Submittal Data Information
Variable Speed “00” Circulators

Effective: November 1, 2003

Supersedes: NEW

General Variable Speed “00” Circulator Features
- Available in all Styles of 003-0014
- All-In-One Pump / Control
- Sensors Included
- Easy to Wire
- UL Approved
- Snap-in PC Board
- Fuse Protected
- Plug-in Low Voltage Wiring Terminal
- Optional Integral Flow Check

Variable Speed Outdoor Reset “00” Circulator (00-VR) Application
Outdoor reset controls the hot water supply temperature, so that the heat supplied to the building equals the heat loss by the building. The 00-VR modulates the circulator to inject hot water from the boiler loop into the radiant or reduced temperature loop while providing Outdoor Reset to a heating system (see figure A). Available in any style 003 – 0014, the 00-VR also comes with a boiler sensor to protect against low return temperatures. The 00-VR is the ultimate for protection, control, ease of installation, and trouble free operation.

Addional 00-VR (Outdoor Reset) Features
- Adjustable Heating Curve (0.2 to 2.2)
- Selectable Maximum Supply Temperature (110°F, 130°F, 150°F, or Off)
- Selectable Minimum Boiler Return Temperature (120°F, 135°F, or Off)
- Minimum Supply Temperature (85°F or Off – Default to Heating Curve)
- System and/or Boiler Pump Contact (Line Voltage, 5 amp max)
- LED Status Panel
- Pump Exercise (10 Seconds After 3 Days of No Operation)
- Post Purge (20 Seconds)
- Fail Safe Mode (Assumes Outdoor Temp of 32°F)
- 2 Second Start Delay Prevents Short Cycling

Variable Speed Setpoint “00” Circulator (00-VS) Application
The versatile Setpoint version of the Variable Speed “00” can be set up to deliver a fixed temperature, maintain a specific temperature drop between sensor locations (∆T), used as a bypass / shunt pump or integrated into a fan coil package to vary the speed of the pump based on supply air temperature.

Variable Speed Variable Voltage “00” Circulator (00-VV) Application

Additional 00-VS (Set Point) Features
- Adjustable Setpoint (30° - 210°F)
- Adjustable Temperature Difference (∆T) (5° - 50°F)
- Boiler Protection (135°F)
- Boiler Protection as a Limit Control (75° - 165°F)
- LED Status Panel
- Direct or Reverse Acting
- Selectable Output Response Speed
- Linear or Logarithmic Output
- Pump Exercise (10 Seconds After 3 Days of No Operation)

Additional 00-VV (Variable Voltage) Features
- 4 Signal Voltage Ranges (0-10 V(dc), 0-20 mA, 2-10 V(dc), or 4-20 mA)
- Internal LED’s
- Manual Operation Switch
- Linear or Logarithmic Output
- Pump Exercise (10 Seconds After 3 Days of No Operation)

Terms and Conditions
- Limited 1 Year
- Free Free Shipping
- International Shipping
- Specials

See applications brochure for additional schematics.

Variable Speed Variable Voltage “00” Circulator (00-VV) Application
The Variable Voltage version of the Variable Speed “00” Circulator is designed to operate the pump at different speeds based on an externally generated analog voltage signal input. Its reliable operation, ease of installation and integration to DDC or building management systems allows for a wide variety of HVAC applications, such as maintaining a pressure differential or a setpoint temperature. The control accepts a 0-10 V(dc), 0-20 mA, 2-10 V(dc), or 4-20mA signal.

See applications brochure for additional schematics.

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