

Water Temperature Control - Single Point of Use



Digital - Sense™



Digital Mixing Valve

- Precision Digital Water Temperature Control
- Remotely Located
- Plug-in design simplifies installation
- Automatically adjusts if supply pressures change
- Automatically adjusts is supply temperatures change
- Intelligent Fault Diagnosis System
- 5-Year Warranty
- ASSE 1016 approved

Digital Control Panel

- No Touch On/Off
- Programmable "On" Temperature Set Point
- Programmable Timed Flow
- No Touch Temperature Adjustment
- Programmable User Adjustment Range
- LED Display Feedback
- User Activity Data Logging/Reporting
- Service Information, Logging/Reporting
- Service Flush Program
- Thermal Disinfection Program
- Promotes compliance with OSHA, CDC and NYDOH Legionella Guidelines



Armstrong® Water Temperature Control - Single Point of Use

Digital

Water Temperature Control - Single Point of Use - Digital features Sense™. Sense™ is a series of 4 individual point of use digital mixing valves designed for installation at the point of use to allow user control of water temperature and flow.

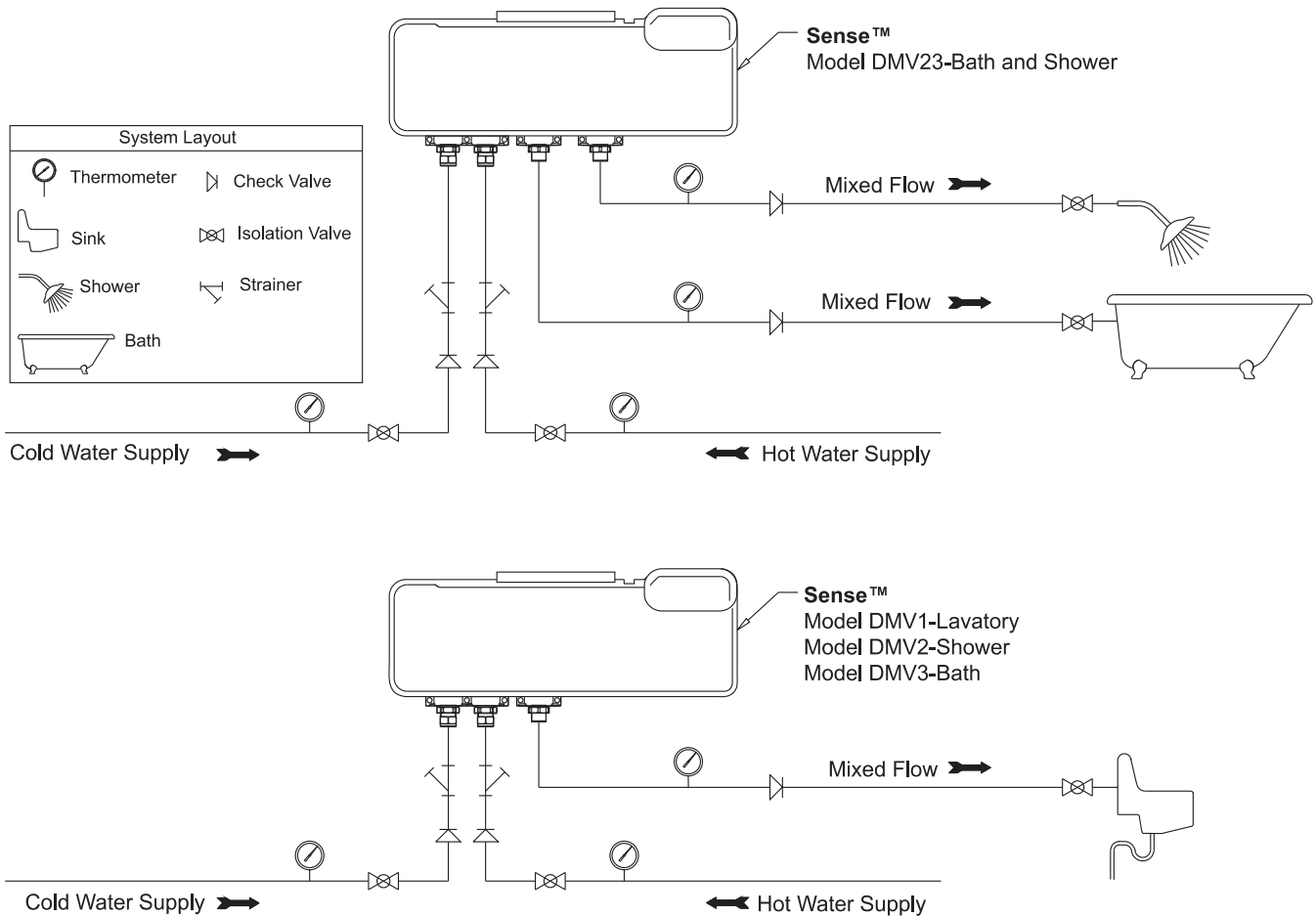
The range has been designed to offer individual lavatory, individual shower, individual bath fill and individual bath/shower combination digital flow and temperature control primarily in healthcare installations where user safety and legionella risk reduction is paramount.

Sizing

Each Sense™ is designed for an individual single point of use and has a suitable maximum and minimum flow capacity.

*For metered lavatory applications Sense meets the requirement of ASME A112.18.1 of .25 gpm per operating cycle.

Model	Pressure Drop (psi)										Min. Flow	C _v
	5	10	15	20	25	30	35	40	45	50		
DMV1	3	4	5	6	6	7	7	8	9	9	1*	1.2
DMV2												
DMV3	6	8	10	11	12	14	15	16	17	18	1.6	2.5
DMV23												



All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

Water Temperature Control - Single Point of Use



Digital

Sense™ Model DMV1

Concealed digital mixing valve with surface mount control panel for lavatory flow and +/-2°F (+/-1°C) temperature control.

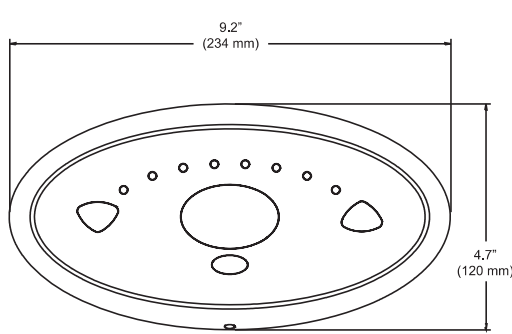
Operational Specifications

- Programmable timed flow
- No touch on/off flow control
- No touch temperature adjustment
- Programmable minimum/maximum temperature access limits
- Programmable service flush
- Programmable thermal disinfection mode
- Data logging capabilities

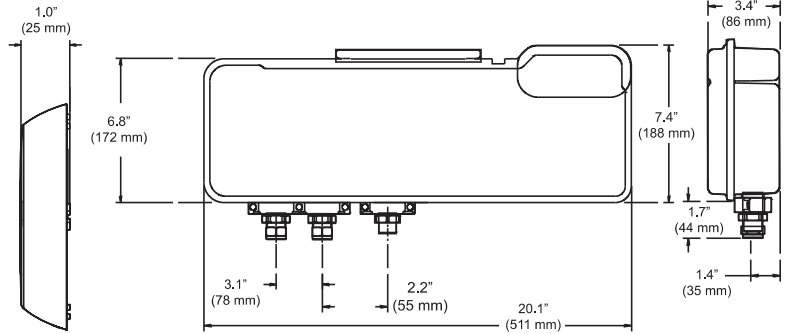


*For metered lavatory applications Sense meets the requirement of ASME A112.18.1 of .25 gpm per operating cycle.

For a submittal drawing, refer to CDLW1147.



Control Panel



Mixing Valve

Sense™ Digital Mixing Valves												
Model	Pressure Drop (psi)										Min. Flow	C _v
	5	10	15	20	25	30	35	40	45	50		
DMV1	3	4	5	6	6	7	7	8	9	9	1*	1.2
DMV2	3	4	5	6	6	7	7	8	9	9	1*	1.2
DMV3	6	8	10	11	12	14	15	16	17	18	1.6	2.5
DMV23	6	8	10	11	12	14	15	16	17	18	1.6	2.5

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Water Temperature Control - Single Point of Use

Digital

Sense™ Model DMV1-Lavatory Technical Specifications

Connections

- Inlet and outlet connections: 1/2" NPT

Materials

- Control panel cover: Chrome ABS I
- Mixing unit enclosure: PC/ABS
- Integral components: DZR brass stainless steel and engineering plastic

Temperatures

- Factory pre-set:
Min 86°F (30°C), Max 106°F (41°C)
Default 100°F (38°C)
- Programmable range:
Min 86°F - 117°F (30°C - 47°C),
Max 91°F - 122°F (33°C - 50°C),
Default 86°F - 122°F (30°C - 50°C)
Full cold can also be selected
- Minimum blend temperature differential from hot supply:
5°F (2°C)
- Optimum thermostatic control range:
86°F - 122°F (30°C - 50°C)
- Inlet Cold water range (recommended):
34°F - 68°F (1°C - 20°C)
- Inlet Hot water range (recommended):
122°F - 149°F (50°C - 65°C)
185°F (85°C) during disinfection

Performance

- Thermal shutdown upon inlet supply failure
- +/- 2°F (+/- 1°C) delivery temperature stability
- Minimum flow rate at recommended supply conditions:
1 GPM (4 LPM) at <72 psi maintained pressure
1.6 GPM (6 LPM) at >72 psi maintained pressure.

Thermal Disinfection

- Factory Settings
Min. Temperature: 140°F (60°C)
Min. Time: 5 minutes
- Programmable Range
Min. Temperature: 140 - 185°F (60 - 85°C)
Min. Time: 0 - 50 minutes

Reduced water flow during disinfection can be selected.

Environment

- Ambient temperature: 34°F - 104°F (1°C - 40°C)
- Maximum relative humidity: 95% non-condensing

Pressures

- Maximum static pressure: 145 psi (10 bar)
- Maximum inlet supply pressure differential: 3:1 (equal inlet pressures recommended)

IP Rating

- Control panel: IP45
- Overall valve enclosure: IP24
- Electronics compartment: IP45
- PSU: IP45

Electrical

- Supply Voltage: 120V 50-60Hz
- Maximum load: 20W at 12V DC
- Control panel cable length: 10 ft. (3m) supplied
- Maximum distance 20 ft. (6m)

Times - Factory settings

- Flow time: 15 seconds
- Service flush cycle: 2 minutes
- Service flush waiting period: 12 hours

Programmable range

- Flow time: 5 seconds - 60 minutes
- Service flush cycle: 1 minute - 59 minutes
- Service flush waiting period: 1 hour - 983 hours

Operation

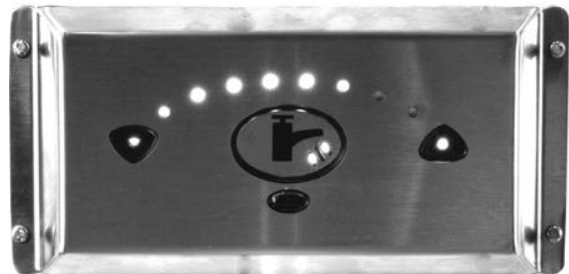
- Temperature selector: Full no-touch temperature control
- Flow control: No-touch on/off - timed flow

Approvals

- ASSE 1016, CSA, UL

Shipping Weight

- 14.5 lbs



Optional Stainless Steel Control Panel Cover

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

Water Temperature Control - Single Point of Use



Digital

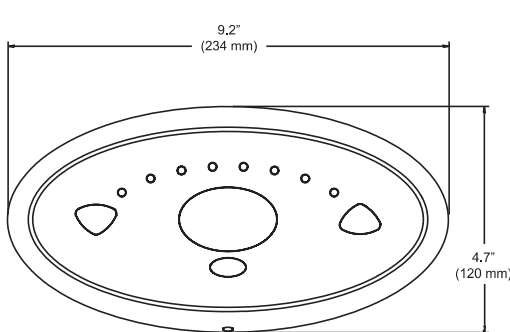
Sense™ Model DMV2

Concealed digital mixing valve with surface mount control panel for **individual shower** flow and $\pm 2^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$) temperature control.

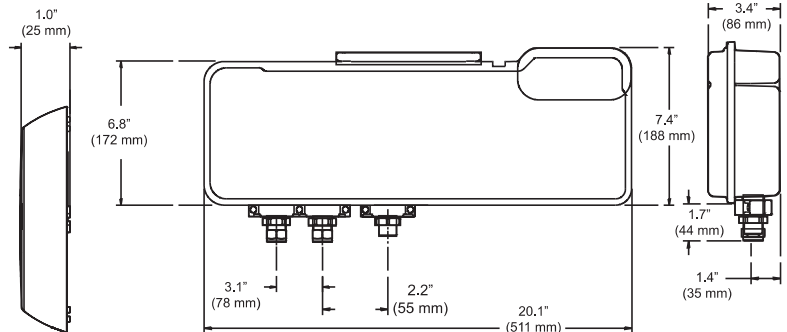
Operational Specifications

- Programmable timed flow
- No touch on/off flow control
- No touch temperature adjustment
- Programmable minimum/maximum temperature access limits
- Programmable service flush
- Programmable thermal disinfection mode
- Data logging capabilities

For a submittal drawing, refer to CDLW1148.



Control Panel



Mixing Valve

Sense™ Digital Mixing Valves												
Model	Pressure Drop (psi)										Min. Flow	C _v
	5	10	15	20	25	30	35	40	45	50		
DMV1	3	4	5	6	6	7	7	8	9	9	1	1.2
DMV2	3	4	5	6	6	7	7	8	9	9	1	1.2
DMV3	6	8	10	11	12	14	15	16	17	18	1.6	2.5
DMV23	6	8	10	11	12	14	15	16	17	18	1.6	2.5

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Armstrong® Water Temperature Control - Single Point of Use

Digital

Sense™ Model DMV2-Individual Shower Technical Specifications

Connections

- Inlet and outlet connections: 1/2" NPT

Materials

- Control panel cover: Chrome ABS
- Mixing unit enclosure: PC/ABS
- Integral components: DZR brass stainless steel and engineering plastic (Dezincification Resistant)

Temperatures

- Factory pre-set:
Min 86°F (30°C), Max 106°F (41°C),
Default 100°F (38°C)
- Programmable range:
Min 86°F - 117°F (30°C - 47°C),
Max 91°F - 122°F (33°C - 50°C),
Default 86°F - 122°F (30°C - 50°C)
Full cold can also be selected
- Minimum blend temperature differential from hot supply:
5°F (2°C)
- Optimum thermostatic control range:
86°F - 122°F (30°C - 50°C)
- Inlet Cold water range (recommended):
34°F - 68°F (1°C - 20°C)
- Inlet Hot water range (recommended):
122°F - 149°F (50°C - 65°C)
185°F (85°C) during disinfection

Performance

- Thermal shutdown upon inlet supply failure
- +/- 2°F (+/- 1°C) delivery temperature stability
- Minimum flow rate at recommended supply conditions:
1 GPM (4 LPM) at <72 psi maintained pressure
1.6 GPM (6 LPM) at >72 psi maintained pressure.

Thermal Disinfection

- Factory Settings
Min. Temperature: 140°F (60°C)
Min. Time: 5 minutes
- Programmable Range
Min. Temperature: 140 - 185°F (60 - 85°C)
Min. Time: 0 - 50 minutes
Reduced water flow during disinfection can be selected.

Environment

- Ambient temperature: 34°F - 104°F (1°C - 40°C)
- Maximum relative humidity: 95% non-condensing

Pressures

- Maximum static pressure: 145 psi (10 bar)
- Maximum inlet supply pressure differential: 3:1 (equal inlet pressures recommended)

IP Rating

- Control panel: IP45
- Overall valve enclosure: IP24
- Electronics compartment: IP45
- PSU: IP45

Electrical

- Supply Voltage: 120V 50-60Hz
- Maximum load: 20W at 12V DC
- Control panel cable length: 10 ft. (3m) supplied
- Maximum distance 20 ft. (6m)

Times - Factory settings

- Flow time: 15 seconds
- Service flush cycle: 2 minutes
- Service flush waiting period: 12 hours

Programmable range

- Flow time: 5 seconds - 60 minutes
- Service flush cycle: 1 minute - 59 minutes
- Service flush waiting period: 1 hour - 983 hours

Operation

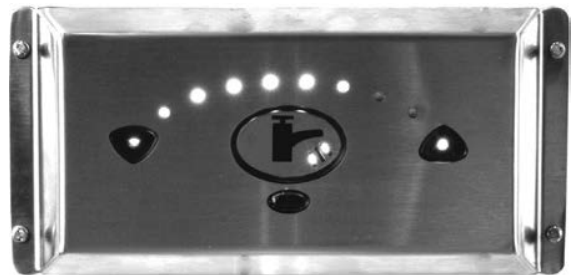
- Temperature selector: Full no-touch temperature control
- Flow control: No-touch on/off - timed flow

Approvals

- ASSE 1016, CSA, UL

Shipping Weight

- 14.5 lbs



Optional Stainless Steel Control Panel Cover

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.



Water Temperature Control - Single Point of Use

Digital

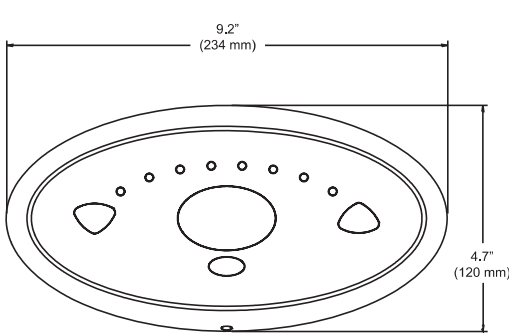
Sense™ Model DMV3-Individual Bath

Concealed digital mixing valve with surface mount control panel for individual bath fill and +/-2°F (+/-1°C) temperature control.

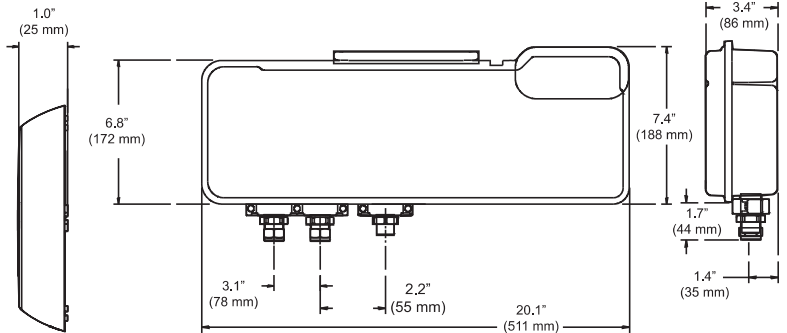
Operational Specifications

- Programmable timed flow
- No touch on/off flow control
- No touch temperature adjustment
- Programmable minimum/maximum temperature access limits
- Programmable service flush
- Programmable thermal disinfection mode
- Data logging capabilities

For a submittal drawing, refer to CDLW1149.



Control Panel



Mixing Valve

Sense™ Digital Mixing Valves												
Model	Pressure Drop (psi)										Min. Flow	C _v
	5	10	15	20	25	30	35	40	45	50		
DMV1	3	4	5	6	6	7	7	8	9	9	1	1.2
DMV2												
DMV3	6	8	10	11	12	14	15	16	17	18	1.6	2.5
DMV23												

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.



Water Temperature Control - Single Point of Use

Digital

Sense™ Model DMV3-Individual Bath Technical Specifications

Connections

- Inlet and outlet connections: 3/4" NPT

Materials

- Control panel cover: Chrome ABS
- Mixing unit enclosure: PC/ABS
- Integral components: DZR brass stainless steel and engineering plastic

Temperatures

- Factory pre-set:
Min 86°F (30°C), Max 106°F (41°C),
Default 104°F (40°C)
- Programmable range:
Min 86°F - 117°F (30°C - 47°C),
Max 91°F - 122°F (33°C - 50°C),
Default 86°F - 122°F (30°C - 50°C)
Full cold can also be selected
- Minimum blend temperature differential from hot supply:
5°F (2°C)
- Optimum thermostatic control range:
86°F - 122°F (30°C - 50°C)
- Inlet Cold water range (recommended):
34°F - 68°F (1°C - 20°C)
- Inlet Hot water range (recommended):
122°F - 149°F (50°C - 65°C)
185°F (85°C) during disinfection

Performance

- Thermal shutdown upon inlet supply failure
- +/- 2°F (+/- 1°C) delivery temperature stability
- Minimum flow rate at recommended supply conditions:
1.6 GPM (6 LPM) at <72 psi maintained pressure
2 GPM (8 LPM) at >72 psi maintained pressure.

Thermal Disinfection

- Factory Settings
Min. Temperature: 140°F (60°C)
Min. Time: 5 minutes
- Programmable Range
Min. Temperature: 140 - 185°F (60 - 85°C)
Min. Time: 0 - 50 minutes
Reduced water flow during disinfection can be selected.

Environment

- Ambient temperature: 34°F - 104°F (1°C - 40°C)
- Maximum relative humidity: 95% non-condensing

Pressures

- Maximum static pressure: 145 psi (10 bar)
- Maximum inlet supply pressure differential: 3:1 (equal inlet pressures recommended)

IP Rating

- Control panel: IP45
- Overall valve enclosure: IP24
- Electronics compartment: IP45
- PSU: IP45

Electrical

- Supply Voltage: 120V 50-60Hz
- Maximum load: 20W at 12V DC
- Control panel cable length: 10 ft. (3m) supplied
- Maximum distance 20 ft. (6m)

Times - Factory settings

- Flow time: 300 seconds
- Service flush cycle: 2 minutes
- Service flush waiting period: 12 hours

Programmable range

- Flow time: 5 seconds - 60 minutes
- Service flush cycle: 1 minute - 59 minutes
- Service flush waiting period: 1 hour - 983 hours

Operation

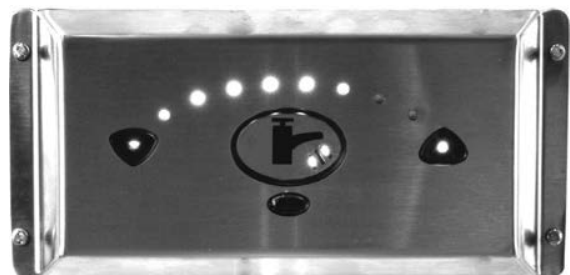
- Temperature selector: Full no-touch temperature control
- Flow control: No-touch on/off - timed flow

Approvals

- ASSE 1016, CSA, UL

Shipping Weight

- 14.5 lbs



Optional Stainless Steel Control Panel Cover

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

Water Temperature Control - Single Point of Use



Digital

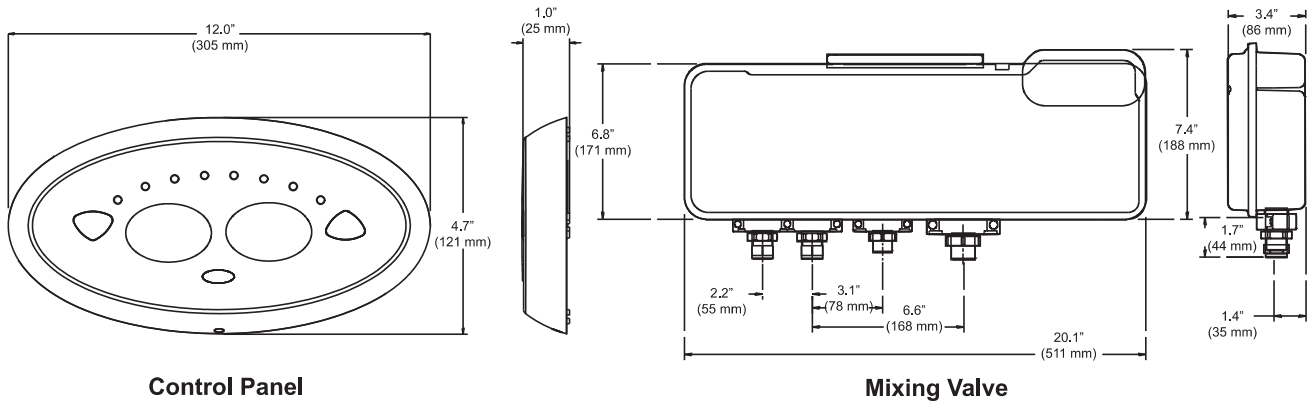
Sense™ Model DMV23-Bath and Shower

Concealed digital mixing valve with surface mount control panel for combination **bath and shower** flow and $\pm 2^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$) temperature control.

Operational Specifications

- Programmable timed flow
- No touch on/off flow control
- No touch temperature adjustment
- Programmable minimum/maximum temperature access limits
- Programmable service flush
- Programmable thermal disinfection mode
- Data logging capabilities

For a submittal drawing, refer to CDLW1150.



Sense™ Digital Mixing Valves												
Model	Pressure Drop (psi)										Min. Flow	C _v
	5	10	15	20	25	30	35	40	45	50		
DMV1	3	4	5	6	6	7	7	8	9	9	1	1.2
DMV2												
DMV3	6	8	10	11	12	14	15	16	17	18	1.6	2.5
DMV23												

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.



Armstrong® Water Temperature Control - Single Point of Use

Digital

Sense™ Model DMV23-Bath and Shower Technical Specifications

Connections

- Inlet connections: 3/4" NPT
- Outlet connection: Bath 3/4" NPT, Shower 1/2" NPT

Materials

- Control panel cover: Chrome ABS
- Mixing unit enclosure: PC/ABS
- Integral components: DZR brass stainless steel and engineering plastic

Temperatures

- Factory pre-set:
 - Shower: Min 86°F (30°C), Max 106°F (41°C), Default 100°F (38°C)
 - Bath: Min 86°F (30°C), Max 111°F (44°C), Default 104°F (40°C)
- Programmable range:
 - Min 86°F - 117°F (30°C - 47°C),
 - Max 91°F - 122°F (33°C - 50°C),
 - Default 86°F - 122°F (30°C - 50°C)
 - Full cold can also be selected
- Minimum blend temperature differential from hot supply:
 - 5°F (2°C)
- Optimum thermostatic control range:
 - 86°F - 122°F (30°C - 50°C)
- Inlet Cold water range (recommended):
 - 34°F - 68°F (1°C - 20°C)
- Inlet Hot water range (recommended):
 - 122°F - 149°F (50°C - 65°C)
 - 185°F (85°C) during disinfection

Performance

- Thermal shutdown upon inlet supply failure
- +/- 2°F (+/- 1°C) delivery temperature stability
- Minimum flow rate at recommended supply conditions:
 - 1.6 GPM (6 LPM) at <72 psi maintained pressure
 - 2 GPM (8 LPM) at >72 psi maintained pressure.

Thermal Disinfection

- Factory Settings
 - Min. Temperature: 140°F (60°C)
 - Min. Time: 5 minutes
- Programmable Range
 - Min. Temperature: 140 - 185°F (60 - 85°C)
 - Min. Time: 0 - 50 minutes

Reduced water flow during disinfection can be selected.

Environment

- Ambient temperature: 34°F - 104°F (1°C - 40°C)
- Maximum relative humidity: 95% non-condensing

Pressures

- Maximum static pressure: 145 psi (10 bar)
- Maximum inlet supply pressure differential: 3:1 (equal inlet pressures recommended)

IP Rating

- Control panel: IP45
- Overall valve enclosure: IP24
- Electronics compartment: IP45
- PSU: IP45

Electrical

- Supply Voltage: 120V 50-60Hz
- Maximum load: 20W at 12V DC
- Control panel cable length: 10 ft. (3m) supplied
- Maximum distance 20 ft. (6m)

Times - Factory settings

- Flow time shower: 30 seconds
- Flow time bath: 300 seconds
- Service flush cycle: 2 minutes
- Service flush waiting period: 12 hours

Programmable range

- Flow time shower : 5 seconds - 60 minutes
- Flow time bath : 5 seconds - 60 minutes
- Duty flush cycle: 1 minute - 59 minutes
- Duty flush waiting period: 1 hour - 983 hours

Operation

- Temperature selector: Full no-touch temperature control
- Flow control: No-touch on/off - timed flow
- Independent bath and shower control

Approvals

- ASSE 1016, CSA, UL

Shipping Weight

- 14.5 lbs

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.