XG-MSE-HC

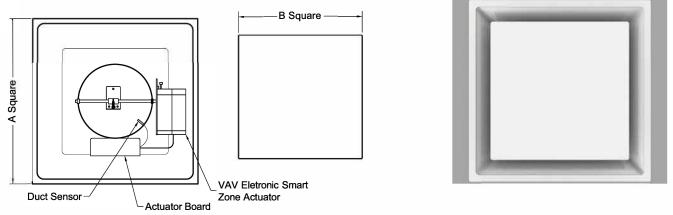
VAV Electronic Smart Zone Diffuser

XG -MSE-HC 6-12 Electronically Controlled Variable Air Volume Diffuser - Lay-In Turned Up Edge 12x12 Panel Models:

XG- MSE-HC 6-24 Electronically Controlled Variable Air Volume Diffuser - Lay-In Turned Up Edge 24x24 Panel

XG -MSE-HC 9-12 Electronically Controlled Variable Air Volume Diffuser - Donn Fineline Ceiling Grid 12x12 Panel

XG -MSE-HC 9-24 Electronically Controlled Variable Air Volume Diffuser - Donn Fineline Ceiling Grid 24x24 Panel



Top View - Panel

Face View - Plaque Center Panel

X = Inlet sizes (Dia. in Inches)

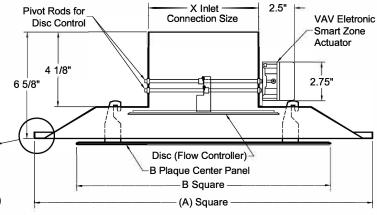
Model	A - Diffuser Panel	B - Plaque Panel	X
XG-MSE-HC 6-12	12"	9"	6 & 8
XG-MSE-HC 6-24	24"	18"	6 - 14
XG-MSE-HC 9-12	12"	9"	6 & 8
XG-MSE-HC 9-24	24"	18"	6 - 14



(Lay-In Turned Up Edge) (Donn Fineline Ceiling Grid)



XG-MSE-HC-9



Construction:

Unitary stamped seamless backpan with Removable Face Plate. Steel construction with Baked White Enamel Finish. 4-way discharge pattern.

Operation:

Incorporates an Integral Modulating Disk that continually regulates the volume of Supply Air in response to the Wall-Mounted Thermostat.

Notes: ☐ (check if provided)

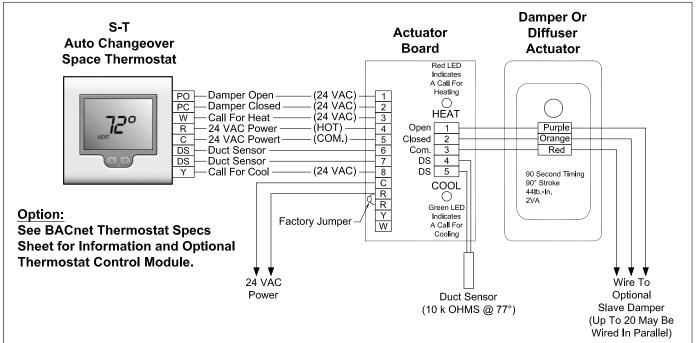
1. Available Finishes	2. Available Accessories	3. Available Options	4. Construction Details
Standard Finish:	XG-BAF - Directional Baffles	Standard:	24 gauge electro-galvanized steel.
01 White Baked Enamel	XG-BPRA - By-Pass Relief Adapter	ST - Auto Changeover Space	● Panel size 12x12 & 24x24.
		Thermostat	● Inlet sizes 6" & 8" for 12x12 Panel
		Option:	● Inlet sizes 6" thru 14" for 24x24 Panel
		BACnet (Network) Thermostat Control	Controls: Modulating Wall-Mounted
		Transformer	Thermostatic Control.
			Electrical: 24Volt, 2VA, Floating Point, 90
			Sec. Timing, 44lbin.





Smart Zone Modulating Stand-Alone Zone Damper Assembly

Models: XG-MSE-HC Sequence Of Operation, Application And Installation Notes



Sequence of operation

- The Automatic Changeover Duct Sensor (located on the Smart Zone™ Damper) senses whether there is warm air or cool air in the duct.
- If the S-T (Smart Thermostat) is calling for cooling and the duct sensor determines there is cool air in the duct, the damper will modulate open.
- If the S-T (Smart Thermostat) is calling for heating and the duct sensor determines there is warm air in the duct, the damper will modulate open.
- The "Green LED" located on the Actuator Board indicates when the space temperature is 1.5°f above the thermostat is calling for cooling. The "Red LED" located on the Actuator Board indicates when the space temperature is 1.5°f below the thermostat set-point and the thermostat is calling for heating.

Application and installation notes:

- Use standard 18 gauge thermostat wire.
- A24 VAC 40 VA Transformer will power a single "Smart Zone." system and up to 20 Actuators.
- The Actuator Board is located on the side of the Actuator.
- If the duct temperature is above 72°f the Zone Damper will open on a call for heating.
- If the duct temperature is below 72°f the Zone Damper will open on a call for cooling.
- If a single "Smart Zoneth" system or multiple "Smart Zoneth" systems are used to zone more than 30% of the total cfm served by the HVAC system, a Bypass Damper may be required to maintain constant system static pressure.
- The HVAC system should be controlled by it's own space thermostat or discharge air controller. If a space thermostat is used to control the HVAC system, it must never be located in an area served by a "Smart Zone.".
- A Suction Line "freeze stat", (fs-38) should be installed when zoning more than 30% of the total cfm served by the HVAC system to protect the equipment in the event the Suction Line temperature drops too low, (wire in series with the Cooling Control Circuit).





Smart Zone S-T Smart Thermostat Modulating Zone Thermostat With Auto Changeover

Models: XG-MSE-HC Smart Zone S-T Thermostat With Auto Changeover

SMART ZONE S-T SMART THERMOSTAT MODULATING ZONE THERMOSTAT WITH AUTO CHANGEOVER



DISASSEMBLING THERMOSTAT

Insert a small coin (dime) into the release slot located on the bottom of the thermostat. Gently twist the coin to release the thermostat from the subbase. Avoid twisting the case as this may stress the LCD and cause it to crack or bend the wiring terminal connection pins.

SWITCH FUNCTIONS

There are eight dip switches located on the thermostat PC board. Only dip switches 1, 2 and 3 are active.

SWITCH 1 - Switch 1 is used to lock the thermostat after setup is completed. When the thermostat is locked (ON position) a padlock icon will show on the LCD. When locked, only setpoint changes and status functions can be accessed by the user. Do not set Switch 1 in the ON position until all SETUP functions are completed.

SWITCH 2 - Switch 2 is used to display the space temperature and setpoint in Celsius (ON position) or Fahrenheit (OFF position). Select Celsius or Fahrenheit before proceeding to the thermostat SETUP menu.

SWITCH 3 - Switch 3 is used to select twoposition (ON) or fully modulating (OFF) damper control to best suit the specific application requirement.

KEY FUNCTIONS

ON/OFF KEY - When the S-T is not locked, this key allows the thermostat to be turned ON or OFF. When in the OFF position, the damper is also driven closed

STATUS KEY - Pressing the STATUS key displays the UNIT number, ZONE number, DUCT temperature and DAMPER position. UP/DOWN KEYS - These keys are used to increase or decrease the setpoint as well as change thermostat setup values.

ENTER KEY - This key is used to enter changes as well as exit the setup menu. (Refer to Installation / Operation Manual for complete setup instructions)

OPERATION

The duct sensor wired to the S-T is designed to select the mode of operation of the damper. If the discharge air temperature is above 72° F, the damper will open on a call for heating. If the discharge air temperature is below 72° F, the damper will open on a call for cooling

TERMINAL DESIGNATIONS

С	24 Vac (Common)
R	24 Vac (Hot)
PO	Power Open
PC	Power Close
DS (2)	Duct Sensor
Y	Cooling Relay
W	Heating Relay
A/B	Modbus Communications

FACTORY DEFAULT SETTINGS

Minimum Heating Damper Position	10%
Minimum Cooling Damper Position	10%
Maximum Damper Position	100%
Unit Number	00
Zone Number	00
Heating Limit	76° F
Cooling Limit	68° F
Actuator Speed	90
Modbus Address	01
Temperature Calibration Offset	0