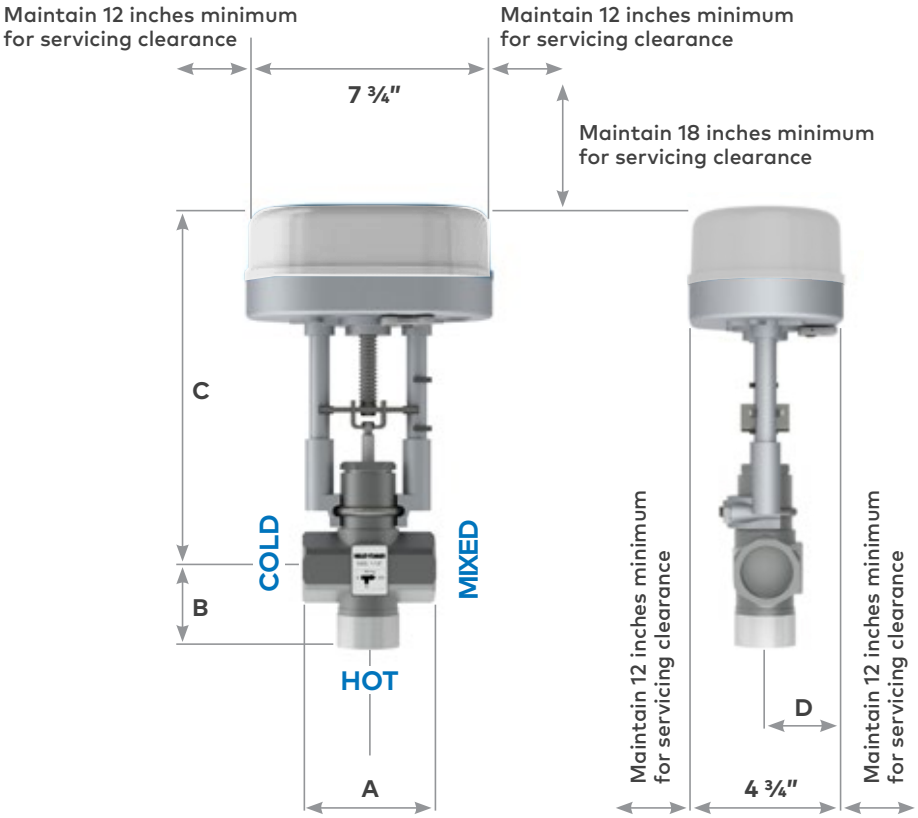
BUILDING AUTOMATION SYSTEMS (BAS)

- Supports BACnet and ModBus protocols
- Read and write access to control setting and temperature readings

LAYOUT



DIMENSIONAL



EBV ASSEMBLY	DIMENSION			
	A	B	C	D
½"	3 ⅛"	2"	10 ½"	2 ⅜"
¾"	3 ⅛"	2"	10 ⅝"	2 ⅜"
1"	4"	2 ⅛"	10 ¾"	2 ⅜"
1 ¼"	4"	2 ½"	11"	2 ⅜"
1 ½"	4 ⅘"	2 ⅘"	11 3/16"	2 ⅜"
2"	5 ½"	3 ⅜"	11 ⅜"	2 ⅜"
2 ½"	6 5/16"	4"	2 ¾"	2 ⅜"

EBV ASSEMBLY	VALVE CONNECTIONS—NPSC		
	HOT	COLD	MIXED
½"	½"	½"	½"
¾"	¾"	¾"	¾"
1"	1"	1"	1"
1 ¼"	1 ¼"	1 ¼"	1 ¼"
1 ½"	1 ½"	1 ½"	1 ½"
2"	2"	2"	2"
2 ½"	2 ½"	2 ½"	2 ½"

SPECIFICATIONS

CONTROL MODULE

Voltage Input:	120 VAC 60 Hz
Maximum Input Rating:	48 VA maximum
Display:	Graphic Display
Display/Temperature Units:	°F and °C
Modes of Operation:	EBV, TMC, EBV+TMC Combo
EBV Set Point:	40°F/ 4°Cto 200°F/ 93°C
Alarm Set Point:	40°F/ 4°Cto 200°F/ 93°C
Modulation Output Signal:	0–10V, 2–10V, 0–5V, 1–5V, 4–20mA
LED Indicators:	3 (Actuator Signal, No Flow, Alarm Status)
Inputs:	Sensors (Hot, Cold, Mixed), Flow Prove, EMS 4–20mA
Dimensions:	11"Wx 9"H x 3 ¾"D
Weight:	2.5 lbs.

ACTUATOR

Voltage Input:	24 VAC 60 Hz
Power Consumption:	18 VA maximum
Input Signal:	0–10 V
Weight:	2.6 lbs.

VALVE BODY

Body & Trim:	304 Stainless
Maximum Operating Temperature:	300°F / 149°C
Maximum Working Pressure:	225 PSI
Stem Material:	640 Stainless

VALVE SIZING

STAINLESS STEEL VALVE

PRESSURE DROP PSI	VALVE SIZE						
	½"	¾"	1"	1 ¼"	1 ½"	2"	2 ½"
Cv	5	7	12	18	29	46	73
3	8	12	20	32	50	80	126
4	9	15	23	37	58	93	145
5	10	16	26	41	64	103	162
6	12	18	28	45	71	113	178
7	13	20	31	50	78	125	192
8	14	21	33	53	83	132	205
9	15	22	35	56	88	140	218
10	16	23	36	58	91	145	230
11	17	24	38	62	97	154	241
12	18	25	40	64	100	160	252

BUILDING RECIRC	GALLONS PER MINUTE		
	5 GPM	10 GPM	15 GPM

PIPING WITH OPTIONAL SAFETY VALVE