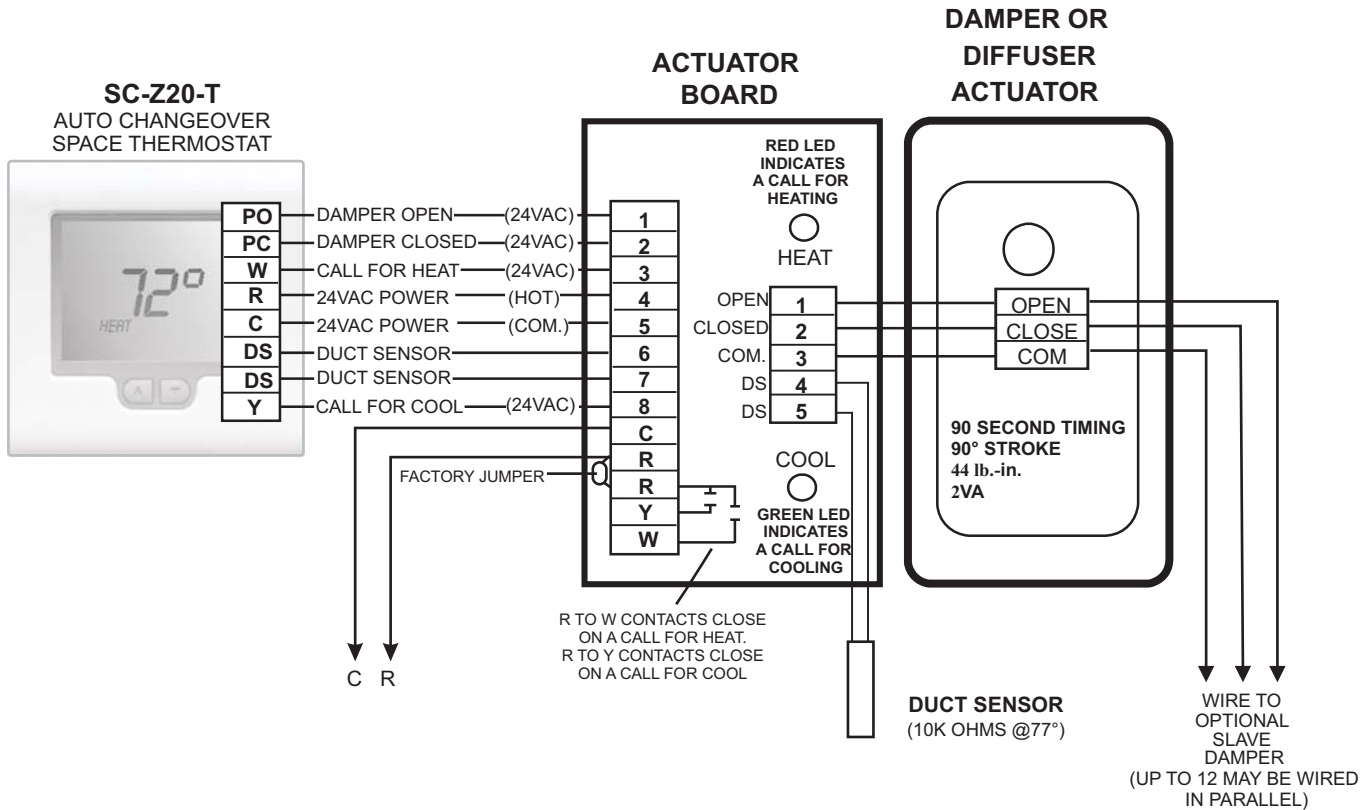


# SC-Zone One

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# SC-ZONE ONE™ MODULATING STAND-ALONE ZONE DAMPER ASSEMBLY



## SEQUENCE OF OPERATION:

The automatic changeover duct sensor (located on the Zone One™ damper) senses whether there is warm air or cool air in the duct. If the SC-Z20-T thermostat is calling for cooling and the duct sensor determines there is cool air in the duct, the damper will modulate open. If the SC-Z20-T 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 setpoint and the thermostat is calling for cooling. The red LED located on the actuator board indicates when the space temperature is 1.5 below the thermostat setpoint and the thermostat is calling for heating.

## APPLICATION AND INSTALLATION NOTES:

Use standard 18 gauge thermostat wire.

A 24VAC 40VA transformer will power a single Zone One™ 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 Zone One™ system or multiple Zone One™ 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 its 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 Zone One™.

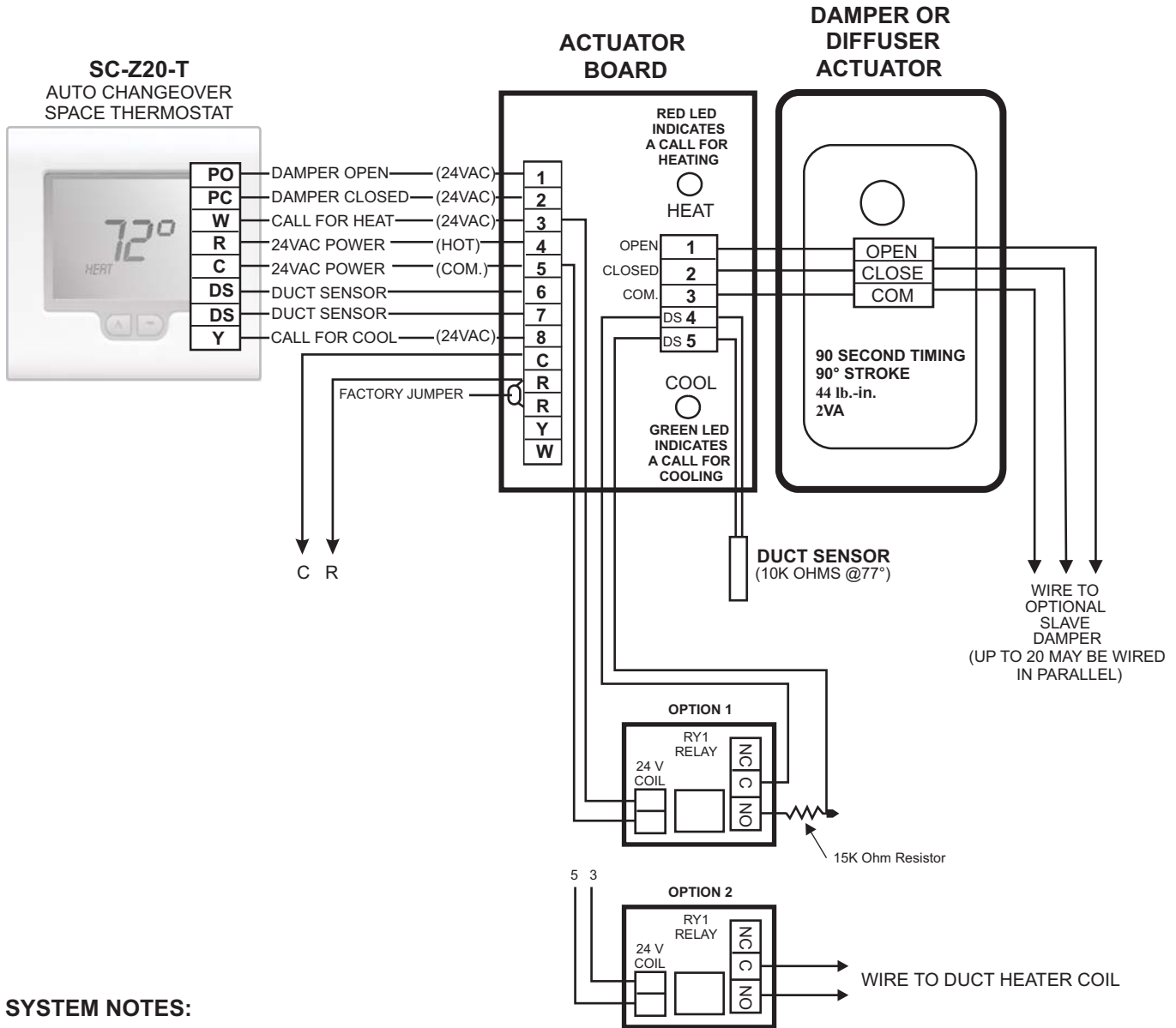
A suction line freeze stat (SC-FS) should be installed when zoning more than 30% of the total CFM served by the HVAC system to protect the equipment in the event the suction line temperature drops too low (Wire in series with the cooling control circuit).

**SPECIFIED  
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# SC-ZONE ONE™ MODULATING STAND-ALONE ZONE DAMPER ASSEMBLY

## WIRING DIAGRAM FOR ZONE HAVING AN ELECTRIC DUCT HEATER



# SC-ZONE ONE SC-Z20-T MODULATING ZONE THERMOSTAT



## 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 two-position (ON) or fully modulating (OFF) damper control to best suit the specific application requirement.

## KEY FUNCTIONS

**ON/OFF KEY** - When the SC-Z20-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 SC-Z20-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

C	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

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