

HYDRONIC ZONE CONTROLS		104 – 109
Description	Model(s)	Page(s)
2-Wire or 3-Wire Hydronic Zone Controls	1311 / 1361 Series	104
Direct Connect Zone Valves	Z Series	105
Automatic Change-Over Controls.....	752 Series	106
Well Immersion Single Control	1100 Series	107
Immersion Wells and Packing Nut.....	F89 / F55 Series	108
Surface (Strap-On) Types.....	1100 Series	109

RELAYS / TRANSFORMERS		109
Description	Model(s)	Page(s)
Relay/Transformer Combinations.....	800 Series	109

GAS DRYER VALVES		110
Description	Model(s)	Page(s)
Gas Valves and Coils	25M / F91 Series	110

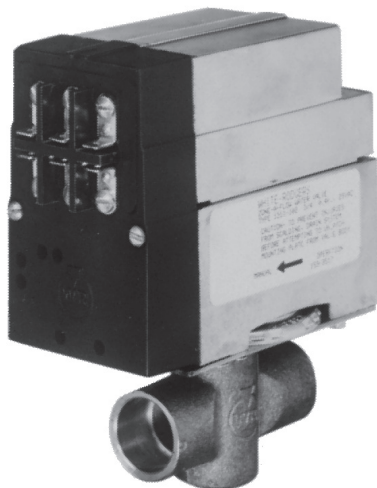
ELECTRIC WATER HEATER THERMOSTATS		111
--	--	------------

GAS WATER HEATER CONTROLS		112 – 114
Description	Model(s)	Page(s)
37E Series Intellivent Controls	37E	112
11E79-101 Integrated Controls.....	11E79-101	112
37C Series Controls	37C	113
11B79-3 Commercial Controls.....	11B79-3	114

PARTS AND ACCESSORIES		115
------------------------------	--	------------

HYDRONIC CONTROLS INDEXED BY RANGE

Range Max.	Range Min.	Differential Max.	Differential Min.	Model	Element	Switch Action	Page Number
240°F	100°F	10°F Fixed	10°F Fixed	1127-2	Surface Mount	SPDT	109
240°F	100°F	45°F	7°F	1131-102	Well Immersion	SPDT	107
240°F	100°F	45°F	5°F	11B18-101	Well Immersion	Open on Rise	107
240°F	100°F	45°F	5°F	11D18-1	Well Immersion	Open on Rise	107
240°F	100°F	45°F	7°F	11D31-1	Well Immersion	SPDT	107



HYDRONIC ZONE VALVES

Two Types of Valves, 2-Wire or 3-Wire, for Zoning Hydronic Systems Up to 50 PSI

FEATURES

- Quiet operation.
- Valve stem made of stainless steel.
- Automatic recycling manual operator shows valve position at all times.
- Built-in auxiliary contacts to control burner or circulator relay.
- Motor can be removed from valve assembly without draining system.

SPECIFICATIONS

Electric rating of auxiliary switch. 2.0A at 24VAC
Four zone valves operate with one 40 VA transformer

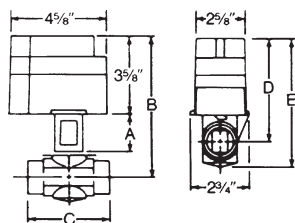
CONTRACTOR TIP: FOR HEAT / COOL APPLICATIONS, SEE 752-1 CONTROL ON PAGE 106.

DO NOT CHANGE VALVE ASSEMBLY WITHOUT DRAINING BOILER OR WHILE BOILER WATER IS HOT. FAILURE TO RELIEVE WATER PRESSURE OR WAIT UNTIL WATER COOLS COULD RESULT IN SCALDING INJURIES

PARTS AND ACCESSORIES

See end of this section for additional parts and accessories

- F19-0097 — Motor assembly for 3-wire zone valves
- F19-0104 — Motor assembly for 2-wire zone valves
- F84-0433 — Valve assembly for 3/4" (both series)
- F84-0434 — Valve assembly for 1" (both series)
- F84-0435 — Valve assembly for 1 1/4" (both series)
- F92-0227 — Water seal kits for 3/4" (both series)
- F92-0228 — Water seal kits for 1" (both series)
- F92-0229 — Water seal kits for 1 1/4" (both series)



VALVE SIZE	DIMENSIONS (inches)				
	A	B	C	D	E
3/4"	1 3/4	6 1/2	2 7/8	4 11/16	5 5/8
1"	1 15/16	6 3/4	3 1/8	4 13/16	5 7/8
1 1/4"	2 1/8	7 1/8	3 11/16	5	6 1/4



TECHNICAL HELP

Zone Valve Troubleshooting See pages 204–205

3-WIRE, 24V VALVES WITH SCREW TERMINAL WIRING PANEL AND AUXILIARY SWITCH (SEE TABLE AT BOTTOM FOR COMPATIBLE THERMOSTATS)

Model Number	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
1311-102	3/4"	0.4A ①	Open: 45 seconds Close: 45 seconds	15 PSI	240°F (116°C)	50 PSI	23.5 ③	2 1/2
1311-103	1"	0.4A ①	Open: 45 seconds Close: 45 seconds	15 PSI	240°F (116°C)	50 PSI	37.0 ③	3.5
1311-104	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

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

Model Number	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
1361-102	3/4"	0.2A ②	Open: 45 seconds Close: 60 seconds	15 PSI	240°F (116°C)	50 PSI	23.5 ③	2 1/2
1361-103	1"	0.2A ②	Open: 45 seconds Close: 60 seconds	15 PSI	240°F (116°C)	50 PSI	37.0 ③	3.5
1361-104	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

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

Model Number	Mechanical/Digital	Display	Upgrade Model Choices/Upgrade Size	Mechanical/Digital	Display
1F56N-444	Mechanical	Analog	1F95-0671	Digital	Blue Universal 6" Display
1F80-0471	Digital	Blue Single 4" Display	1F95-0680	Digital	Blue Commercial 6" Display
1F83-0422	Digital	Blue Universal 4" Display	1F95-1280	Digital	Big Blue Commercial 12" Touchscreen
1F83-0471	Digital	Blue Universal 4" Display	1F95-1291	Digital	Big Blue Humidity 12" Touchscreen
1F85-0422	Digital	Blue Universal 4" Display	1F95EZ-0671	Digital	Blue Easy Reader 6" Display
1F86-0471	Digital	Blue Single 4" Display	1F97-1277	Digital	Big Blue Single 12" Touchscreen



✦ **ZSW34NCA**

DIRECT-CONNECT ZONE VALVES – FLARE, SWEAT AND NPT MODELS

FEATURES

- Lever for manual open (normally closed valves only).
- Auxiliary switch (optional).
- Return spring design – stainless steel for long life.
- Plastic molded cover provides extra protection from moisture.
- Swing-type ball valve made from EPDM (Ethylene Propylene Polymer).
 - Rotating design results in less wear on valve.
 - Raised ball design ensures positive valve closure and even surface wear.
- Valve body and crank arm assemblies each made from one-piece cast brass construction.
- Gears made from heavy 14 gauge brass for durable long life.
- Valve assembly design includes a recessed "O" ring for positive sealing.
- Not for steam systems.

SPECIFICATIONS

Voltage	24 VAC
Frequency	50 / 60 Hz
Connection	18" leads
Motor	Electric synchronous, spring return
Positioning	2-way, straight through

Canada Model Number ✦	Pipe Size	Pipe Connection	Flow Capacity Cv	Auxiliary Switch	De-Energized Position	ΔP	Max. System Pressure	Max. Water Temp.
Z Series								
ZINV12NCA	1/2"	Inv. Flare	3.5	Yes	NC	20 PSI	142 PSI	110°C
ZINV12NOA	1/2"	Inv. Flare	3.5	Yes	NO	20 PSI	142 PSI	110°C
ZFL38NO	3/8"	Flare	3.5	No	NO	20 PSI	142 PSI	110°C
ZFL38NO-34AD*	3/8"	Flare	3.5	No	NO	20 PSI	142 PSI	110°C
ZFL38NC	3/8"	Flare	3.5	No	NC	20 PSI	142 PSI	110°C
ZFL38NC-34AD*	3/8"	Flare	3.5	No	NC	20 PSI	142 PSI	110°C
ZFL38NCA	3/8"	Flare	3.5	Yes	NC	20 PSI	142 PSI	110°C
ZSW12NCA	1/2"	Sweat	3.5	Yes	NC	20 PSI	142 PSI	110°C
ZSW34NCA	3/4"	Sweat	3.5	Yes	NC	20 PSI	142 PSI	110°C
ZSW34NO	3/4"	Sweat	3.5	No	NO	20 PSI	142 PSI	110°C
ZSW1NCA	1"	Sweat	3.5	Yes	NC	20 PSI	142 PSI	110°C
ZSW1NCA7C	1"	Sweat	7.0	Yes	NC	20 PSI	142 PSI	110°C
ZNPT12NCA	1/2"	NPT	3.5	Yes	NC	20 PSI	142 PSI	110°C
ZNPT12NO	1/2"	NPT	3.5	No	NO	20 PSI	142 PSI	110°C
ZNPT34NCA	3/4"	NPT	3.5	Yes	NC	20 PSI	142 PSI	110°C
ZNPT1NCA	1"	NPT	3.5	Yes	NC	20 PSI	142 PSI	110°C
ZNPT1NCA7C	1"	NPT	3.5	Yes	NC	20 PSI	142 PSI	110°C
Z Series EZ-top								
13FL38NCA	3/8"	Flare	3.5	Yes	NC	20 PSI	142 PSI	110°C
13ZINV12NCA	1/2"	Inv. Flare	3.5	Yes	NC	20 PSI	142 PSI	110°C

*With (2) 3/4" sweat adaptors

✦ Indicates Canadian Model Number: call 1-800-305-6953 to order



752-1

CONTRACTOR TIP: USE WITH ZONE VALVES ON PAGE 104 FOR HEAT / COOL APPLICATIONS.

AUTOMATIC CHANGE-OVER SWITCH

SPDT Control Provides Automatic Change-Over of Thermostat to Operate Zone Valve on Combination Hot and Chilled Water Systems

FEATURES

- Epoxy resin seal protects bimetallic disc and Snap-Action contacts from dust, dirt and corrosion.
- Furnished with removable spring clip to attach control to tubing.
- SPDT switch connects heating side of thermostat to two-wire zone valve when hot water is circulated through tubing.
- SPDT switch connects cooling side of thermostat to two-wire zone valve when chilled water is circulated through tubing.
- Curved sensing element provides maximum contact with tubing.

SPECIFICATIONS

Electrical Connections	12" red, brown and black leads, 105°C insulated, No. 18 wire
Temperature Settings	Red-Black: open on rise @ 85°F, close @ 70°F Red-Brown: close on rise @ 85°F, open @ 70°F
Ambient Temperature	221°F maximum

TYPES FOR USE WITH 1/2" TUBING (5/8" O.D.)

Model Number without conduit connector	Model Number with conduit connector	Switch Action	Motor Rating				Pilot Duty 120 / 240 / 277 VAC	Resistive (non-inductive) 120 / 240 / 277 VAC
			Full Load		Lock Rotor			
			120 VAC	240 VAC	120 VAC	240 VAC		
752-1	752-2	SPDT	7.5A	3.75A	45.0A	22.5A	125 VA	15A

TYPES FOR USE WITH 1/2" TUBING (5/8" O.D.)

TYPES		SWITCH ACTION	A.C MOTOR RATING				PILOT DUTY (120V or 240V)	NON-INDUCTIVE (120 or 240V)
WITHOUT CONDUIT CONNECTOR	WITH CONDUIT CONNECTOR		FULL LOAD		LOCKED ROTOR			
			120V	240V	120V	240V		
752-1	752-2	SPDT	7.5A	3.75A	45.0A	22.5A	125 VA	15.0A

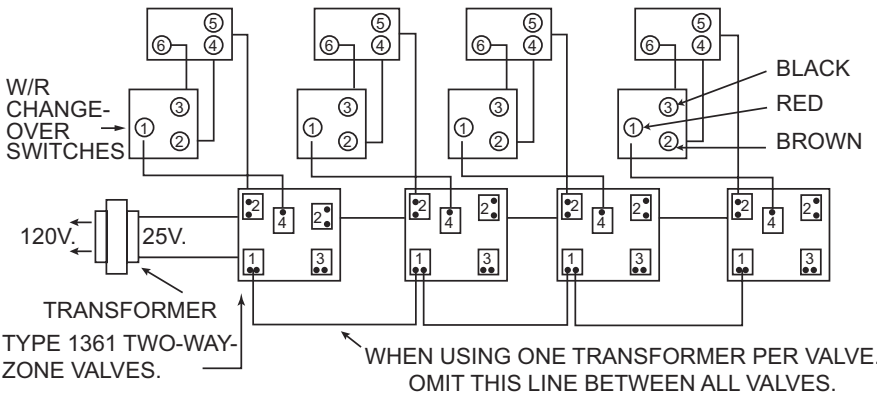
TYPES FOR USE WITH 3/4" TUBING (7/8" O.D.)

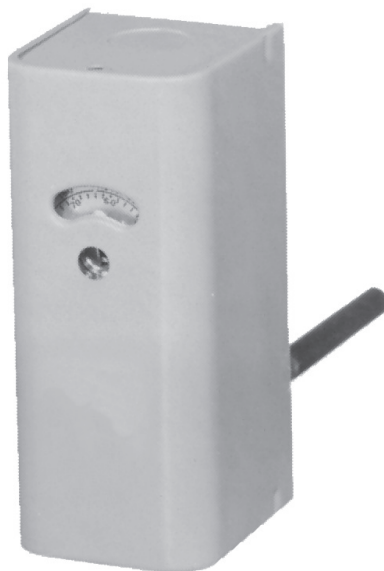
752-1	SPDT	7.5A	3.75A	45.0A	22.5A	125 VA	15.0A
-------	------	------	-------	-------	-------	--------	-------

SPECIFICATIONS

Electrical Connections – 12" red, brown, and black leads, 105°C insulated, No. 18 wire.
Temperature Settings – Red-Black, open at 85°F ± 6°
Red-Brown, open 70°F ± 6°
Ambient Temp. – 220°F Max.

Typical diagram using Type 1361 valves (25 volts) with Changeover Switch. Boiler, chiller, and circulator operation are independent of thermostat demand.





11D18-1

WELL IMMERSION SINGLE CONTROL

Types for Use as High Limit, Reverse Action or SPDT Switching
Action: May be Mounted Either Horizontal or Vertical

FEATURES

- Extra capillary length for extended shank wells.
- Special screw terminals with “ears” securely hold solid and stranded wires.
- Screwdriver-adjustable differential with direct-read indicator.
- Knockouts on top and bottom and plenty of wiring room.
- Hydraulic action element – fast acting.

SPECIFICATIONS

Dimensions $5\frac{3}{8}''$ H + $2\frac{5}{16}''$ coil x $2\frac{9}{16}''$ D
Finish Grey
Agency U.L. listed and C.S.A. approved

PARTS AND ACCESSORIES See end of this section for additional parts and accessories

- F145-0163 — Tube heat conductive compound
- Immersion wells — see page 108

TYPES WITH BULBS DIRECTLY INTERCHANGEABLE WITH HONEYWELL ($3\frac{9}{16}''$ x $\frac{3}{8}''$) No wells included.

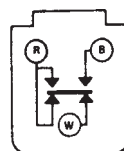
Model Number	Range	Differential	Switch Action	Full Electrical Rating	Motor Rating (Full Load)		Valves and Relays	
					120 VAC	240 VAC	24 VAC	0.3-12v DC
11D18-1 ①	100 to 240°F (38 to 116°C)	5 to 45°F (3 to 25°C)	Open on Rise	HTV See page 222	10.0A	6.0A	6.0A	1.0A
11D31-1	100 to 240°F (38 to 116°C)	7 to 45°F (4 to 25°C)	SPDT	HH See page 222	7.4A	3.7A	2.9A	—

① Has U.L. approved adjustable dial stop, factory set at 150°F maximum.

TYPES WITH TAPERED BULBS ($2\frac{7}{16}''$ x $\frac{7}{16}''$) All types include $\frac{1}{2}''$ standard shank well, unless otherwise specified.

Model Number	Range	Differential	Switch Action	Full Electrical Rating	Motor Rating (Full Load)		Valves and Relays	
					120 VAC	240 VAC	24 VAC	0.3-12v DC
1131-102 ①	100 to 240°F (38 to 116°C)	7 to 45°F (4 to 25°C)	SPDT	HH See page 222	7.4A	3.7A	2.9A	—
11B18-101 ①	100 to 240°F (38 to 116°C)	5 to 45°F (3 to 25°C)	Open on Rise	HTV See page 222	10.0A	6.0A	6.0A	1.0A

① Has U.L. approved adjustable dial stop, factory set at 150°F maximum.



SPDT Contact Structure

HH Rated Controls

Switch Action

R-B Open on Rise
R-W Close on Rise

CONTRACTOR TIP: TESTING AUTOMATIC TEMPERATURE CONTROLS To verify a control is opening and closing properly, disconnect all power before testing. Testing must be performed with the sensing element at a temperature within the setting range of the control. For most hydronic controls with a range of 100 to 240°F, a pan of hot water is sufficient to reach the control range.

Attach an ohmmeter or continuity tester across the Open on Rise contacts. Lower the temperature setting dial to the lowest setting. If the lowest setting is below the temperature of the sensing element minus the differential of the control, the contacts should be open. Raise the temperature dial slowly. When the setting is raised above the temperature of the sensor, the contacts should close.

IMMERSION WELLS AND PACKING NUT

1/2" and 3/4" NPT Sizes for Hydronic Element Insertion

FEATURES

- Wells are used where it is desired that the control operates from the temperature of a liquid in a closed system.
- The bulb of the control can be removed from an immersion well in the tank wall without draining the boiler tank.
- The packing nut can be used with any of the remote bulb types listed.
- Packing nuts permit closer control than wells because the bulb is directly immersed in the liquid.

SPECIFICATIONS

Compatibility For use in liquids that are not corrosive to brass and copper. Not recommended for use above 100 psi, 250°F (120°C)

PACKING NUT

Model Number	Description	Figure Number
F55-0088	Packing nut with 1/2" threads	1

Fig. 1



Fig. 2

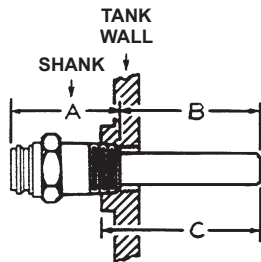


Fig. 3

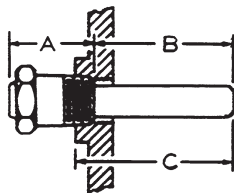
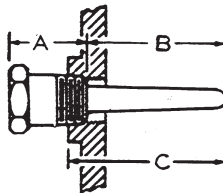


Fig. 4



INTERCHANGEABLE WELLS

Model Number	Basic Types Well is Used With	Bulb Size of Control Used	Well Description		Figure Number	Dimensions		
			Pipe Size NPT	Shank		A	B	C
F89-0211	11DXX	3 1/2 x 3/8"	1/2"	Standard	2	1 13/16"	3"	3 5/16"
F89-0212	11DXX	3 1/2 x 3/8"	1/2"	Std. Extended	2	3 5/16"	3"	3 5/16"
F89-0213	11DXX	3 1/2 x 3/8"	3/4"	Standard	2	1 13/16"	3"	3 5/16"
F89-0214	11DXX	3 1/2 x 3/8"	3/4"	Std. Extended	2	3 5/16"	3"	3 5/16"
F89-0215	11DXX	3 1/2 x 3/8"	3/4"	Extra Extended	2	4 13/16"	3"	3 5/16"

INTERCHANGEABLE WELLS

Model Number	Basic Types Well is Used With	Bulb Size of Control Used	Well Description		Figure Number	Dimensions		
			Pipe Size NPT	Shank		A	B	C
F89-0027	1609, 1629, 2A23	5 3/4 x 3/8"	1/2"	Standard	3	1 5/8"	6"	6 5/16"
F89-0033	11B06, 11B37, 11B82	3 1/2 x 7/16"	3/4"	Standard	3	1 5/8"	2 13/16"	3 1/8"
F89-0036	11B06, 11B37, 11B82	3 1/2 x 7/16"	1/2"	Standard	3	1 5/8"	2 13/16"	3 1/8"
F89-0148	1050-1	2 15/16 x 7/16"	1/2"	Standard	3	1 5/8"	2 13/16"	3 1/2"

INTERCHANGEABLE WELLS

Model Number	Basic Types Well is Used With	Bulb Size of Control Used	Well Description		Figure Number	Dimensions		
			Pipe Size NPT	Shank		A	B	C
F89-0062	11B18, 11B05, 11B55, 1131	—	1/2"	Standard	4	1 5/8"	2 13/16"	3 1/8"
F89-0063	11B18, 11B05, 11B55, 1131	—	3/4"	Standard	4	1 5/8"	2 13/16"	3 1/8"



1127-2

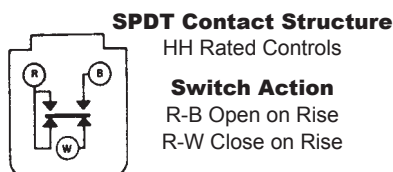
SURFACE (STRAP-ON) TYPE HYDRONIC CONTROL

Attach Directly to Surface of Pipe. Types for Use as High Limit, Reverse Acting or SPDT Switching Action Control

FEATURES

- Sensing element has twice the contact area of competitive models.
- Hydraulic action element can be mounted in any position – no leveling required.
- Dustproof steel case.
- Special screw terminals with “ears” securely hold solid and stranded wires.
- Includes pipe strap and mounting screws.

SPECIFICATIONS



Dimensions 6⁷/₈" H (includes plate) x 2⁵/₁₆" W x 3³/₁₆" D
Finish Grey
Agency U.L. listed and C.S.A. approved

Model Number	Range	Differential	Switch Action	Full Electrical Rating	Motor Rating (Full Load)		Valves and Relays	
					120 VAC	240 VAC	24 VAC	0.3-12v DC
1127-2 ①	100 to 240°F (38 to 116°C)	Fixed 10°F (5.5°C)	SPDT	HH See page 222	7.4A	3.7A	2.9A	—

① Has U.L. approved adjustable dial stop, factory set at 150°F maximum.



8A05A-101

RELAY / TRANSFORMER COMBINATIONS

DPST Relay Models Enclosed with a Transformer Capable of Powering External Loads Up to 35VA. Ideal for Use on Boilers without Domestic Coil. Equally Adaptable for Zoned and Unzoned Systems

FEATURES

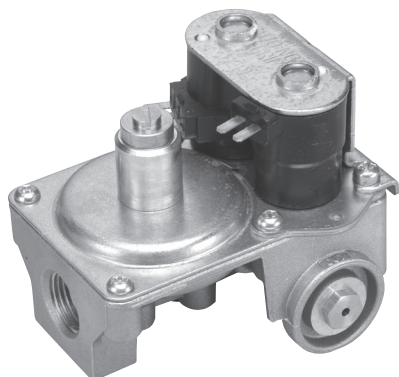
- Low voltage screw terminals — 3 color coded, end stripped line voltage leads.
- Internal transformer can power up to 35VA external loads.
- Mounts to 4" x 4" junction box.
- Dustproof steel case.

SPECIFICATIONS

Dimensions 4¹/₄" H x 2³/₄" W x 2³/₄" D
Finish Grey
Mounting To 4" x 4" junction box
Lead length 8 inches
Transformer 35 VA maximum connected external load
Agency U.L. recognized and C.S.A. approved

Model Number	Input Voltage	Switch Action	Thermostat Current	Contact Ratings			
				Motor Rating		Valves & Relays	
				120 VAC		Terminals V1 & V2	
				Full Load	Locked Rotor	30 VAC	0.3-12v DC
8A05A-4	120 VAC, 60 Hz	DPST	0.28A	10.0A / 16.0A	60.0A / 96.0A	—	—
8A05A-101	120 VAC, 60 Hz	SPDT	0.13A	8.0A / 14.0A	48.0 / 84.0A	—	—

✻ Indicates Canadian Model Number: call 1-800-305-6953 to order



25M01A-101

25M01A-100 AND 25M01A-101

25M01A Series Gas Valves Combine a Gas Pressure Regulator with Redundant and Main Solenoid Valves for Hot Surface Ignition (HSI) Residential Gas Clothes Dryers. Two Models to Replace Virtually All Whirlpool, Maytag, GE, Frigidaire, Electrolux, or Speed Queen Gas Dryer Valves

FEATURES

- Compact split coil design.
- Inlet/outlet screen.
- Field-adjustable regulator.
- Replaceable operating coils (no gas interruption).
- Outlet pressure tap.
- Both models packaged with the most popular main burner orifices to replace many OEM models.

SPECIFICATIONS

Type of Gas	Natural or LP gas (conversion kit included)
Pressure Regulator Setting	Nat. Gas: 2.8" to 5.4" W.C. LP Gas: 8.5" to 12.0" W.C.
Operating Ambient	Temperature: 32° to 155°F
Max. Pressure Rating	14" W.C. (½ PSI) max.
Electrical	120 VAC, 60 Hz, .06 amps
1" P.D. Capacity	40,000 BTU/HR

PARTS AND ACCESSORIES

- F91-3889 — Replacement Coil (Secondary)
- F91-3890 — Replacement Coil (Boost/Hold)

Model Number	Coil Voltage	Outlet Flow Direction	Inlet/Outlet Size	Regulator Adjustment Range
25M01A-100	120 VAC	Right Angle Left	3/8" NPT X 11/32"	Nat. Gas: 2.8" to 5.4" W.C.
25M01A-101	120 VAC	Right Angle Right	3/8" NPT X 1/32"	LP Gas: 8.5" to 12.0" W.C. (Conversion Kit Included)

Mounting Position — Control may be mounted in the following positions: horizontal, vertical or 90° of horizontal. Do not mount upside down.



F91-3889



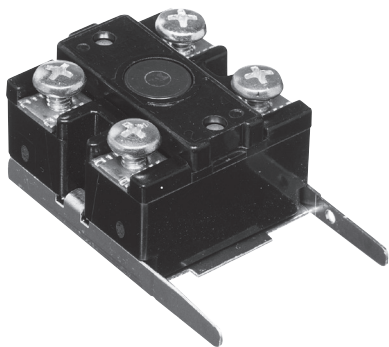
F91-3890

2500 SERIES REPLACEMENT GAS VALVE COILS

FEATURES

- Easy installation of replacement coil assemblies.
- Available for most popular models.
- Single or complete coil sets

Model Number	Application	Description	OEM
F91-3889	25M01A-xxx	120V Coil Replacement for 25M valve individual pack secondary coil	Used on Whirlpool, Electrolux, GE, Maytag, Speed Queen
F91-3890	25M01A-xxx	120V Coil Replacement for 25M valve individual pack booster and holding coil	Used on Whirlpool, Electrolux, GE, Maytag, Speed Queen
F91-4241	25M01A-xxx	Boost/host coil and secondary coil (120V, 60 Hz) for 25M dryer gas valve (includes F91-3889 plus F91-3890 combined)	Used on Whirlpool, Electrolux, GE, Maytag, Speed Queen



754-1

ELECTRIC WATER HEATER THERMOSTATS
AND LIMITS – UNIVERSAL REPLACEMENTS

Surface Mount Temperature Sensing Controls

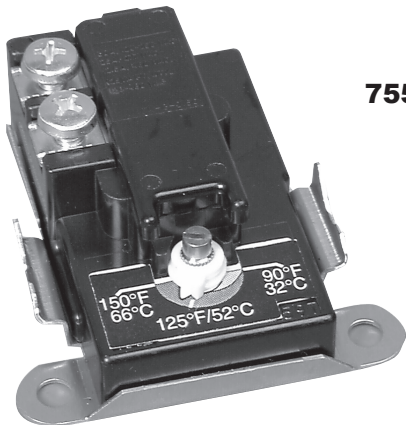
FEATURES

- High electrical capacity.
- Snap-Action contact.
- Long life-proven reliability.
- Adjustable control or manual reset styles.

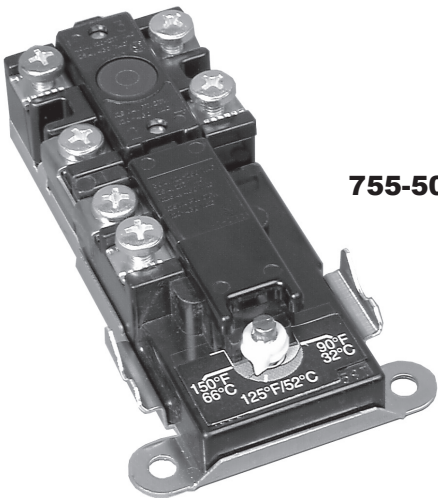
SPECIFICATIONS

Agency U.L. and C.S.A. approved

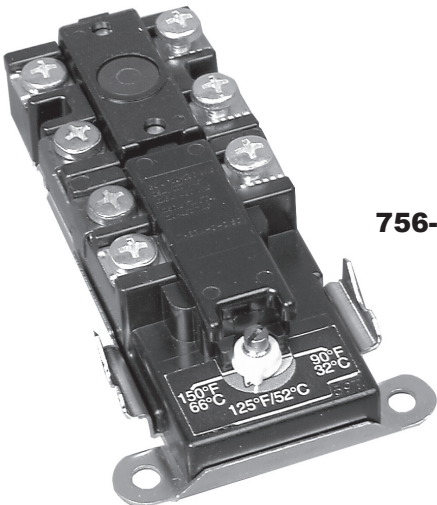
Model Number	Description	Switch Action	Range	A.C. Electrical Ratings (Non-Inductive)		
				120 / 240 VAC	277 VAC	480 VAC
754-1	DPST limit (manual reset)	Open on Rise	170°F fixed (77°C)	—	40.0A	25.0A
755-1	SPST thermostat	Open on Rise	90 to 150°F (32 to 66°C)	30.0A	25.0A	12.5A
755-50	754-1 + 755-1	—	—	30.0A	25.0A	12.5A
756-1	SPDT thermostat	Open 1-2 on Rise	90 to 150°F (32 to 66°C)	30.0A	25.0A	12.5A
756-50	754-1 + 756-1	—	—	30.0A	25.0A	12.5A



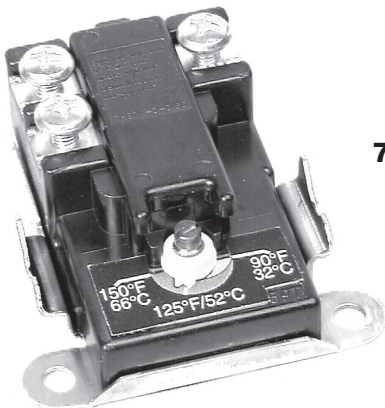
755-1



755-50



756-50



756-1

HYDRONIC /
APPLIANCE



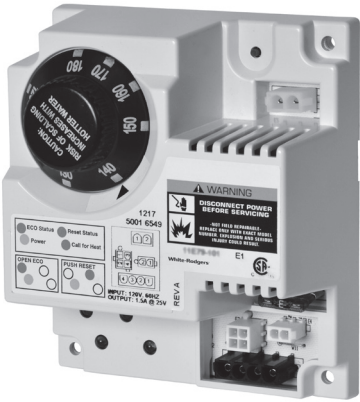
**37E73A SERIES INTELLI-VENT CONTROLS
FOR POWER VENTED WATER HEATERS**

Combination Gas, Ignition and Thermostat Controls

FEATURES

- Intelli-vent combines gas, ignition and thermostat into one control.
- Right angle with 1/2" N.P.T. inlet and 1/2" inverted flare outlet.
- 70° to 160° range.
- Regulation range 20,000 to 150,000 BTU's.
- Natural gas only.

Model Number	Replaces OEM Model Number	Original Equipment Manufacturer
37E73A-903	184960	A.O. Smith
37E73A-903	9003691005	State Industries
37E73A-906	9005964005	State Industries
37E73A-918	56000152A	Giant
37E73A-921	GSW 64020	GSW
37E73A-922	37E73A-322	GSW (White-Rodgers Model Number)
37E73A-922	GSW 64021	GSW
37E73A-927	SP13845D	Rheem



11E79-901

11E79-901 INTEGRATED WATER HEATER CONTROL

Solid State Thermostat Control for Gas Fired Commercial Water Heater Applications

FEATURES

- Provides relay switched output for damper or inducer fan applications and a "Call for Heat" signal and power to energize a gas valve.
- Receives input signals from a temperature probe and Electric Cutoff (ECO).
- Controls temperature with an integrated temperature control knob.
- Provides diagnostic LED's to trouble shoot system faults and issues.

SPECIFICATIONS

Electrical Ratings:

Input & Frequency 120 VAC, 60 Hz
XFMR Sec. Current 1.5 A @ 24 VAC
Field Output (DD4, DD2) 1.5A @ 24 VAC

Temperature Range

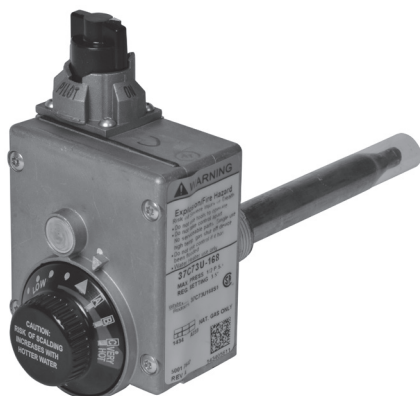
Setpoint Range 120°F-180°F

11E79-901 Model Number Replacement Cross Reference Table

Model Number	Replaces OEM Model	Temperature Range
11E79-901	11E79-101 11E79-301	120°F to 180°F

NEW

HYDRONIC /
APPLIANCE

**37C73U-168****37C SERIES GAS WATER HEATER CONTROLS**

For Replacement of Standard Gas Water Heater Controls with
Built-In E.C.O. (Energy Cut Off)

FEATURES

- Automatic shut-off of main and pilot gas in the event of pilot failure.
- Pilot gas cock with safe lighting feature and filter.
- Temperature adjustment.
- Manifold pressure tap.
- Built-In E.C.O. (Energy Cut Off) non-cycling high limit.

SPECIFICATIONS

Inlet Size	1/2" NPT
Outlet Size	1/2" inverted flare
Outlet Adapter Fittings	1/2" inverted flare x 3/8" NPT reducer (furnished with controls noted below) adapter. 1/2" x 1/2" inverted flare outlet extension adapter
Mounting	3/4" NPT, 4 1/2" bulb insertion length
Pilot Connection	1/4" compression fitting

Model Number	Pressure Regulation		Temperature Range	Shank Length	Gas Type
	Main Burner	Pilot			
37C73U-168 ①	3.5" W.C. (A.O. Smith Style)	4.0" W.C.	70 to 160°F (21 to 71°C)	1 1/4"	Natural Gas (Right hand threads)
37C72U-185 ②	10.0" W.C.	10.0" W.C.	70 to 160°F (21 to 71°C)	1 1/4"	L.P. Gas (Left hand threads)

① Outlet adapter fittings included.

② Includes Left Hand outlet extension fittings: 1/2" LH x 1/2" LH inverted flare and 1/2" LH x 3/8" LH inverted flare

Replacement Gas Water Heater Controls

Model Number	Replaces OEM Model Number	Main Burner	Pilot	Temperature Range	Shank Length	OEM
37C73U-171	37C73U-274	4.0" W.C. Nat. Gas	4.0" W.C. Nat. Gas	70° - 160°F	2 1/2"	A. O. Smith
37C73U-173	37C73U-640	4.0" W.C. Nat. Gas	4.0" W.C. Nat. Gas	70° - 160°F	1 1/4"	A. O. Smith
37C73U-172	37C73U-641	4.0" W.C. Nat. Gas	4.0" W.C. Nat. Gas	70° - 160°F	2 1/4"	A. O. Smith
37C73U-174	37C73U-652	5.0" W.C. Nat. Gas	5.0" W.C. Nat. Gas	70° - 160°F	1 1/4"	A. O. Smith
37C73U-170	37C73U-836	4.0" W.C. Nat. Gas	4.9" W.C. Nat. Gas	70° - 160°F	1"	Rheem



11B79-3

11B79-3 GAS WATER HEATER CONTROL

Commercial Gas Water Heater Control with Built-In ECO (Energy Cut-Off) is a Direct Replacement for A.O. Smith Part # 192828-000

FEATURES

- All bulbs are full direct immersion – no immersion well required.
- Case element has a bulb for the ECO and thermostat.
- Thermostat has a remote build with an integral to remote bulb volume ratio of 3:1.
- Terminal insulator on thermostat.
- Remote capillary routed through immersion nut for strain relief.
- Dial has both °F and °C scale.
- Temperature regulating device for use in applications not exceeding 180°F (82°C)
- ECO contacts gold plated with special adjustments.
- 1/4" male spade terminals on thermostat.
- Ground screw.
- Center bottom knockout removed.

SPECIFICATIONS

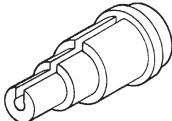
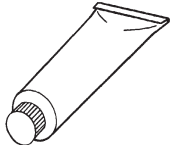
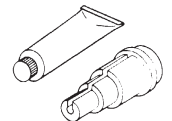
Case Element. 3/4" NPT
2 3/4" shank, 4 5/8" beyond thread
Remote Element. 3/4" NPT
Compression fitting on 1-1/2" stud
5 1/4" beyond stud

NEW

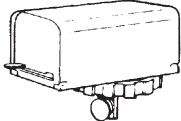
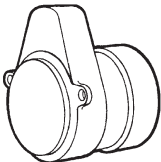
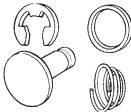
Model Number	Thermostat		E.C.O.	
	Electrical Rating	Switch Action	Electrical Rating	Switch Action
11B79-3	24 VAC - 0.75 Amp 0.25 to 1.0 VDC - 0.25 Amp 10 F.L.A., 60 L.R.A., 120 VAC	Open on Rise Differential: Fixed 4°F (2.2°C)	24 VAC - 0.75 Amp 0.25 to 1.0 VDC - 0.25 Amp	Open on Rise @ 205°F (96°C) Differential: Non-Cycling, Manual Reset

HYDRONIC /
APPLIANCE

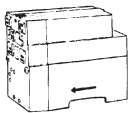
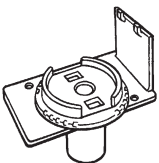
**TEMPERATURE AND
HOT WATER CONTROLS
1000–1100 SERIES**

Item Number	Model Number	Description
	F71-0924	Well adapter for 1100 series bulbs
	F145-0163	Heat transfer compound
	F145-0650	F71-0924 and F145-0163 packed together

**COMPACT ZONE VALVES
13A00 SERIES**

Item Number	Model Number	Description
	F19-0181 F19-0187	POWER HEAD (includes seal ring) For 2-way zone valves 25v with conduit hub 25v with plug-in panel that includes an auxiliary switch
	F19-0190	MOTOR 24v motor
	F84-1215	VALVE DISC Contains one disc, spring, E-ring and body seal ring

ZONE VALVES – 1300 SERIES

Item Number	Model Number	Description
	F19-0097 F19-0104	MOTOR ASSEMBLIES For 1311-102, -103, -104 For 1361-102, -103, -104 Water seal replacement kit not included
	F84-0433 F84-0434 F84-0435	VALVE ASSEMBLIES 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	WATER SEAL REPLACEMENT KIT (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")