Code No. LIT-1922535
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A350R

Electronic Temperature Reset Control (with Relay)

Description

The A350R Reset Controller is designed to raise or lower the setpoint of supply water temperature based upon a proportionate drop or rise in temperature at the master (outdoor) sensor. The control output is a Single-Pole, Single-Throw (SPST) normally open relay with Light-Emitting Diode (LED) indication.

The adjustable differential enables the user to match the amount of control (maximum to minimum) required for a given application. An adjustable reset ratio adapts to a variety of weather zones and to the specific heat loss characteristics of most buildings.

As with all System 350 products, the A350R is housed in a NEMA 1, high-impact plastic enclosure. The modular design provides easy, plug-together connections for quick installation and future expandability.

Features

- modular design enables stage, display, and transformer modules to be purchased and installed as necessary
- adjustable master reset setpoint (M.R.S.) enables the user to select a master (outdoor) sensor temperature starting point for the supply reset ramp
- adjustable minimum and maximum supply temperature permits compliance with equipment manufacturer's specifications
- selectable warm weather shutdown temperature saves energy by disabling equipment when the master sensor temperature rises to a point where heating is no longer required
- adjustable setback temperature saves energy by lowering the supply temperature setpoint at night or during unoccupied periods

Applications

The A350R Temperature Reset Controller can be used as a stand-alone device or in conjunction with plug-together accessory modules. The addition of the S350A or S350C for on/off output, or an S350P for a proportional or proportional plus integral output allows this temperature system to control a variety of single or multiple stage Heating Ventilation Air Conditioning and Refrigeration (HVAC/R) applications. Typical applications include reset of single or multistage boilers.



A350R

Selection Charts

Code Number	Item	Description
A350RS-1C	A350R Temperature Reset Control	Temperature Reset Control (packaged with A99BB-300C and A99BC-25C sensors)
A350RT-1C	A350R Temperature Reset Control	Temperature Reset Control (temperature sensors not included)

Accessories and Replacement Parts

Code Number	Item	Description
D350AA-1C **D350BA-1C**	Display Module	Fahrenheit Scale Celsius Scale
S350AA-1C **S350AB-1C**	On-Off Stage Module	Fahrenheit Scale Celsius Scale
S350CC-1C	Slave Stage Module	Dual Scale (°F and °C)
S350PQ-1C	Proportional Stage Module	Dual Scale (°F and °C)
Y350R-1C	Power Module	120/240 VAC, 50/60 Hz input; rectified 24V Class 2 output
A99BB-300C **A99BC-25C** **A99BC-300C** **A99BC-500C** **A99BC-1500C**	Temperature Sensors	PTC Silicon Sensor with PVC Cable; Cable length 9-3/4 ft (3m) PTC Silcon Sensor with high temp. silicon cable; cable length 9-3/4 in. (0.25 m) PTC Silcon Sensor with high temp. silicon cable; cable length 9-3/4 ft (3 m) PTC Silcon Sensor with high temp. silicon cable; cable length 16-3/8 ft (5 m) PTC Silcon Sensor with high temp. silicon cable; cable length 49 ft (15 m)
BOX10A-600R	Enclosure	PVC Sensor Enclosure
WEL11A-601R	Immersion Well	For liquid sensing applications
SHL10A-603R	Sun Shield	For use with outside sensors in sunny locations
BKT287-1R **BKT287-2R**	DIN Rail Sections	35 x 7.5 mm, 12 in./0.305 m long 35 x 7.5 mm, 36 in./0.914 m long
PLT344-1R	DIN Rail End Clamps	Two end clamps
WHA29A-600R **WHA29A-603R** **WHA29A-604R**	Cable for Remote Mounting of D350 Display Module	3 ft (0.9 m) [1] 25 ft (7.6 m) 50 ft (15.2 m)

1. WHA29A-600R can also be used to daisy chain S350 Stage Modules together.

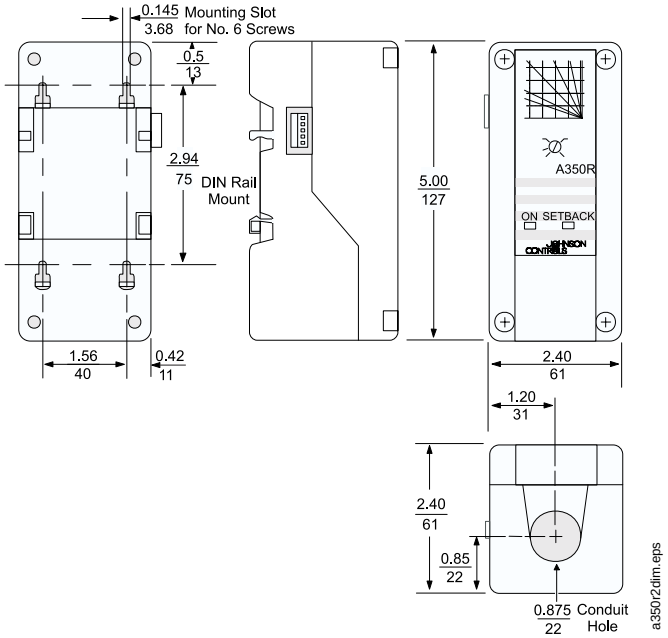
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Electronic Temperature Reset Control (With Relay) (Continued)

Technical Specifications

A350R Electronic Temperature Reset Control	
Supply Voltage [1]	Transformer: 20 to 30 VAC, Class 2, 50/60 Hz Y350R: 120/240 VAC, 50/60 Hz
Power Consumption	3.2 VA maximum
Ambient Temperature	Operating: -30 to 150°F (-34 to 66°C) Shipping: -40 to 185°F (-40 to 85°C)
Humidity	0 to 95% RH non-condensing, 85°F (29°C) maximum dew point
Reset Ratio Adjustment Range	1:5 to 3:1 (master supply)
Reset Action	Reverse acting
Master Reset Setpoint Adjustment Range	40 to 70°F (4 to 21°C)
Minimum Supply Temperature Adjustment Range	50 to 160°F (10 to 71°C)
Maximum Supply Temperature Adjustment Range	160 to 220°F (71 to 104°C)
Differential Adjustment Range	1 to 30F° (0.5 to 17C°)
Relay On-Time	Jumper Selectable: OFF, 1 min., 2 min., or 3 min.
Warm Weather Shutdown	Jumper Selectable: OFF, 60, 64, 68, or 72°F (OFF, 16, 18, 20, or 22°C)
Setback Adjustment Range	0 to 30F° (0 to 17C°) (Enabled by an external time clock)
Mode of Operation	Heating (Differential is below the setpoint.)
Relay Contact	SPST maximum: 4A non-inductive, 24 VAC; Pilot Duty 42.4 VA at 24 VAC minimum: 100 mA at 5 VDC
Case and Cover Material	NEMA 1, high-impact thermoplastic
Agency Listing	UL Guide No. XAPX and cUL Guide No. XAPX7, File E27734

1. Only one supply voltage source may be used.



A350R Dimensions, in. (mm)

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