

# AQ25244B Universal Injection / Mixing Boiler Reset Control Panel

System commissioning date: \_\_\_\_\_

Customer: \_\_\_\_\_

Building address: \_\_\_\_\_

## INSTALLATION JOB RECORD

### INSTRUCTIONS:

Fill in the details of the equipment connected to the control module and the zoning module:

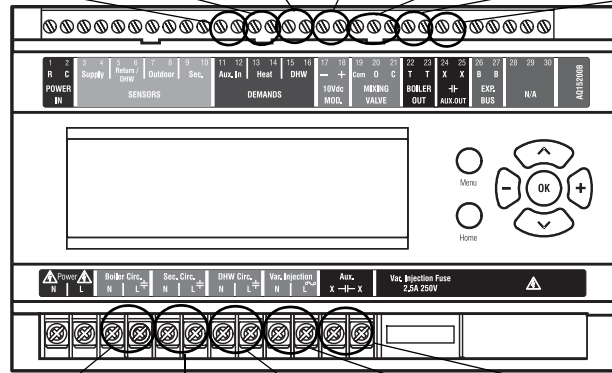
- A** Low voltage control module wiring
- B** Line voltage Boiler pump, DHW pump, and AUX output
- C** Low voltage zone thermostats
- D** Low voltage zone valves with end switches
- E** Review and set DIP switch settings - once DIP switches for the zoning module (AQ25744B) have been set, complete the "Installer Settings" diagram by filling in the circles to indicate the DIP switch position set during installation

File this with other installation records for equipment used on this installation.

#### A Boiler Control Module - Low Voltage

Terminal #	11-12	13-14	15-16	17-18	19-21	22-23	24-25
Terminal ID	Aux. In	Heat	DHW	+ 10Vdc -	COM O C	Boiler	Aux. Out
Input/ Output Description	Input	Input	Input	Output	Output	Output	Output
	Powered	Powered	Powered	Powered	Powered	Dry Contact	Dry Contact
Function	Installer defined	Heat Demand	DHW Demand	Modulating Signal	Floating Valve Signal	Boiler Demand	Installer defined
Equipment							
Manufacturer							
Model #							
Serial #							
Date Code							
Notes							

**Warning: Do not apply power to these terminals**



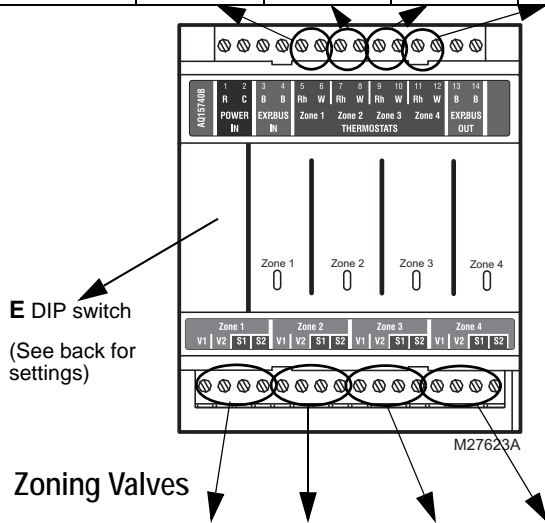
#### B Boiler pump, Secondary pump, DHW, and AUX Device.

Terminal ID	Boiler	Sec	DHW	Var. Injection	Aux
Input/ Output Description	Output	Output	Output	Output	Output
Function	Boiler loop control	Secondary loop control	DHW loop control	Injection pump control	Installer defined
Equipment					
Manufacturer					
Model #					
Amp Draw					
Date Code					
Notes					



## C Zoning Thermostats

Terminal #	5-6	7-8	9-10	11-12
Terminal ID	TH1	TH2	TH3	TH4
Function	Zone call for heat			
Equipment				
Manufacturer				
Model #				
Date Code				
Notes				



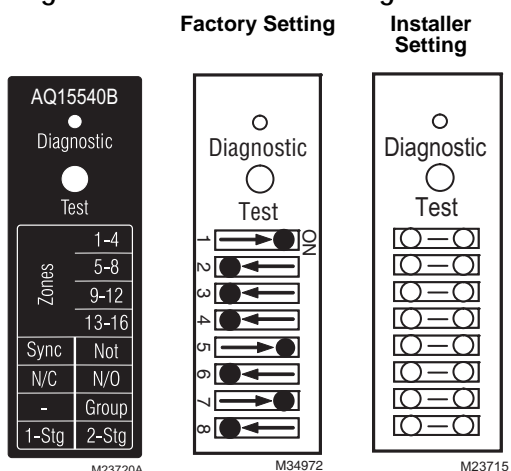
DIP Number	Description
1	<b>Zone Address</b>
2	Slide the DIP switch to the right-hand (ON) position to indicate which group of zones this is.
3	The correct DIP switch settings for each zone module are: <ul style="list-style-type: none"> <li>First Zone (1-4) Module: 1 = ON position; 2, 3, and 4 = OFF position</li> <li>Second Zone (5-8) Module: 2 = ON position; 1, 3, and 4 = OFF position</li> <li>Third Zone (9-12) Module: 3 = ON position; 1, 2, and 4 = OFF position</li> <li>Fourth Zone (13-16) Module: 4 = ON position; 1, 2, and 3 = OFF position</li> </ul>
4	NOTE: For each zone group, there can be only <u>one</u> DIP switch in the right-hand (ON) position.
5	<ul style="list-style-type: none"> <li>If set to SYNC, zone synchronization is enabled.</li> <li>If set to NOT, zone synchronization is disabled.</li> </ul>
6	<ul style="list-style-type: none"> <li>If zone valves are normally closed (N.C.), set the NC/NO DIP switch to the OFF position.</li> <li>If zone valves are normally open (N.O.), set the NC/NO DIP switch to the ON position.</li> </ul>
7	<ul style="list-style-type: none"> <li>If set to Group (ON position) the zone outputs are energized with the AUX pump.</li> <li>If set to - (OFF position), the AUX Pump contacts are not affected by activity on these zones.</li> </ul>
8	<ul style="list-style-type: none"> <li>If set to 2-Stg (ON position), then 2-stage operation is activated on thermostat inputs. The zoning module operates as two 2-stage zones or 3 zones (one 2-stage and two 1-stage).</li> <li>If set to 1-Stg (OFF position), then operates as four 1-stage zones.</li> </ul>

## D Zoning Valves

Terminal ID	Zone 1	Zone 2	Zone 3	Zone 4
Function	Zone control			
Equipment	Valve	Valve	Valve	Valve
Manufacturer				
Model #				
Power draw VA				
Notes				

NOTE: When wiring zone valves with end switches, note the transformer's VA:

## E Zoning Module DIP Switch Settings



Fill in the circle to indicate position of DIP switch.

If low voltage zone valves with end switches are used for zone control, make sure the selected zone valves do not draw more power (VA) than the 38 VA capacity of the AQ10X38 transformer supplied with the AQ252 Control Panel. This integral transformer has enough power to operate 4 motorized zone valves (such as Honeywell V8043E valves or 4 valves using low-amperage draw, heat motor actuators, such as Honeywell MV100 actuators), plus power the electronics of the AQ252's Control Module and up to 16 AQ1000 thermostats. If zone valves with high-amperage draw, heat motor actuators are used (such as Taco 500 series zone valves), additional 24 Vac transformer capacity will need to be wired to the Zoning Module to power the valves. Refer to the Installation Instructions for AQ255/AQ257 Expansion Zoning Panels (Form No. 69-1981) for recommended wiring of additional low voltage VA capacity to AQ2000 Series Zoning Modules.

## CAUTION

### Equipment Damage Hazard.

### Can damage internal circuitry of Zoning Module.

The ES1 and ES2 terminals of the AQ15740B Zoning Module are powered terminals and must only be connected to a set of dry contacts, such as a zone valve motor's end switch. If power is applied to these contacts (for example, by running line voltage through the zone valves' end switches to bring on a circulator feeding those valves), the internal circuitry of the Zoning Module will be damaged, in which case the warranty for this product will be voided.

# EQUIPMENT SETTINGS

The Installer Menu is used to establish and modify the system's equipment and option settings. These include equipment settings for boiler operation, DHW management, zoning, auxiliary input/output operation, and option settings such as pump/valve exercise, and freeze protection.

Use Table 1 to record the equipment settings for this installation.

To record the equipment and option settings:

- A** Press the Home button to return to the Home Page display.
- B** Press and hold the OK button for 3 seconds until the message, INSTALLER MODE – ARE YOU SURE?, displays.
- C** Select YES, then press and release the OK button to display the Installer Menu.
- D** Select the Equipment Setup sub-menu.
- E** Record the configured settings in Table 1.
- F** Exit Installer mode by selecting the Installer Exit menu option.

**Table 1. Installer Menu – Equipment Setup Sub-menu.**

EQUIPMENT SETUP SUB-MENU				
Sub-Menu and Option	Range	Factory Default	Equipment Settings Used	
<b>BOILER SETTINGS</b>				
HIGH LIMIT	120°F to 225°F (49°C to 107°C)	190°F (88°C)		
LOW LIMIT	60°F to 180°F (15°C to 82°C)	150°F		
BOILER DIFF	2°F to 41°F (1°C to 23°C) / AUTO	AUTO		
W.W.S.D.	- - a 35°F to 100°F (2°C to 38°C)	70°F (21°C)		
RESET	OUTDOOR / LOAD / NONE	OUTDOOR		
OUTDOOR LOW	-60°F to 32°F (-51°C to 0°C)	10°F (-12°C)		
BOILER DSGN	80°F to 210°F (27°C to 99°C)	180°F (82°C)		
MIN. RETURN	- - / 80°F to 180°F (27°C to 82°C)	140°F (60°C)		
<b>BOILER OPERATION</b>				
CYCLES/HOUR	2 to 6	4		
FIRE DELAY	0 seconds to 3 minutes (in 5 second increments)	10 (seconds)		
PURGE TIME	OFF, 10 seconds to 30 minutes (in 10 second increments)	30 (seconds)		
EXERCISE	YES / NO	YES		
FREEZE PROT	YES / NO	YES		
<b>10V MOD. SELECT</b>				
10V MOD	0-10V / 2-10V	0-10V		
USAGE	NONE / MIX. INJ. / BOILER	NONE		
<b>SECONDARY LOOP</b>				
MIX HIGH	- - 80°F to 210°F (27°C to 99°C)	140°F (60°C)		
MIX LOW	- - 35°F to 150°F (2°C to 66°C)	- - (disabled)		
MIX DESIGN	70°F to 210°F (21°C to 99°C)	120°F (49°C)		
INJECT.	ENABLE / DISABLE	ENABLE		
MIX.VLV	ENABLE / DISABLE	DISABLE		
MIX.V.TTO	5 to 230 seconds (in 5 second increments)	160 (seconds)		
MIX.V.ACT	DIRECT / REVRSE	DIRECT		
MIX DEVICE	FLOAT / INJ / 10V	10V		
<b>DOMEST.HOT WATER</b>				
DHW	ENABLE / DISABLE	ENABLE		
DHW PRIO	YES / NO	NO		
PRIO.OVER.	YES / NO	YES		
DHW DEVICE	PUMP / VALVE	PUMP		
DHW VLV.OP	0 - 230 seconds (in 5 second increments)	15 (seconds)		
DHW PURGE	YES / NO	YES		
DHW SENSOR	YES / NO	NO		

**Table 1. Installer Menu – Equipment Setup Sub-menu. (Continued)**

<b>EQUIPMENT SETUP SUB-MENU</b>			
<b>Sub-Menu and Option</b>	<b>Range</b>	<b>Factory Default</b>	<b>Equipment Settings Used</b>
<b>DOMEST.HOT WATER (continued)</b>			
DHW SETPOINT	-- 60°F to 160°F (16°C to 71°C)	140°F (60°C)	
DHW DIFF	-- 5°F to 40°F (2.5°C to 22°C)	20°F (-7°C)	
DHW VACANCY	-- [41°F + DHW DIFF] to 160°F ([5°C + DHW DIFF] to 71°C)	45°F (7°C)	
<b>ZONING</b>			
HEAT DMND	RESET / SETPT	RESET	
HT DMND PRIO	YES / NO	NO	
PRIO.OVER	YES / NO	NO	
ZONING VALVES TIME TO OPEN	5 - 230 (seconds)	15 (seconds)	
PRI/SEC	PRI / SEC	SEC	
<b>AUXILIARY I/O</b>			
AUX.IN (optional)	SETBACK / VACANCY / EM. SHUT / NONE	SETBACK	
AUX.OUT (optional)	BOILER / SETBACK / ZONE OP. / ALARM / AUX.IN / DHW IN / HEAT IN / HT DMND / COOL / NONE	BOILER	
AUX.PUMP (optional)	BOILER / GROUP / OCC / BYPASS / FAN / NONE / AUX.IN / DHW IN / HEAT IN / HT DMND	BOILER	
<b>A/C SETTINGS</b>			
CYCLES/HOUR	2 / 3 / 4 / 5 / 6	4	
MIN.OFF TIME	2 to 10 (minutes)	5M	
C.W.S.D.	-- 32°F to 100°F (0°C to 38°C)	65°F (18°C)	
FAN MODE	AUTO / ON	AUTO	
<b>A/C EQUIP CONFIG</b>			
ZONE	A-1 to D-16	A-1	
A/C UNIT	NONE / 1	1	
COOLING	ENABLE / DISABLE	ENABLE	
<b>ENVIRACOM (not used - reserved for future use)</b>			

<sup>a</sup> Any entry of two dashes (-) indicates that the option is disabled or not used.

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