



1311-102

1300 SERIES HYDRONIC ZONE VALVES

1300 Series valves for zoning systems up to 50 PSI operate quietly and efficiently providing years of reliable service.

FEATURES

- Self-aligning barrel-type valve stem design
- Made of a corrosion-resistant stainless steel
- Motor can be removed from valve assembly without draining system
- Built-in auxiliary contacts to control burner or circulator relay
- Automatic recycling manual operator shows valve position at all times
- Screw terminal wiring panel for added convenience

SPECIFICATIONS

Electrical Ratings 24 VAC
 1311 - 0.4A
 1361 - 0.2A
 Aux Switch - 2.0A

3-WIRE, 24V VALVES WITH SCREW TERMINAL WIRING PANEL AND AUXILIARY SWITCH

(See table at bottom for compatible thermostats)

TUBING SIZE (I.D.)	24 VAC THERMOSTAT CIRCUIT RATING	TIME CYCLE	MAXIMUM DIFFERENTIAL ACROSS VALVE	MAXIMUM WATER TEMP.	MAXIMUM SYSTEM PRESSURE	FLOW CAPACITY CV	FRICTION LOSS EQUIVALENTS FT. OF TUBING	MODEL NUMBER	ITEM NUMBER
3/4"	0.4A ①	Open: 45 seconds Close: 45 seconds	15 PSI	240°F (116°C)	50 PSI	23.5 ③	2.5	1311-102	13 11 102S1
1"	0.4A ①	Open: 45 seconds Close: 45 seconds	15 PSI	240°F (116°C)	50 PSI	37.0 ③	3.5	1311-103	13 11 103S1
1-1/4"	0.4A ①	Open: 45 seconds Close: 45 seconds	15 PSI	240°F (116°C)	50 PSI	42.2 ③	6.5	1311-104	13 11 104S1

2-WIRE, 24V VALVES WITH SCREW TERMINAL WIRING PANEL AND AUXILIARY SWITCH

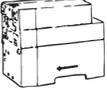
TUBING SIZE (I.D.)	24 VAC THERMOSTAT CIRCUIT RATING	TIME CYCLE	MAXIMUM DIFFERENTIAL ACROSS VALVE	MAXIMUM WATER TEMP.	MAXIMUM SYSTEM PRESSURE	FLOW CAPACITY CV	FRICTION LOSS EQUIVALENTS FT. OF TUBING	MODEL NUMBER	ITEM NUMBER
3/4"	0.2A ②	Open: 45 seconds Close: 60 seconds	15 PSI	240°F (116°C)	50 PSI	23.5 ③	2.5	1361-102	13 61 102S1
1"	0.2A ②	Open: 45 seconds Close: 60 seconds	15 PSI	240°F (116°C)	50 PSI	37.0 ③	3.5	1361-103	13 61 103S1
1-1/4"	0.2A ②	Open: 45 seconds Close: 60 seconds	15 PSI	240°F (116°C)	50 PSI	42.2 ③	6.5	1361-104	13 61 104S1

- ① Valve current is 0.4A only during opening or closing. For proper anticipation, select thermostat designed for use with a 3-wire zone valve.
- ② Valve current is 0.52A when opening but 0.2A when fully open: therefore set anticipator for 0.2A.
- ③ GPM @ 1 PSI drop.

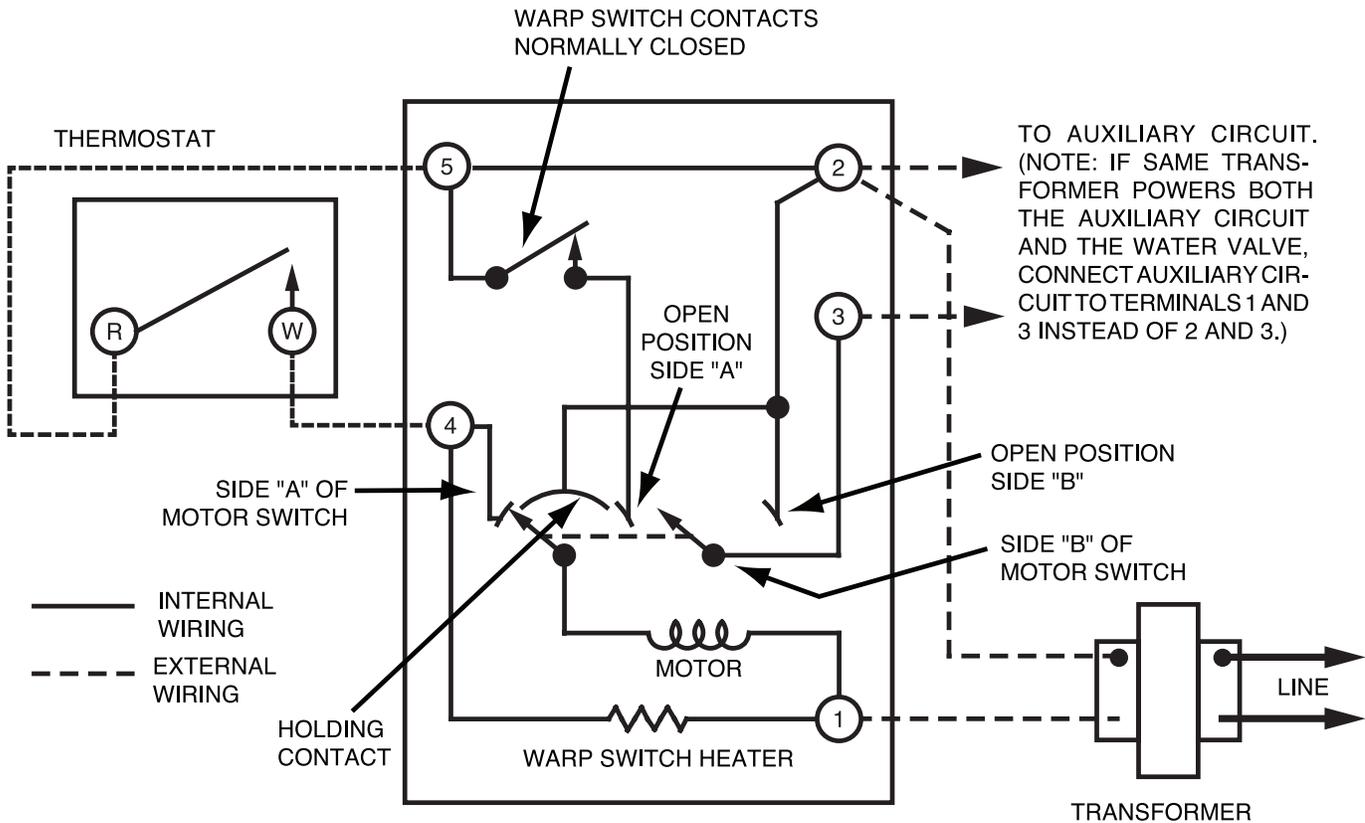
1311 COMPATIBLE THERMOSTATS TABLE

MECHANICAL/ DIGITAL	MODEL NUMBER	ITEM NUMBER	UPGRADE MODEL NUMBER	UPGRADE ITEM NUMBER	MECHANICAL/ DIGITAL
Mechanical	1E56N-444	1E56N-444	1F95-0671	1F95-0671	Premium Digital
Mechanical	1F56N-444	1F56N-444	1F95-0680	1F95-0680	Premium Digital
Digital	1F85U-22NP	1F85U-22NP	1F95-1280	1F95-1280	Premium Digital
Digital	1F85U-22PR	1F85U-22PR	1F95-1291	1F95-1291	Premium Digital
Digital	1F85U-42NP	1F85U-42NP	1F95EZ-0671	1F95EZ-0671	Premium Digital
Digital	1F85U-42PR	1F85U-42PR	1F97-1277	01F97 1277	Premium Digital

PARTS AND ACCESSORIES

IMAGE	DESCRIPTION	MODEL NUMBER	ITEM NUMBER
	1300 Hydronic Zone Valve Motor assemblies For 1311-102, -103, -104 For 1361-102, -103, -104 Water seal replacement kit not included	F19-0097 F19-0104	F0019 009700S1 F0019 010400S1
	1300 Hydronic zone valve assemblies 1311-102 and 1361-102 (3/4") 1311-103 and 1361-103 (1") 1311-104 and 1361-104 (1-1/4")	F84-0433 F84-0434 F84-0435	F0084 043300S1 F0084 043400S1 F0084 043500S1
	1300 Hydronic zone water seal Replacement (Quad ring, "O" ring, Tru-arc ring and cotter pin) 1311-102 and 1361-102 (3/4") 1311-103 and 1361-103 (1") 1311-104 and 1361-104 (1-1/4")	F92-0227 F92-0228 F92-0229	F0092 022700S1 F0092 022800S1 F0092 022900S1
	13A00 Hydronic zone power head (includes seal ring) For 2-way zone Valves 25 VAC with conduit hub 25 VAC with plug-in panel that includes an auxiliary switch	F19-0181 F19-0187	F0019 018100S1 F0019 018700S1
	13A00 Hydronic zone motor 24 VAC motor	F19-0190	F0019 019000S1
	13A00 Hydronic zone valve disc Contains one disc, spring, E-ring and body seal ring	F84-1215	F0084 121500S1
	Hydronic well adapter for 1100 series bulbs	F71-0924	F0071 092400S1
	Hydronic well heat transfer compound	F145-0163	F0145 016300S1
	Hydronic well adapter and heat transfer compound F71-0924 and F145-0163 packed together	F145-0650	F0145 065000S1

1361 TWO-WIRE ZONE VALVE



TERMINALS 1, 2 = POWER TO VALVE
 1 = 24 VAC NEUTRAL
 2 = 24 VAC HOT

TERMINALS 2, 4 = SPST THERMOSTAT
 MAKE TO OPEN, BREAK TO CLOSE

TERMINALS 2, 3 = AUXILIARY SWITCH
 2, 3 BECOME SAME POINT ON CALL FOR HEAT

TERMINALS 1, 3 = POWER OUT TO AUXILIARY CIRCUIT
 ON CALL FOR HEAT

TROUBLESHOOTING:

1. Attach a voltmeter to terminals 1 and 2. Power (24 volts) should always be present on 1 and 2. If power is interrupted check transformer or power source.
2. With voltmeter attached as above, jumper terminals 2 and 4 to verify the valve opens. If power is present on 1 and 2 but the valve fails to open check connections. Replace motor assembly (Replacement Motor # F19-0104) if condition persists. When the jumper is removed between 2 and 4 the valve should close. If the valve fails to close replace motor assembly.
3. Terminals 2 and 3 (auxiliary circuit) become the same point electrically when the valve opens. Because terminal 2 is 24 volts hot, a voltmeter should read 24 volts between terminal 3 and terminal 1 (neutral) when the valve is open.

NOTE: If the auxiliary circuit terminals (2 and 3) are being attached to a control circuit with a separate transformer the transformers must be in phase or one transformer may be damaged. If phasing the transformers is not possible a 24 volt isolation relay can be installed with the coil attached to terminals 1 and 3 and the contacts can be used to operate the control circuit. The relay will energize when the valve opens.

For complete installation instructions visit our website.