System 350™ Basic Controls

A350A/B–Electronic On/Off Temperature Control

The A350 on/off Control has a Single-Pole, Double-Throw (SPDT) relay with LED indication of the relay status for use with heating and cooling equipment. Adjustments include: setpoint, differential, and heat/cool mode of operation. Applications include staging compressors for frozen food or dairy cases, chilled water, and space thermostat control of rooftop packages for heating/air conditioning. Refer to *A350A/B Series Electronic On/Off Temperature Control Catalog Page* for more details.

A350E–Electronic On/Off Cooling Control

The A350E is an on/off electronic, cooling only control with SPDT relay output, LED indication, and both Fahrenheit and Celsius temperature scales. Besides being a cooling only control, the A350E has two features that differentiate it from the A350A/B Electronic Temperature Control: an adjustable minimum setpoint and sensor short/open circuit protection. Refer to *A350E Electronic On/Off Cooling Control Catalog Page* for more details.

A350P–Electronic Proportional Plus Integral Temperature Control

The A350P is a proportional or proportional plus integral control that has both Fahrenheit and Celsius temperature scales and a unique ten-segment LED that displays percentage of output. Adjustments include setpoint (Fahrenheit or Celsius), throttling range, minimum output, and reverse or direct acting mode of operation (for heating or cooling applications). The control also provides two simultaneous analog outputs of 0 to 10 VDC and 0 to 20 mA. The output is jumper-selectable for direct- or reverse-acting output. Application capabilities include mixing valves for chilled or hot water control and modulating dampers for air flow. Refer to *A350P Series Electronic Proportional Plus Integral Temperature Control Catalog Page* for more details.

A350R–Electronic Temperature Reset Control (with Relay)

The A350R is an electronic reset control with an SPST (normally open) relay with LED indication for relay operation. The A350R raises or lowers (resets) the temperature of the supply water or supply air based on a proportional drop or rise in temperature at the outdoor sensor. Adjustments include reset ratio (1:5 to 3:1), differential (1 to 30F°), minimum supply temperature (50 to 160°F), maximum supply temperature (160 to 220°F), adjustable master reset setpoint temperature (40 to 70°F), jumper selectable relay on-time (off, 1, 2, or 3 minutes), adjustable setback temperature (0 to 30°F), and selectable warm weather shutdown temperature settings. Typical applications include on/off control of single or multi-stage boilers. Refer to *A350R Electronic Temperature Reset Control (With Relay) Catalog Page* for more details.

A350S–Electronic Temperature Reset Module (without Relay)

The A350S requires the use of an S350 to provide either on/off (S350A) or proportional (S350P) output. There are two A350S models with different reset ratio adjustment ranges (1:5 to 10:1, or 1:30 to 1:1) for different applications. Other adjustments include: minimum supply temperature (35 to 80°F), maximum supply temperature (45 to 140°F), and adjustable master reset setpoint (30 to 90°F). Refer to *A350S Electronic Temperature Reset Module (Without Relay) Catalog Page* for more details.

W351–Electronic On/Off Humidity Control

The W351 Humidity Control contains an SPDT relay with LED indication of relay status, for use with humidification and dehumidification equipment. Adjustments include setpoint (10 to 90% RH), differential (2 to 10% RH), and humidify/dehumidify mode of operation. Typical applications include humidity control of clean rooms, computer rooms, office space, and warehouses. Refer to *W351 Series Electronic On/Off Humidity Control Catalog Page* for more details.

W351P–Electronic Proportional Plus Integral Humidity Control

The W351P is a proportional or proportional plus integral humidity control with a unique 10 segment LED that displays percent of output. Adjustments include: setpoint, integration constant, throttling range, minimum output, and reverse and direct acting mode of operation. The control provides two simultaneous analog outputs of 0 to 10 VDC and 0 to 20 mA. A typical application includes modulating steam valves for humidification. Refer to *W351P Series Electronic Proportional Plus Integral Humidity Control Catalog Page* for more details.

P352AB–Electronic On/Off Pressure Control

The P352AB control is an automatic reset, electronic pressure control with SPDT relay output and LED indication. Typical applications include condenser-fan cycling, compressor unloading, as well as other high and low pressure cutout applications. It is designed for use as either a direct or reverse-acting control. Three models provide control over a 0 to100, 90 to 250, or 240 to 600 psi pressure range. The 0 to 100 psi model has an adjustable differential of 2 to 50 psi, and the 90 to 250 and 240 to 600 psi models have an adjustable differential of 10 to 100 psi. The P352AB controls use a (specified) P499 Electronic Pressure Transducer and a WHA-PKD3 Wiring Harness which must be ordered separately. Refer to *P352AB Electronic On/Off Pressure Control Catalog Page* for more details.

P352P–Electronic Proportional Plus Integral Pressure Controls: Static Pressure (W.C.) and PSI Series

The P352P Series Controls may be setup as proportional-only or proportional plus integral pressure controls, which generate analog output signals based on the sensed pressure. These controls feature a 10 segment LED that displays percent of output, and they generate a 0 to 10 VDC and a 0 to 20 mA signal simultaneously. Adjustments include: setpoint, reverse or direct operation throttling range, minimum signal output, and integration constant (recovery rate). The P352PQ control models are designed for static pressure applications (W. C.) and use a DPT2640 Series Static Pressure Sensor which must be ordered separately. The P352PN series are designed for refrigerant pressure applications and come in three model pressure ranges: 0 to 100, 90 to 250, or 240 to 600 psi. The P352PN series models use a P499 Electronic Pressure Transducer and WHA-PKD3 Wiring Harness which must be ordered separately. Refer to *P352P Series Electronic Proportional Plus Integral Pressure Controls: Static Pressure (W.C.) and PSI Series Catalog Page* for more details.

R353 / S353–Modular Electronic Sequencer

The R353 is a signal input module that accepts 0 to 10 VDC, 0 to 20 mA, or 135 to 10k ohm slidewire potentiometer inputs to drive up to ten S353 Stage Modules. The S353 Stage Modules contain an SPDT relay with LED indication of relay status. Field selectable jumpers allow for direct, reverse, or mixed acting applications. The R353 / S353 works in any combination of heating, cooling, humidity, and/or pressure applications. Refer to *R353/S353 Modular Electronic Sequencer Catalog Page* for more details.