

L8124A,B,C,E,G,L,M Aquastat® Relays

PRODUCT DATA



GENERAL

These immersion type controllers are for use with forced hydronic heating systems that include domestic hot water service.

FEATURES

- L8124 Aquastat® Relays provide high limit, low limit, and circulator control for maintaining boiler temperatures.
- L8124 Aquastat Relays can provide multizone control by using a separate circulator and R845 Relay for each zone.
- All L8124 Aquastat Relays mount directly on the boiler.
- L8124E,G and L have large transformers and extra terminals for supplying power to low voltage zone valves.
- L8124M is for use in a wood-coal/gas-oil multifuel heating system. Circulator is independently controlled by the thermostat.

Contents

General	1
Features	1
Specifications	2
Ordering Information	2
Installation	5
Wiring	7
Operation	10
Setting And Checkout	10
Checkout	14
Material Safety Data Sheet (MSDS)	14



SPECIFICATIONS

IMPORTANT

The specifications given in this publication do not include normal manufacturing tolerances. Therefore, this unit may not exactly match the listed specifications. Also, this product is tested and calibrated under closely controlled conditions, and some minor differences in performance can be expected if those conditions are changed.

TRADELINER® Models

TRADELINER models are selected and packaged for ease of handling, ease of stocking, and maximum replacement value. TRADELINE model specifications are the same as those of standard models except as noted in Table 1.

Tradeliner Models Available L8124B,E,G,L Aquastat Relays without well and spud.

Additional Features:

- Heat-conductive compound for better bulb response in oversized well.
- Case can be vertically or horizontally mounted.
- Field-addable limit stops.
- TRADELINE pack with cross reference label and special instructions.

Pressure Rating:

200 psi (1380 kPa) on outside of immersion well.
100 psi (690 kPa) on capsule if inserted directly.

Maximum Ambient Temperature:

Case: 150°F (66°C).

Sensing element: 265°F (129°C).

Thermostat Heat Anticipator Setting: 0.2A.

Low Limit:

Setting: 110°F to 220°F, adjustable (43°C to 104°C).
Differential: 10°F to 25°F, adjustable (6°C to 14°C).

High Limit:

Setting: 130°F to 240°F, adjustable (54°C to 116°C).
Differential: 10°F, fixed (6°C).

Mounting Means: 1/2 or 3/4 in. taper pipe threaded.

Dimensions: See Fig. 1 and 2.

Sensing Element: 3/8 x 2-7/8 in (10 x 73 mm).

Insulation Depth: 1-1/2 or 3 in. (38 or 76 mm);
see Fig. 1 and 2.

Insertion Length: 3-3/8 in. (86 mm).

Approvals:

Underwriters Laboratories Inc.:

Listed (L8124 models with well): File No. MP466,
Guide No. MBPR.

Component Recognized (L8124 Models Without Well):
File No. MP466, Guide No. MBPR2.

Canadian Standards Association:

Component Recognized: File No. LR1620,
Guide No. 400-E-O.

ORDERING INFORMATION

When purchasing replacement and modernization products from your TRADELINE® wholesaler or distributor, refer to the TRADELINE® Catalog or price sheets for complete ordering number.

If you have additional questions, need further information, or would like to comment on our products or services, please write or phone:

1. Your local Home and Building Control Sales Office (check white pages of your phone directory).
2. Home and Building Control Customer Relations
Honeywell, 1885 Douglas Drive North
Minneapolis, Minnesota 55422-4386

In Canada—Honeywell Limited/Honeywell Limitée, 35 Dynamic Drive, Scarborough, Ontario M1V 4Z9.

International Sales and Service Offices in all principal cities of the world. Manufacturing in Australia, Canada, Finland, France, Germany, Japan, Mexico, Netherlands, Spain, Taiwan, United Kingdom, U.S.A.

Table 1. Aquastat Relay models.

Model Number	Burner Control Circuit	Case Dimensions						Can be Used For Multizone With Circulators ^a	No. of V8043 Zone Valves Powered Without Additional Transformer	Electrical Ratings		Mounting
		Height		Width		Depth				Burner Circuit	Circulator or Circuit	
		in.	mm	in.	mm	in.	mm					
L8124A	120V	6-1/8	156	4-3/8	111	3-1/16	78	Yes	—	Same as L8124A-G,L circulator rating	120 Vac: 7.4A (full load); 44.4A (locked rotor)	Vertical
L8124B	^b	6-1/8	156	4-3/8	111	3-1/16	78	—	—	0.25A at 1/4 to 12 Vdc		Vertical or horizontal
L8124C	120V	4-3/8	111	6-1/8	156	3-1/16	78	Yes	—	Same as L8124A-G,L circulator rating	240 Vac:3.7A (full load); 22.2A (locked rotor)	Horizontal
L8124E	24V	6-1/8	156	4-3/8	111	3-1/16	78	Yes	2	1.25A at 24 Vac; 30 VA (total load) B1-B2 TV-Z		Vertical or horizontal
L8124G	120V	6-1/8	156	4-3/8	111	3-1/16	78	—	2	Same as L8124A-G,L circulator rating		
L8124L	120V	4-3/8	111	6-1/8	156	3-1/16	78	Yes	2	Same as L8124A-6,L circulator rating		
L8124M	120V	4-3/8	111	6-1/8	156	3-1/16	78	Yes	—	Same as L8124A		Horizontal

^a Multizone control can be provided by using a separate circulator and R845 Relay for each zone.

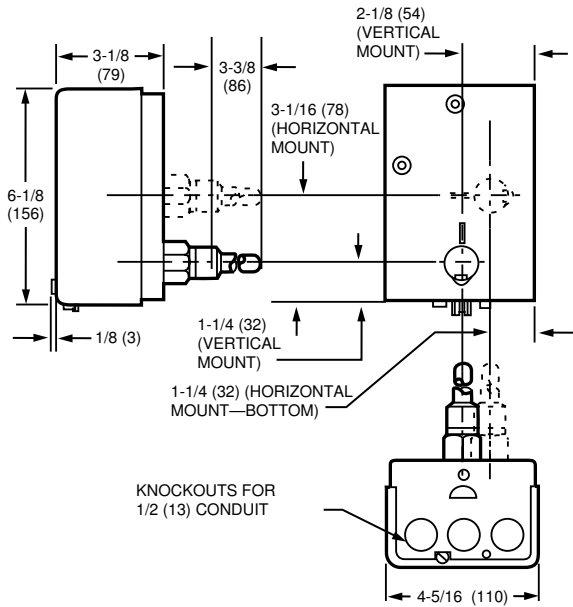
^b Contacts are not powered; they are rated for switching of millivoltage loads.

Replacement Aquastat Assemblies:

See Table 2 and Fig. 3 through 7.

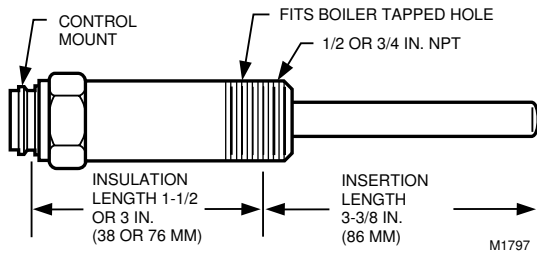
Table 2. Replacement Aquastat assemblies.

Model	Fahrenheit	Celsius (L8124A, 100/220V Model Only)
	1-1/2 in. or 3 in. (38 or 76 mm) insulation	1-1/2 in. or 3 in. (38 or 76 mm) insulation
L8124A-C, E,G,L,M	125026AAE	125026BAC



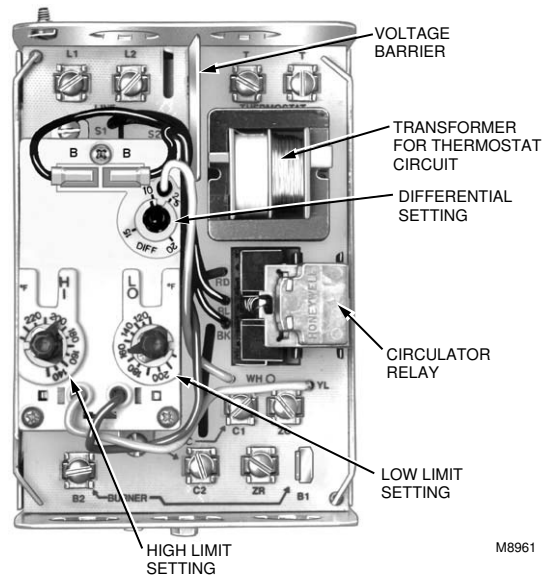
M8925

Fig. 1. L8124 mounting dimensions in in. (mm).



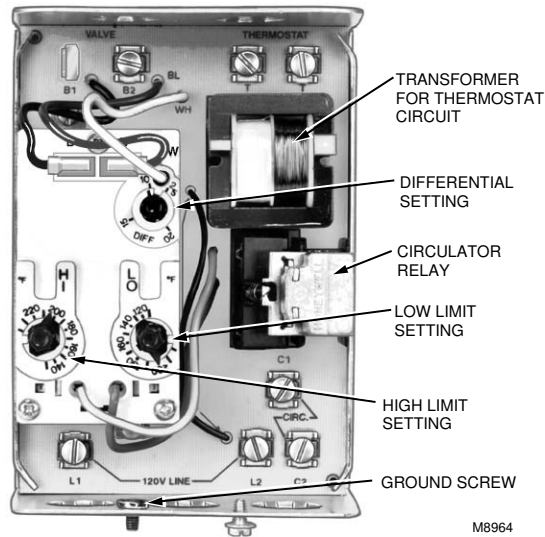
M1797

Fig. 2. Immersion well dimensions. (Refer to form 68-0040, Wells and Fittings for Temperature Controllers, to order well.)



M8961

Fig. 3. Internal view of L8124A and C.



M8964

Fig. 4. Internal view of L8124B.

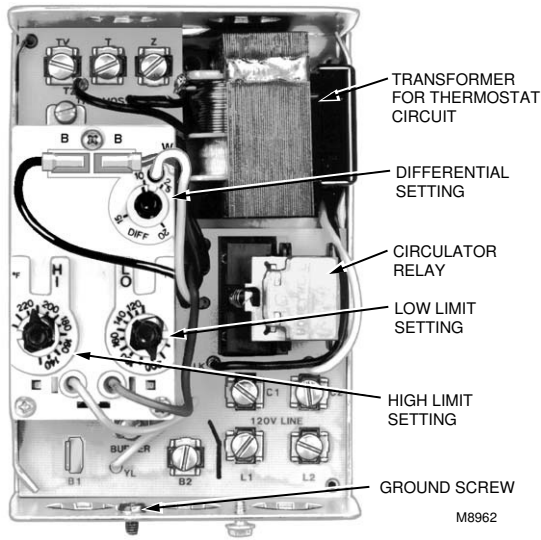


Fig. 5. Internal view of L8124E.

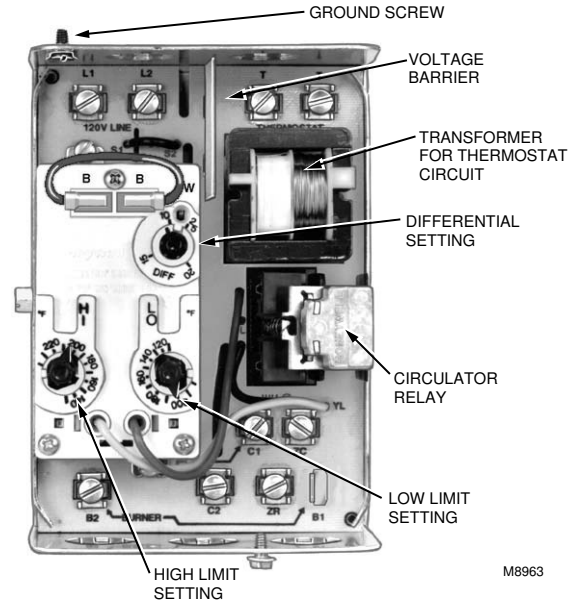


Fig. 7. Internal view of L8124M.

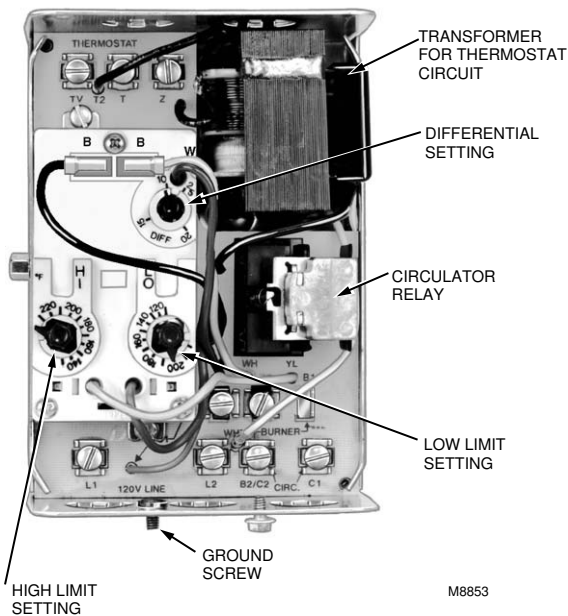


Fig. 6. Internal view of L8124G and L.

INSTALLATION

When Installing This Product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

⚠ WARNING

Fire or Explosion Hazard.

Can cause severe injury, death or property damage.

Product is for use only in a system with a pressure relief valve.

⚠ WARNING

Electrical Shock Hazard.

Can cause severe injury, death or property damage.

Disconnect power supply before beginning installation to prevent electrical shock or equipment damage.