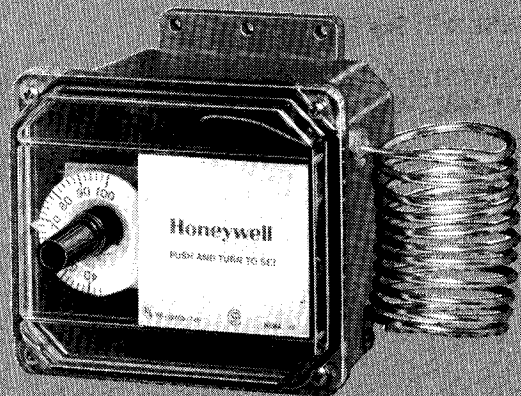


# Honeywell

## FARM-O-STAT AIRSWITCH CONTROLLERS

T631 CONTROLLERS PROVIDE LINE VOLTAGE CONTROL OF HEATING, COOLING, AND VENTILATING SYSTEMS IN FARM BUILDINGS OR STORAGE AREAS.

- Typical applications include barns, brooder houses, poultry houses, hog houses, pump houses, milk houses and crop storage houses.
- NEMA 4X enclosure resists oil, water, dust and corrosion.
- T631F,G meets National Electrical Code (Article 547-4) requirements for animal confinement buildings.
- Clear plastic cover reveals set point, discourages tampering.
- Sensing element externally mounted for fast response and tin-plated to resist corrosion.
- Reliable snap switches sealed against contamination.
- Insulated case has internal grounding screw for safety.
- Single-stage model (T631F) identified by red label, 2-stage model (T631G) by white label.
- Available with external set point adjustment.



## T631F,G

# SPECIFICATIONS

## MODELS:

T631F—35 F to 100 F [2 C to 38 C] setting range, one spdt snap switch (standard or 1 hp contact rating).

T631G—35 F to 100 F [2 C to 38 C] setting range, 2 spdt snap switches (1 hp contact rating). More model specifications in Table 1.

**SENSING ELEMENT:** Tin-plated copper capillary, mounted externally.

**WATERPROOF ENCLOSURE:** To retain waterproof rating of T631F,G controllers, use waterproof connector fittings.

**MOUNTING MEANS:** Screws through holes in flanges on case.

**SET POINT ADJUSTMENT:** Screwdriver/finger adjust dial under removable cover. On some models, set point adjustment is external. See Table 1.

**MAXIMUM AMBIENT TEMPERATURE;** 145 F [63 C] for both T631F,G

**DIMENSIONS:** See Fig. 1.

**UNDERWRITERS LABORATORIES INC. LISTED:** File No. E4436, Vol. 1, dated 12-17-80; Guide No. XAPX.

**MEETS NATIONAL ELECTRICAL CODE, ARTICLE 547-4.**

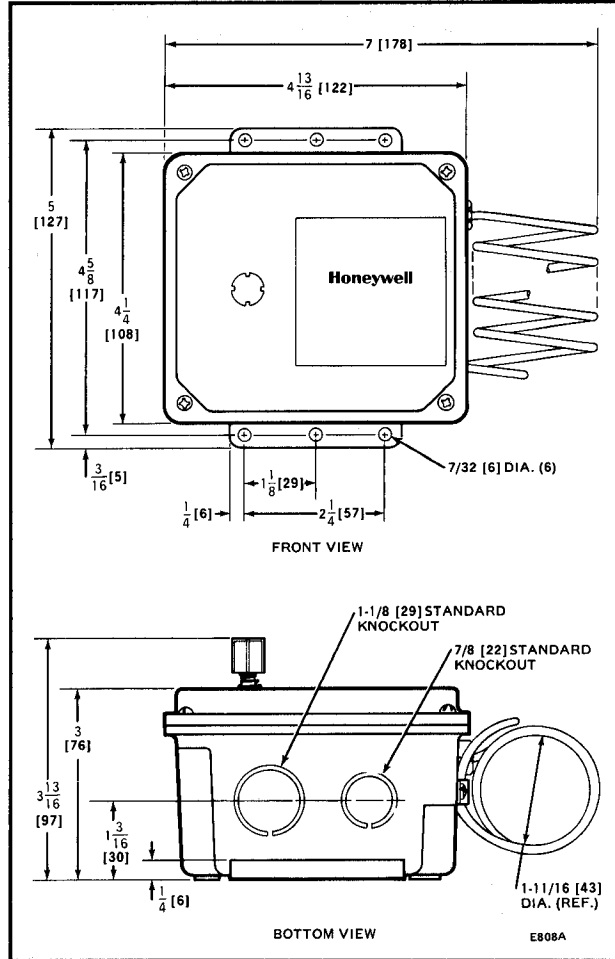


FIG. 1—T631 MOUNTING DIMENSIONS IN in. [mm IN BRACKETS].

# ORDERING INFORMATION

WHEN PURCHASING REPLACEMENT AND MODERNIZATION PRODUCTS FROM YOUR TRADELINE WHOLESALE OR YOUR DISTRIBUTOR, REFER TO THE TRADELINE CATALOG OR PRICE SHEETS FOR COMPLETE ORDERING NUMBER, OR SPECIFY—

1. Order number.
2. Scale range.
3. Differential (including interstage differential for T631G).
4. One hp switch(es) if desired.
5. Accessory, if desired.

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 BUILDING CONTROLS SALES OFFICE (CHECK WHITE PAGES OF PHONE DIRECTORY).
2. BUILDING CONTROLS DIVISION CUSTOMER SERVICE  
HONEYWELL INC., 1885 DOUGLAS DRIVE NORTH  
MINNEAPOLIS, MINNESOTA 55422-4386 (612) 542-7500

(IN CANADA—HONEYWELL LIMITED/HONEYWELL LIMITEE, 740 ELLESMERE ROAD, SCARBOROUGH, ONTARIO M1P 2V9) INTERNATIONAL SALES AND SERVICE OFFICES IN ALL PRINCIPAL CITIES OF THE WORLD.

ELECTRICAL RATINGS (A):

VOLTAGE	WITH STANDARD SWITCH				WITH SWITCH RATED AT 1 hp	
	24 Vac	120 Vac	240 Vac	277 Vac	120 Vac	240 Vac
Full Load	2.0	7.4	3.7	3.0	16.0	8.0
Locked Rotor	—	44.4	22.2	18.0	96.0	48.0

TABLE 1

MODEL NUMBER	TEMPERATURE SCALE RANGE		SWITCH DIFFERENTIAL		ADDITIONAL FEATURES
	F	C	F	C	
T631F1068 T631F1084 <sup>a</sup>	35 to 100	2 to 38	2.0	1.1	
T631F1076 T631F1092 <sup>a</sup>	35 to 100	2 to 38	3.5	1.9	Snap switch with 1 hp contact.
T631G1042 T631G1059 <sup>a</sup> T631G1109	35 to 100	2 to 38	2.0	1.1	Snap switches with 1 hp contact rating. Adj. interstage differential. <sup>b</sup>

<sup>a</sup> Set point adjusted externally.

<sup>b</sup> Interstage differential is adjustable from 0 F to 7 F [0 C to 4 C]. At 0 differential, both switches make at set point. With differential set above 0, speed change switch closes after fan switch, on temperature rise.

# 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

CAUTION

Disconnect power supply before connecting wiring to prevent electrical shock and equipment damage. **DO NOT** install the T631F,G in a system that is not waterproof. Condensation in such a system could enter the T631F,G enclosure and cause a potential electrical hazard.

**MOUNTING ON FLAT SURFACE OR SWITCH BOX:**

1. Remove controller cover (held by 4 captive screws)
2. Remove bottom knockout for wiring.
3. Attach controller to switch box or flat mounting surface in upright position (knockouts on bottom) using two No. 8 screws through holes in flanges on case. **DO NOT OVERTIGHTEN SCREWS.** If surface is brick, metal or concrete, mount a wooden panel on the surface and attach controller to panel.

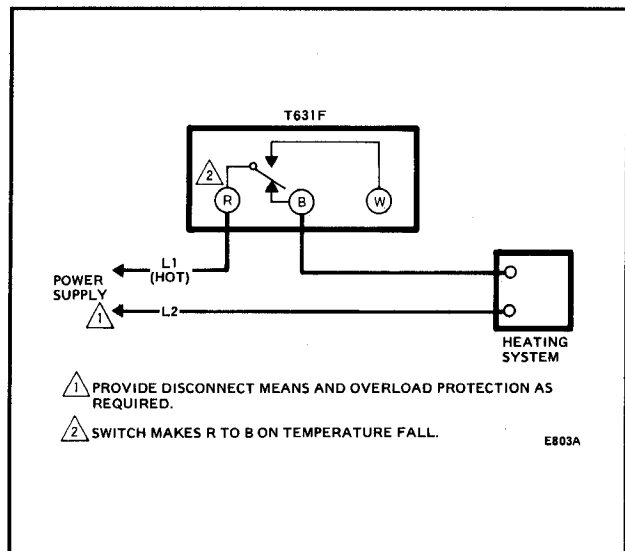
**NOTE:** Do not replace controller cover until wiring and checkout are complete.

**WIRING**

Disconnect power supply before making wiring connections to avoid possible electrical shock or equipment damage. All wiring must agree with local codes and ordinances.

When wiring controller, refer to diagrams of typical systems (Figs. 2-8) as well as those furnished with the system equipment.

1. With controller cover removed, run wires into controller through a waterproof connector.
2. Connect controller terminals as shown in applicable diagrams.
3. Verify operation of controller by performing procedure indicated in the CHECKOUT section.



**FIG. 2—T631F HOOKUP FOR HEATING CONTROL.**

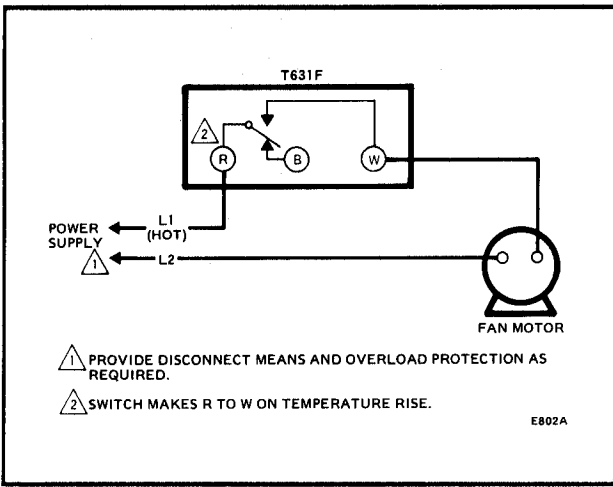


FIG. 3—T631F HOOKUP FOR CONTROLLING FAN.

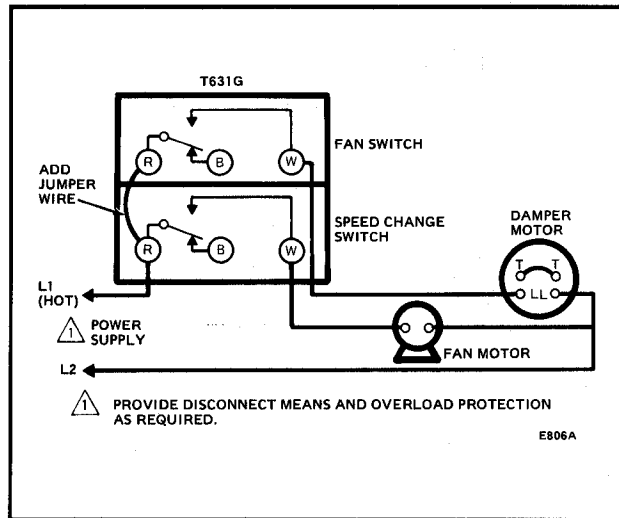


FIG. 6—T631G HOOKUP FOR CONTROLLING SINGLE-SPEED FAN AND DAMPER MOTOR.

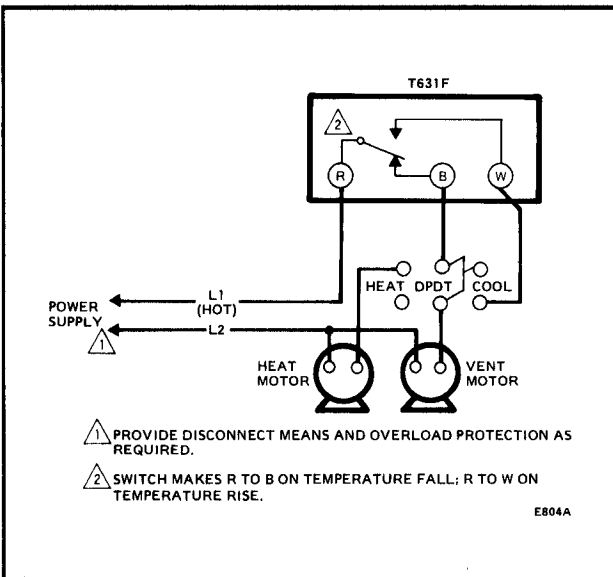


FIG. 4—T631F HOOKUP FOR BOTH HEATING AND COOLING CONTROL.

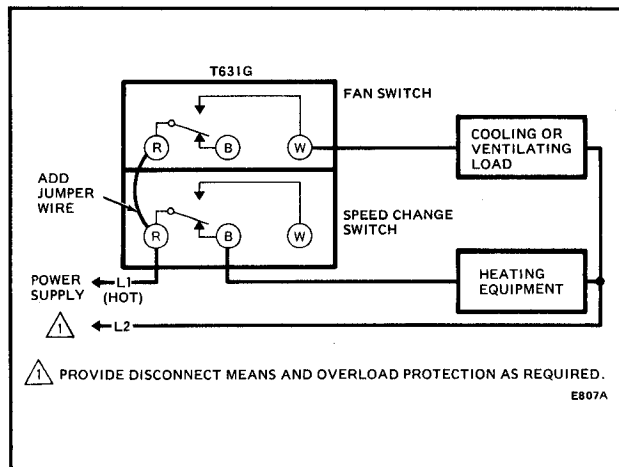


FIG. 7—T631G HOOKUP FOR HEATING AND COOLING (or ventilating) CONTROL.

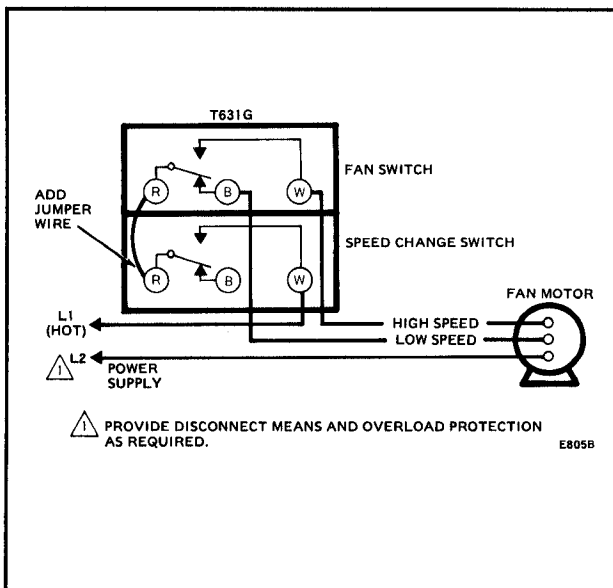


FIG. 5—T631G HOOKUP FOR CONTROLLING 2-SPEED FAN.

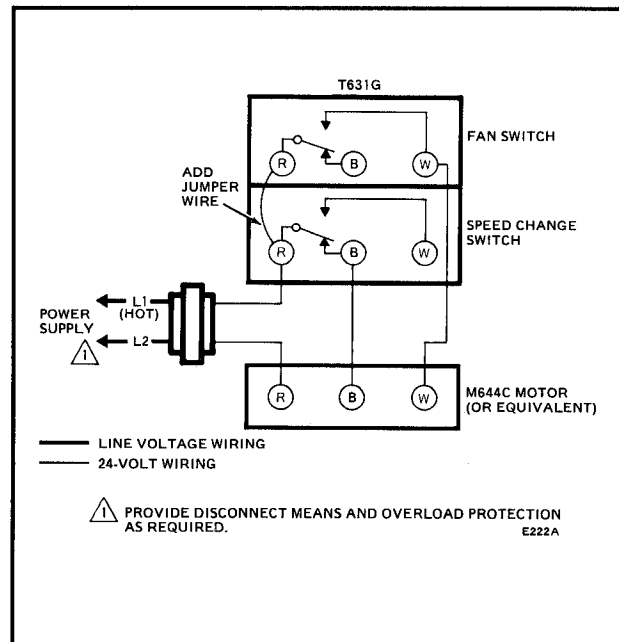


FIG. 8—T631G HOOKUP FOR FLOATING CONTROL OF DAMPER MOTOR.

# CHECKOUT

1. Check wiring connections.
2. Set controller dial at 100, then turn system power on (Fig. 9). Heating equipment should now be on (or cooling equipment should be off).
3. Slowly decrease dial setting from 100 to 40 and check that heating equipment goes off (or cooling comes on) as dial setting passes ambient temperature point.
4. Slowly increase dial setting from 40 back to 100 and check that heating now comes on (or cooling goes off).

## CAUTION

Always wait at least 5 minutes before restarting air conditioning compressors to prevent overload.

5. Replace cover and tighten plastic cover screws until snug. **DO NOT OVERTIGHTEN COVER SCREWS.**

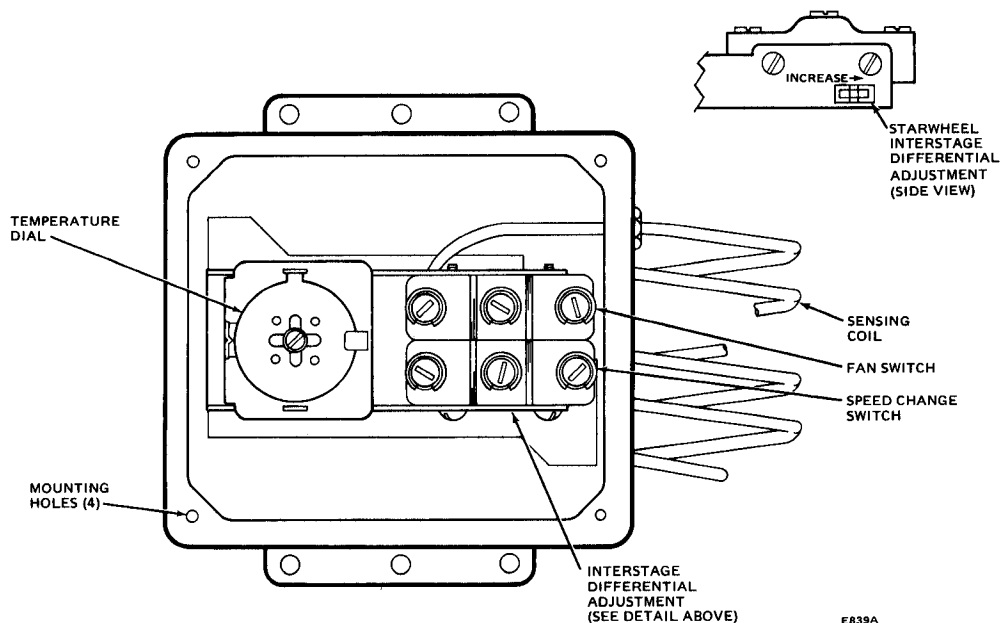


FIG. 9—T631G CONTROLLER FRONT VIEW.

### IMPORTANT

If the T631 is installed in an area where it is subjected to contamination, clean the temperature sensing coil periodically to maintain maximum controller efficiency.