

Aquatrol® Hydronic Controls

Simple. Powerful. Energy Efficient. Honeywell Aquatrol Hydronic Controls are designed to keep even the most complex systems simple.

All Aquatrol Control Panels Are Loaded With Standard Features:

- Control Pumps or Zone Valves
- Zone Synchronization
- Domestic Hot Water Priority and Priority Override
- Boiler Post Purge
- Boiler Short Cycling Protection
- Freeze Protection
- Pump/Valve Exercise
- Auto Test
- Auto Purge
- Compatible with any digital thermostat
- Intuitive color-coded wiring terminals

AQ250 Relay Control Panels

- Includes all features listed above

Material Number	Application
AQ25042B/U	For use with pumps or zone valves without end switches
AQ25044B/U	For use with zone valves with end switches



AQ25A Relay “Plus” Control Panels

Everything the AQ250 has plus...

- LCD screen, customizable control settings, ability to display outdoor temperature on thermostats, programmable auxiliary relays to add system versatility and more

Material Number	Application
AQ25A42B/U	For use with pumps or zone valves without end switches
AQ25A44B/U	For use with zone valves with end switches



Dedicated AQ1000TN2 and AQ1000TP2 Communicating Thermostats

- Indoor and outdoor temperature can be displayed
- 2-wire “polarity insensitive”
- Displays Fahrenheit or Celsius
- Zone settings for all thermostats can be programmed at the main control panel
- Programmable model controls 1 zone of cooling



AQ251 Reset Control Panels

Everything the AQ25A has plus...

- Outdoor Reset or Load Reset, 0-10 Vdc output to run modulating boilers, support for 1 A/C compressor and up to 64 zones of cooling

Material Number	Application
AQ25110B/U	1 Zone Reset
AQ25142B/U	For use with pumps or zone valves without end switches
AQ25144B/U	For use with zone valves with end switches



AQ252 Mixing Injection Control Panels

Everything the AQ251 has plus...

- The ability to control 2 temperatures with injection pump or mixing valve

Material Number	Application
AQ25242B/U	For use with pumps or zone valves without end switches
AQ25244B/U	For use with zone valves with end switches



Expansion Zoning Panels

For additional zones of pumps or valves, to extend the capacity of systems up to a maximum of 64 heating zones.

Material Number	Application	Number of Zones
AQ25542B/U	Expansion panel for pumps or 2 wire zone valves (line voltage)	4
AQ25582B/U	Expansion panel for pumps or 2 wire zone valves (line voltage)	8
AQ25742B/U	Expansion panel for 2 wire zone valves (24 Vac)	4
AQ25744B/U	Expansion panel for 4 wire zone valves (24 Vac)	4
AQ25400B/U	Add a temperature or expand the AQ network capacity for 16 more zones	—



AQ252 Universal Injection/Mixing Boiler Reset Control Panel for Hydronic Zoning System



Application: Controls one boiler and one mixing (either variable speed injection or floating valve mixing) loop in a hydronic zoning system.

Thermostat Compatibility: AQ1000 Series 2-wire communicating thermostats and most digital thermostats

Setback Program: 7 day, up to 2 setback periods/day.

User Interface: LCD Display and a 7 button Key Pad

Boiler Control Temperature: Supply – Max: OFF, 120°F to 225°F; Min: OFF, 59°F to 180°F; Differential – 2°F to 41°F or Auto (minimum 2 minutes on time) (Supply – Max: OFF, 49°C to 107°C; Min: OFF, 15°C to 82°C; Differential – 1°C to 23°C or Auto (minimum 2 minutes on time))

Boiler Design Temperature: 80°F to 210°F (26°C to 99°C)

Outdoor Low Design Control Temperature: -60°F to 32°F (-51°C to 0°C)

Return Min. Control Temperature: 80°F to 180°F (2°C to 82°C)

Boiler Heat Post Purge: Off, 10 seconds to 30 minutes (factory default is 30 seconds)

Pump/Valve Exercise: 30 seconds per 2 weeks of space heating inactivity

R-C Output (on Transformer): 38 VA, 24 Vac Class II

R-C Input (on Control and Zoning Modules): 24 Vac Class II (input on Control and Zoning Modules)

Demand Input: Heat Demand (Thermostat R-W), Auxiliary Demand, and DHW Demand – External dry contacts connection only

B-B Communication Bus Terminals: Low voltage, Class II, 2-wire polarity-insensitive, digital communicating link to other Control or Zoning modules.

Zone Module Thermostat Input: Low voltage, Class II, 2-wire polarity-insensitive, digital communicating with power link to AQ1000 series thermostat.

Output Ratings: Boiler (T-T) – 24 Vac, 0.5A, 12VA; Auxiliary Low Voltage – 24 Vac, 0.5A, 12VA; Boiler Pump – 120 Vac/250 Vac 5A, 1/3HP; DHW Pump/Valve – 120 Vac 5A, 1/3HP; Auxiliary Pump – Dry contact output, 120 Vac/250 Vac 5A, 1/3 HP

Honeywell AQ252 AQUATROL universal injection/mixing boiler reset controls for single temperature, residential hydronic heating systems ensure ample supply of hot water through energy-efficient outdoor temperature compensated control.

- Displays of outdoor temperature on all AQ1000 thermostats when used with an AQ12C10 outdoor sensor (included)
- Customizable control settings allow for greater control and comfort
- Intuitive and accessible programming interface and central program of zone set points and setback
- Zoning control for up to four zones and can be up to 64 zones using expansion panels
- Boiler short cycling protection, boiler post purge and boiler shock prevent from cold water returning to boiler
- Automated test and purge feature for quick start-up and troubleshooting
- Line and low-voltage output and domestic hot water priority and priority override protection
- Non-volatile EPROM memory retains program settings

Mixing Valve Floating Output (Com,O,C): 24 Vac rated dry contacts

Mixing Valve Modulating Output: 0-10 Vdc

Secondary Pump Output Rating: 120 Vac 5A, 1/3HP

Variable Speed Injection Pump Output: Triac modulated; 120 Vac, 2.1A, 1/6HP

Electrical Connections: Wire-clamp screw terminals, Maximum 2 x 14 AWG each on line voltage terminals

Operating Humidity Range (% RH): 5 to 90% RH, non-condensing

Secondary Loop Temperature Range: Mixing (Supply) max control – 80°F to 210°F; Mixing (Supply) min control – 35°F to 150°F;

Mixing (Supply) Design Temperature – 70°F to 210°F; Return min control – 80°F to 180°F (Mixing (Supply) max control – 27°C to 99°C; Mixing (Supply) min control – 2°C to 66°C; Mixing (Supply) Design Temperature – 21°C to 99°C; Return min control – 27°C to 82°C)

WWSD (Warm Weather Shut Down) Temperature: Off, 35°F to 100°F (Off, 1°C to 38°C)

Sensor: Supply/Return Sensor – 10 kilohm NTC thermistor at 25°C (77°F) ±0.5°F (±0.3°C) up to 500 ft (150 M) using 18 AWG or larger wire, Lead Length: 10 ft. (3050 mm); Outdoor Sensor – 10 kilohm NTC thermistor at 25°C (77°F) ± 0.5°F (±0.3°C) up to 500 ft (150 M) using 18 AWG or larger wire, beta=3892, Lead Length: 10 ft. (3050 mm)

Approvals, CSA: CSA C/US Certified to CSA and UL Standards, File No. LR76030

Approximate, Dimensions: 16 1/2 in. wide x 8 in. high x 3 3/8 in. deep (42 cm wide x 20.3 cm high x 8.5 cm deep)

Weight: 6.0 lbs (2.7 kg)

Temperature Ratings: Panel – 32°F to 130°F; Sensor – -58°F to +230°F (Panel – 0°C to 55°C; Sensor – -50°C to +110°C)

Supply Voltage: 120V 60 Hz

Material Number	Zoning Devices Controlled	Number of Zones	Zone Output Contact Rating	Replacement Parts
AQ25242B/U	Zone pumps or 2-wire valves (line voltage)	4	Pumps: 120 Vac/250 Vac, 5A, 1/3 HP, Valves: 24 Vac, 0.5 A, 12 VA	AQ10X38 24 Vac 38 VA transformer, AQ15540B 4-zone pump expansion module, AQ12C11 supply/return/mixed loop sensor, AQ12C10 outdoor sensor, AQ15200B universal injection/mixing boiler reset module
AQ25244B/U	Zone valves with end switches	4	Pumps: 120 Vac/250 Vac, 5A, 1/3 HP, Valves: 24 Vac, 0.5 A, 12 VA	AQ10X38 24 Vac 38 VA transformer, AQ12C11 supply/return/mixed loop sensor, AQ15740B 4-zone valve with end switch expansion module, AQ12C10 outdoor sensor, AQ15200B universal injection/mixing boiler reset module