

SENSE™ DMV23-BT

DIGITAL MIXING VALVE with BLUETOOTH FOR INDIVIDUAL BATH AND SHOWER

Sense™ is a Bluetooth®-programmable concealed point-of-use digital mixing valve supplied with a wall surface mount sensor for hands-free control of water temperature and flow. Pre-set temperature and flow reduce water and energy usage and protects users from scalding.

Digital duty flush limits waterborne pathogen growth and water usage.

Opportunities for cross contamination are decreased through hands-free digital controls.

The collection of key statistical data on usage patterns supports necessary compliance with ASHRAE guidelines (Guideline 12-2000 and Standard 188-2018)



Sense™ Digital Mixing Valve DMV23 with Bluetooth® technology

Sense™ DMV23-BT Performance Chart: Pressure Drop (in PSIG) to Flow Rate (in GPM)												
DMV23	Pressure Drop (PSIG)										Minimum Flow Rate	C _v
	5	10	15	20	25	30	35	40	45	50		
GPM	6	8	10	11	12	14	15	16	17	18	1.6 GPM	2.5

Sense™ DMV23-BT Performance Chart: Pressure Drop (in BARG) to Flow Rate (in LPM)												
DMV23	Pressure Drop (BARG)										Minimum Flow Rate	K _v
	0.3	0.7	1.0	1.4	1.7	2.1	2.4	2.8	3.1	3.4		
LPM	22.7	30.3	37.8	41.6	45.4	53.0	56.8	60.6	64.3	68.1	6.1 LPM	2.155

Designs, materials, weights, and performance ratings are approximate and subject to change without notice. Visit armstronginternational.com for the most up-to-date information.

SENSE™ DMV23-BT

TECHNICAL SPECIFICATIONS

General		
Ambient Temperature	Minimum Ambient Temperature: 34°F (1°C)	Maximum Ambient Temperature: 104°F (40°C)
Ambient Humidity	95% Non-Condensing	
Materials	Cover: Chome ABS I; Enclosure: PC/ABS; Integral components: DZR brass / stainless steel / plastic	
Safety	Automatic thermal shutdown upon inlet supply failure	
Shipping Weight	14.5 lbs (6.35 kg)	
Connections		
Inlet Connections	3/4” NPT Connections	
Outlet Connections	Bath Outlet Connections: 3/4” NPT	Shower Outlet Connections: 1/2” NPT
Pressures		
Inlet Supply Pressures	Maximum Inlet Supply Pressure: 145 psig (10 barg)	Minimum Inlet Supply Pressure: 10 psig (0.7 barg)
Supply Pressures Differential	Maximum 3:1 ratio; nominally equal pressures are recommended	
Temperatures		
Hot Water Supply Temperature	Maximum Hot Water Temperature: 185°F (80°C) <i>(149°F maximum recommended for optimal performance)</i>	Minimum Hot Water Temperature: 5°F (2°C) above mixing valve set point
Cold Water Supply Temperature	Maximum Cold Water Temperature: 68°F (20°C)	Minimum Cold Water Temperature: 34°F (1°C)
Optimum Thermostatic Control Range	86°F - 122°F (30°C - 50°C)	
Electrical		
Power Supply	120 V 50-60 Hz	
Maximum Distance to First Outlet	20 ft (6 m)	
Control Panel Cable Length	10 ft (3 m) - supplied	
Configurable Settings		
Set Point Range	Minimum Set Point Range: 86°F - 117°F (30°C - 47°C)	Maximum Set Point Range: 91°F - 122°F (33°C - 50°C)
Flow Times	Programmable range: 5 seconds - 60 minutes	
Thermal Disinfection Temperature	Programmable range: 140°F - 185°F (60°C - 85°C)	
Thermal Disinfection Set-Up	Disinfection Duration: ≤ 50 minutes <i>Reduced water flow during thermal disinfection is available</i>	
Service Flush Cycle	Service Flush Duration: 1 minute - 59 minutes Service Flush Waiting Period: 1 hour - 983 hours	
Performance		
Outlet Temperature Control	+ / - 2°F (1°C) outlet temperature set point	
Minimum Flow Rate	1 GPM	
Standards and Approvals		
Lead Free	Compliant	
ASSE 1016	Certified	
CSA B125	Compliant	
UL	Listed	

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SENSE™ DMV23-BT

WRITTEN SPECIFICATIONS

Category: Water Temperature Control - Single Point of Use

Type: Digital

Model: Sense™ DMV23-BT

Part 1 - GENERAL

1.1 Overview

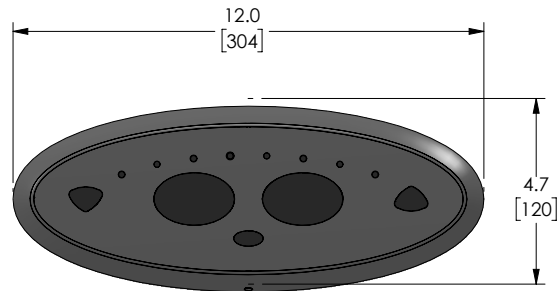
- A. The Digital Mixing Valve (DMV) shall be of DZR brass / stainless steel / polymer with chrome surface mount control panel. DMV shall have NPT inlets and outlet with integral inlet spring loaded check valves and strainers. DMV shall be supplied with a power supply and wall-mounted control panel. Control panel shall be programmable using Bluetooth® connectivity for flow and temperature adjustment and shall be capable of programmable timed flow and temperature control.

1.2 Materials of Construction

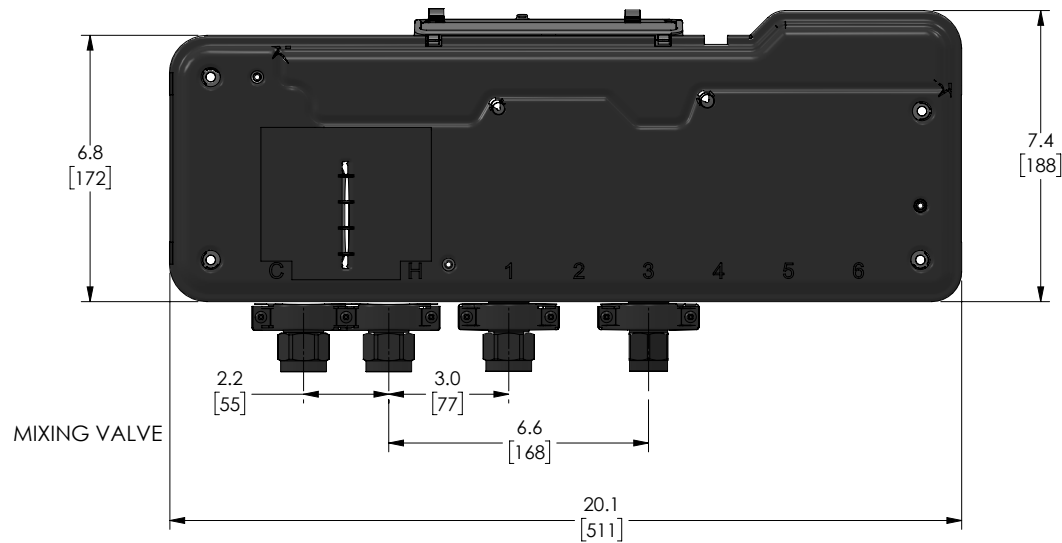
- A. Materials of construction and items included shall be:
 - 1. DZR brass/stainless steel/polymer
 - 2. Chrome control panel cover
 - 3. 3/4" NPT inlets, 3/4" NPT bath outlet, and 1/2" NPT shower outlet
 - 4. Integral inlet check valves and strainers
 - 5. Programmable software and 120 V 50-60Hz power supply
 - 6. Infrared no-touch surface mount control panel with 10 ft (3 m) cable)

1.3 Performance

- A. Concealed DMV for individual bath/shower shall be capable of controlling mixed water temperatures + / - 2°F (1°C) at flow rates between 1 GPM and 7 GPM (3.8 LPM and 26 LPM), and shall have a programmable flow time of 5 seconds - 60 minutes. DMV shall be capable of delivering a mixed water temperature that is within 5°F (2°C) of either inlet supply temperature. DMV shall have a minimum programmable temperature range 86°F - 117°F (30°C - 47°C) and a maximum range of 91°F - 122°F (33°C - 50°C). DMV shall be capable of delivering cold water directly from the cold water supply to the fixture in the event of a failure of the inlet hot supply. DMV shall have service flush with programmable thermal disinfection temperature range 140°F-185°F (60°C - 85°C) for 0 - 50 minutes with data logging capabilities. DMV shall be compliant with ASSE Standard 1016, CSA B125, and UL and shall be so certified and identified.
- B. The Digital Mixing Valve shall include all of the following capabilities:
 - 1. Maintain mixed water temperatures within + / - 2°F (1°C) at flow rates between 1 GPM - 7 GPM (3.8 LPM -26 LPM)
 - 2. Delivers mixed water temperature within 2°F of either inlet supply temperature
 - 3. Instant automatic outlet shutdown upon either inlet supply failure
 - 4. Programmable temperature setpoint minimum range of 86°F - 117°F (30°C - 47°C) and maximum range of 91°F -122°F (33°C -50°C)
 - 5. Programmable thermal disinfection option of 140°F - 185°F (60°C - 85°C) for 0 - 50 minutes
 - 6. Operational water pressure of 10 - 145 psig



CONTROL PANEL





MIXING VALVE



NOTES:

1. CONNECTIONS -
INLET: 3/4 NPT
OUTLET: BATH - 3/4 NPT
SHOWER - 1/2 NPT
2. OPERATING PRESSURE - 150 PSI (10 BAR) MAX

 DO NOT SCALE DRAWING TOLERANCES UNLESS OTHERWISE SPECIFIED DIMENSIONING ENGLISH (mm) FRACTIONAL $\pm 1/64$ ANGULAR: ± 2		 Armstrong		ARMSTRONG INTERNATIONAL Copyright © 2010 ARMSTRONG INTERNATIONAL, INC. SENSE DMV23 BATH/SHWR BT	
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