

L404A-D, F; L604A,L Pressuretrol® Controllers

PRODUCT DATA



APPLICATION

L404 and L604 Pressuretrol® Controllers are line voltage pressure controllers that provide operating control, automatic limit protection, or manual reset limit protection for pressure systems of up to 300 psi (21.1 kg/cm² or 2068 kPa).

FEATURES

- Can be used with steam, air, non-combustible gases, or fluids non-corrosive to the pressure sensing element.
- Stainless steel diaphragm (except 300 psi [21.1 kg/cm²; 2068 kPa] models) also allows use with ammonia, oxygen, distilled water and similar media.
- L404B is recommended for supervision of atomizing medium pressure in oil burner systems.
- Models are available with single-pole, single-throw (spst), single-pole, double-throw (spdt), or double-pole single-throw (dpst) switching and in a variety of operating ranges.
- Dustproof, trouble-free mercury switches (all models except L404F, which has snap-acting switch).
- Automatic reset models have adjustable, subtractive differential.
- Trip-free mechanism on manual reset models assures that limit function of controller cannot be defeated by jamming reset lever.
- Screw adjustments made on top of case.
- Scaleplates marked in English (psi) and Metric (kg/cm²) units.
- L404F models available with European enclosure, British Standard Pipe Threads, ground screw, and scale plates marked in kg/cm² and either psi or kPa.
- Clear plastic cover on case to observe pressure settings and switch action.
- Leveling indicator visible through cover.
- Hexagonal fitting with 1/4-18 NPT internal threads for direct mounting to 14026 Steam Trap (siphon loop).
- Surface mount is available using screws through holes (knockouts) in case backing.

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SPECIFICATIONS

TRADELINE® Models

TRADELINE® models are selected and packaged to provide ease of stocking, ease of handling and maximum replacement value. Specifications of TRADELINE® controls are the same as those of standard models, except as noted below.

TRADELINE® Models Available:

L604A Pressuretrol® Controllers—available in 2 to 15, 5 to 50, 10 to 150 and 20 to 300 psi (0.14 to 1.1 kg/cm² [14 to 103 kPa], 0.4 to 3.5 kg/cm² [34 to 345 kPa], 0.7 to 10.6 kg/cm² [69 to 1034 kPa], and 1.4 to 21.0 kg/cm² [138 to 2068 kPa]).

Additional Features: TRADELINE® pack with cross-reference label.

Standard Models:

Models:

L404A-D,F and L604A,L Pressuretrol® Controllers. See Table 1.

NOTE: A 14026 Steam Trap (siphon loop) is available, except where noted in Table 1. The steam trap is necessary for boiler installations.

Switches:

Mercury switches in all models except the L404F which has a Micro Switch™ snap-acting switch.

Pressure Sensing Element:

Stainless steel diaphragm (brass bellows in 300 psi [21.1 kg/cm² (2068 kPa)] models).

Ambient Temperature Range:

-35°F (-37°C) to +150°F (66°C).

NOTE: Also, see the NOTE in the Location and Mounting section.

Adjustment Means:

Screws on top of controller case. Scales are marked in psi and kPa.

Electrical Connections:

Internal screw terminals; hole in side of case for 1/2 in. (13 mm) conduit.

Mounting:

Hexagonal fitting on diaphragm has 1/4-18 NPT internal threads for mounting on a pipe or steam trap (siphon loop). Also can be surface-mounted using screws through two holes (knockouts) in back of case.

Dimensions: See Fig. 1. See Fig. 2 for mounting steam trap (siphon loop).

Weight: 2 lb. (0.91 kg).

Finish: Gray.

Approvals:

Underwriters Laboratories Inc. Listed (L404A,B,C,D,F; L604A,L only); file no. MP466, vol. 10, guide no. MBPR.

Canadian Standards Association certified (L404A,B,C,D,F; L604A,L only); file no. LR1620; guide no. 400-E-0.

Replacement Parts:

129178 Thermoplastic Cover.

14026 Steam Trap (siphon loop)—1/4 in. black iron pipe; necessary for boiler installations.

Accessories:

33312B Knurled Adjustment Knob—with setscrew; fits on main scale pressure adjusting screw.

4074BWJ Limit Stop Assembly—to limit setpoint ranges; includes 129564 Range Stop, 107194 Range Stop Screw, and 23466 Wrench.

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 Honeywell Automation and Control Products Sales Office (check white pages of your phone directory).
2. Honeywell Customer Care
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. Models Available .

Model	Switching Action on Pressure Rise to Setpoint	Operating Ranges ^a			Midscale Subtractive Differential ^a (Adjustable)			Maximum Surge Pressure		
		psi	kg/cm ²	kPa	psi	kg/cm ²	kPa	psi	kg/cm ²	kPa
L404A	spst, breaks circuit	0.5 to 5	0.035 to 0.35	3.4 to 35	Fixed (0.30 ± 0.15 psi maximum @ 1.5 psi)			8.5	0.6	59
		2 to 15 ^b	.14 to 1.0	14 to 103	2 to 6	0.14 to 0.41	14 to 4	50	3.5	345
		5 to 50	.35 to 3.5	34 to 345	4 to 12	.28 to 0.82	127 to 83	85	6.0	586
		10 to 150	.66 to 10.6	69 to 1034	8 to 16	0.56 to 1.10	55 to 110	225	15.8	1550
		20 to 300 ^c	1.4 to 21.0	138 to 2068	15 to 40	1.04 to 2.76	103 to 276	500	35.2	3445
L404B ^f	spst, makes circuit	2 to 15 ^b	.14 to 1.1	14 to 103	2 to 6	0.14 to 0.41	14 to 41	50	3.5	345
		5 to 50	.35 to 3.5	24 to 345	4 to 12	0.28 to 0.82	27 to 83	85	6.0	586
		10 to 150	.66 to 10.6	69 to 1034	8 to 16	0.56 to 1.10	55 to 110	225	15.8	1550
		20 to 300 ^c	1.4 to 21.0	138 to 2068	15 to 40	1.04 to 2.76	103 to 276	500	35.2	3445
L404C	spst, breaks circuit	2 to 15	.14 to 1.0	14 to 103	manual reset ^d (fixed, subtractive differential)			50	3.5	345
		5 to 50	.35 to 3.5	34 to 345				85	6.0	586
		10 to 150	.66 to 10.6	69 to 1034				225	15.8	1550
		20 to 300 ^c	1.4 to 21.0	138 to 2068				500	35.2	3445
L404D	spst, makes circuit	2 to 15	.14 to 1.0	14 to 103				50	3.5	345
		10 to 150	.66 to 10	69 to 1068				225	15.8	1550
L404F ^e	spdt snap-acting switch, makes R1-W, breaks R2-B	2 to 15	.14 to 1.0	14 to 103	2 to 6	0.14 to 0.41	14 to 41	50	3.5	345
		5 to 50	.35 to 3.5	34 to 345	6 to 14	0.41 to 0.97	41 to 97	85	6.0	586
		10 to 150	.66 to 10	69 to 1034	10 to 22	0.69 to 15.2	60 to 152	225	15.8	1550
		20 to 300 ^c	1.4 to 21.0	138 to 2068	20 to 50	1.4 to 3.5	138 to 345	500	35.2	3445
L604A	spdt circuit makes R-W, breaks R-B	2-15 ^b	.14 to 1.0	14 to 103	2 to 6	0.14 to 0.41	14 to 41	25	1.8	172
		5 to 50	.35 to 3.5	34 to 345	4 to 12	0.28 to 0.82	27 to 83	85	6.0	586
		10 to 150	.66 to 10	69 to 1034	8 to 16	0.56 to 1.10	55 to 110	225	15.8	1550
		20 to 300 ^c	1.4 to 21.0	138 to 2068	15 to 40	1.04 to 2.76	103 to 276	500	35.2	3445
L604L	spdt circuit makes R-W, breaks R-B	2-15	.14 to 1.0	14 to 103	manual reset ^d (fixed, subtractive differential)			25	1.8	172

^a Scaleplates are marked in both psi and kg/cm².

^b L404A,B and L604A models are available with 1 to 6 psi midscale subtractive differential in 2 to 15 psi models.

^c Brass bellows replace stainless steel diaphragm. Not suitable for use with ammonia, oxygen, or other corrosive materials.

^d L404C,D and L604L models are designated as Manual Reset 2 controllers; the trip-free reset mechanism does not permit the controller to function as an automatic-reset device when the manual reset lever is held in the reset position. The subtractive differential is fixed at the minimum value of the adjustable differential of the L404A for each corresponding operating range.

^e L404F only; all other models have mercury switches.

^f Also recommended for supervision of atomizing medium pressure (air or steam) in an oil burner system.

Table 2. Switch Contact Rating (in Amperes at 50/60 Hz).

Model	Load	120 vac	240 Vac	120 Vdc	240 Vdc
L404	Full Load	8.0	5.1	2.4	1.2
	Locked Rotor	48.0	30.5	24.0	12.0
	Noninductive ^a	10.0	5.0	5.0	2.0
L604A,L ^b	Full Load	8.0	5.1	2.0	1.0
	Locked Rotor	48.0	30.6	20.0	10.0
	Noninductive	10.0	5.0	8.0	4.0

^a L404F (snap-acting) does not have noninductive or dc ratings.

^b L604A and L have also been tested (and listed by Underwriters Laboratories Inc.) and breaking (not making) a load with a total rating of 9.8A full load, plus 360 VA ignition, plus 250 VA pilot duty at 120 Vac.

Table 3. Conversion Table (psi to kPa).

Operating Range			Subtractive Differential		
Equivalent			Equivalent		
Scale-Plate (psi)	kg/cm2	kPa	Scale-Plate (psi)	kg/cm2	kPa
0 to 15	0 to 10	0 to 103	—	—	—
2 to 15	0.14 to 1.0	14 to 103	1 to 6 2 to 6	0.77 to 4 0.14 to 0.4	7 to 41 14 to 41
5 to 50	0.3 to 3.5	35 to 345	4 to 12 5 to 14	0.3 to 0.8 0.4 to 1.0	28 to 83 41 to 97
5 to 150	0.3 to 10.3	34 to 1034	—	—	—
10 to 150	0.7 to 10.3	69 to 1034	8 to 16 10 to 22	0.6 to 1.1 0.7 to 1.5	55 to 110 69 to 152
20 to 360	1.4 to 20.7	138 to 2068	15 to 40	1.0 to 2.8	103 to 276 138 to 345



MERCURY NOTICE

If this control is replacing a control that contains mercury in a sealed tube, do not place your old control in the trash. Dispose of properly. This control also contains mercury in a sealed tube. It must also be disposed of properly when it is replaced.

Contact your local waste management authority for instructions regarding recycling and the proper disposal of an old control.