Code No. LIT-1922550
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S350P

Proportional Plus Integral Temperature Stage Module

Description

The S350P is used in conjunction with the A350 Temperature Control to add proportional or proportional plus integral staging capability. The S350P is an electronic control with analog 0 to 10 VDC and 0 to 20 mA outputs.

As with all System 350 products, the S350P is housed in a NEMA 1, high-impact plastic enclosure. The modular design provides easy, plug-in connections for quick installation and future expandability.

Features

- plug-in connectors and 35 mm DIN rail mountability eliminates wiring between modules and reduces installation costs
- proportional or proportional plus integral output adds proportional or proportional plus integral staging capability to all A350 temperature controls
- minimum output adjustable from 0 to 60% tailors the output to the requirements of the controlled device; can also be used to set minimum valve or damper position
- adjustable throttling range of 2 to 30F° (1 to 17C°) enables the user to tune the system for optimum performance
- field-selectable reverse or direct acting mode works in heating or cooling applications
- three user-selectable integration constant provides selection of the integration constant for applications requiring proportional and integral control
- light-emitting diode (LED) bar graph display of output aids in adjustment, tuning, and troubleshooting

Applications

The S350P Proportional Stage Module must be used in conjunction with an A350 Temperature Control. The S350P receives its power, setpoint, and sensor inputs from the A350. The S350P adds a proportional or proportional plus integral output to the A350 control.

The maximum number of stages that can be used in a system varies with the type of control module (on-off, proportional, or reset), type of stage module (on-off, subordinate, or proportional), and type of power supply (external transformer or Y350R). Use the Maximum S350 Stage Modules chart to determine the maximum number of stages that may be used with each control module.



S350P

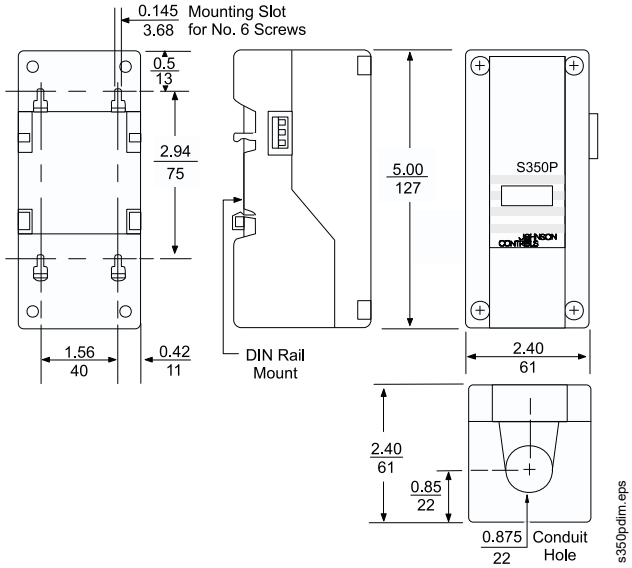
Selection Chart

Code Number	Description
S350PQ-1C	S350P Proportional Plus Integral Temperature Stage Module

Note: Do not make field repairs or perform calibration. The A99B Temperature Sensor and replacement controls are also available.

Technical Specifications

S350P Proportional Plus Integral Temperature Stage Module	
Input Voltage	5 VDC reference provided by the A350; 24V power supply
Ambient Temperatures	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; Maximum dew point: 85°F (29°C)
Analog Outputs	0 to 10 VDC (550 ohm load minimum) and 0 to 20 mA (600 ohm load maximum)
Minimum Output	Adjustable from 0 to 60% of the output
Output Indication	A ten-segment LED bar graph indicates percentage of output.
Mode of Operation	Direct or reverse action is jumper selectable.
Offset Range	0 to 30F° (0 to 17C°)
Throttling Range	2 to 30F° (1 to 17C°)
Integration Constant	Four selectable rates: Fast, Medium, Slow, and Off
Case and Cover Material	NEMA 1 high-impact thermoplastic
Agency Listing	UL Guide No. XAPX and cUL Guide No. XAPX7, File E27734



S350P Dimensions, in. (mm)

Maximum S350 Stage Modules per Control Module

Control	Maximum S350A or S350C Stage Modules	Maximum S350A or S350C (with 1 S350P)	Maximum S350A or S350C (with 2 S350P)
A350A, A350B, A350E, A350R, A350S (using Y350R)	9	6	4
A350P (using Y350R)	4	2	N/A
Any A350 (using external 40 VA transformer)	9	8	7

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products. © 2008 Johnson Controls, Inc.