



Young Regulator Co.

7100 Krick Rd • Walton Hills, OH 44146

P: 440-232-9700 • F: 440-232-8266

www.youngregulator.com

Submit T-322 – 1-10

Model T-322

*Micro Computer Based Zone Thermostat
24V with Digital Display*

Application

The T-322-JS 24V thermostat is designed for use with the Young Regulator 9100E series of motorized VAV diffuser or the 4075, 3085 series damper. It operates a modulating 90-second tri-state floating actuator. This is a true multi position modulating output. Performances are equivalent to more expensive 0 to 10 VDC type thermostats.

Advanced Design and P + I Control

Advanced Proportional and Integral (P + I) control thermostats provide precise temperature control and eliminates wasted energy caused by the typical On / Off cycling in conventional thermostats. Thus the room occupant is able to reduce the thermostat set point to the lowest comfortable setting. The result is energy savings ranging from 5% to 10%.

Individual control of zones prevents over heating & over cooling of space temperature.

Modulating Floating Output

This output is designed to give true P + I modulation out of a floating 24 v actuator.

Discharge Air Sensor

A discharge air sensor is available for the thermostat when auto changeover is require. The purpose of the discharge air sensor is to select the mode of operation of the damper. If the discharge air temperature is above 72 degrees F, the damper will open on a call for heating. If the discharge air temperature is below 72 degrees F, the damper will open on a call for cooling.

Testing the Discharge Air Sensor

Disconnecting the discharge air sensor will put the thermostat in the cool mode. Shorting out the sensor will put the thermostat in the heat mode.



Push Button Functions:

- Press the ON button to activate the thermostat.
- Press the OFF button to deactivate the thermostat. This will also drive the zone damper closed.
- The C/F button switches the display from Fahrenheit and Celsius.
- Press the + or – button to raise or lower set point (set point temperature will be displayed).
- The thermostat continuously displays room temperature.

TERMINAL DESIGNATIONS

TERMINAL NUMBER	TERMINAL DESCRIPTION
1	OPEN DAMPER (24 VOLTS OUT)
2	CLOSE DAMPER (24 VOLTS OUT)
3	HEAT OUTPUT (24 VOLTS OUT)
4	HOT (24 VOLTS IN)
5	COMMON (24 VOLTS IN)
6	DUCT SENSOR
7	DUCT SENSOR
8	COOL OUTPUT (24 VOLTS OUT)



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THERMOSTAT INSTALLATION

Important: Electronic controllers require special care for wiring and startup. To avoid problems, carefully follow the procedures below.

Be sure to have all the literature on hand for all components installed: controller, actuators, relay, etc...

Look at the wiring diagrams, and study them carefully. Be sure that you understand how the system is supposed to work.

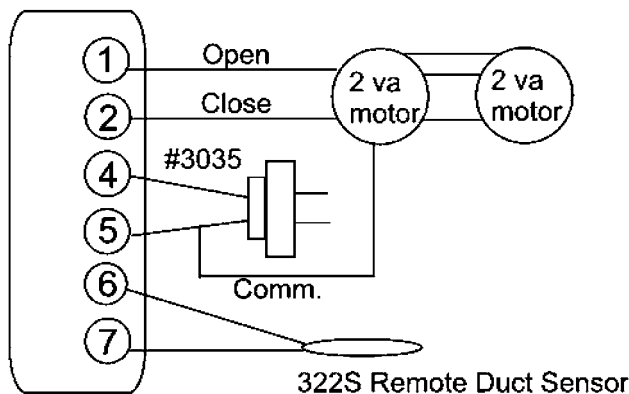
Make the wiring according to the wiring diagrams. Respect polarity for power terminals # 4 & # 5 between multiple controllers if the same transformer is used. Separate the thermostat from the back-plate by holding the front of the thermostat with right hand. Use the thumbnail of the left hand to hook the extremely small rounded tab located on the top edge of the thermostat back plate and pull them apart.

A) Location:

1. Should not be installed on outside wall.
2. Must be installed away from any heat source.
3. Should not be affected by direct sun radiation.
4. Nothing must restrain vertical air circulation to the thermostat.

B) Installation:

1. Pull out cables 6" out of the wall.
2. Wall surface must be flat and clean.
3. Separate the thermostat from the back-plate by holding the front of the thermostat with right hand. Use the thumbnail of the left hand to hook the extremely small rounded tab located on the top edge of the thermostat back plate and pull them apart.
4. Insert cable in the central hole of the base.
5. Align the base and mark the location of the three mounting holes on the wall. Install proper side of base up.
6. Install shields in the wall.
7. Insert screws in mounting holes on the topside of the base and the bottom. **DO NOT OVERTIGHTEN!**
8. Strip each wire 1/4 inch.
9. Insert wire according to wiring diagram.
10. Reinstall the cover and gently push back extra wire length in the hole in the wall.



If operation of the actuator is reversed, change the open/close wires (terminals 1 & 2 on the thermostat)