



Water Temperature Control - Recirculation Systems

Connectivity

The integral RS 485 Serial Port on The Brain® Digital Recirculating Valve (DRV) can be used to connect the DRV to either BrainScan® or directly to a Building Automation System (BAS) which operates on a Modbus protocol.

BrainScan®

BrainScan® is an optionally selected control module from Armstrong which enables an interface with Building Automation Systems (BAS) which utilize Modbus, Bacnet™ or LonWorks™ protocols via the use of specific processor cards.

BrainScan® also has an ethernet port and operates as a web server for remote network access.

BrainScan® includes remote hot water supply, cold/ recirculation water supply, blended water outlet temperature outputs and is supplied with a system graphic, memory card for data storage and web based software.

BrainScan® includes terminals for additional installer supplied RTD's, pressure transducers and pulse type flow meters and this data can be forwarded via the BrainScan® interface.

Modbus

Modbus – DRV can be configured to communicate directly with BAS which use Modbus protocols.

When configured for Modbus the DRV becomes a Remote Terminal Unit (RTU).

The BAS will need to be using a Modbus RTU format.

When connected directly to a BAS using Modbus, the DRV will be assigned a unique network address which is programmed via the integral DB9 external port.

RS485 Port

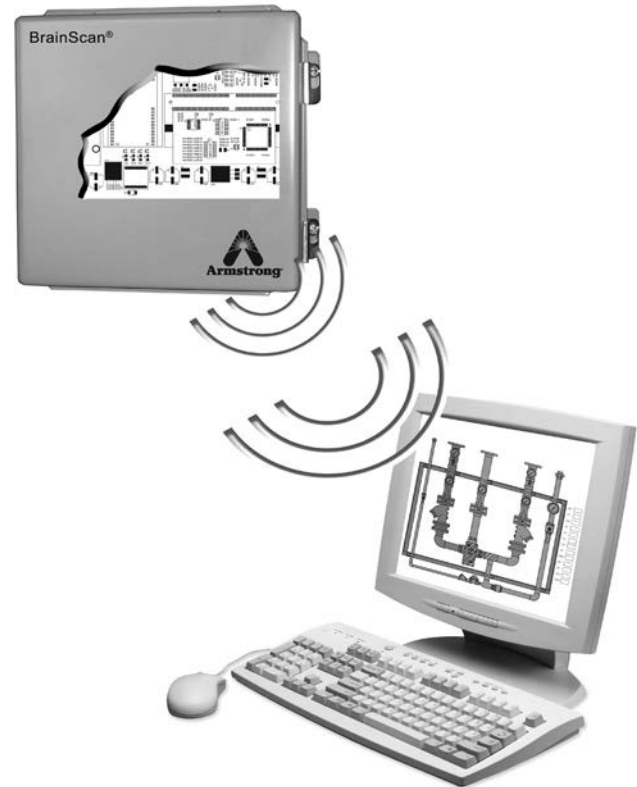
The integral RS485 Serial Port provides an ability to remotely program the DRV and update the firmware via BrainScan or Modbus.

The integral RS485 Serial Port can receive the following outputs from the DRV and communicate them via BrainScan or Modbus.

- Set Point
- Inlet/Outlet Temperature
- Over Temperature Alert

The integral RS284 Serial Port can receive the following self-diagnostic error messages from the DRV and communicate them via BrainScan or Modbus

- Over Temperature Error
- PCB Error
- Thermister Error
- Motor Error/Emergency Mode
- Battery Error



All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.