Honeywell

Q7100A,C,D
Thermostat Subbases

TRADELINE ®

APPLICATION

The Q7100 Thermostat Subbases provide electronic control of commercial 24 Vac single or multistage heat pump or conventional heating and cooling systems. Select models have terminals for light emitting diodes LEDs, remote temperature sensors and remote setback timer. The LED models have up to two field configurable LEDs and up to two factory assigned LEDs. Refer to Table 1. All Q7100 Thermostat Subbases require a common wire to the supply power.

Table 1. Description of Q7100 Subbases.

Q7100	Use T7100	System	Stages[a]		Figs.
			Heat	Cool	
A	D or F	Conventional	1 or 2	1 or 2	8-9
C	E or F	Heat pump	1, 2 or 3	1 or 2	10-14
D	E or F	Heat pump	1 or 2	1 or 2	15

[a] Depends on the model.

RECYCLING NOTICE

If this control is replacing a control that contains mercury in a sealed tube, do *not* place your old control in the trash.

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

INSTALLATION

When Installing this Product...

1. Read these instructions carefully. Failure to follow the instructions can 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 completing installation, use these instructions to check out the product operation.

⚠ CAUTION

Disconnect power supply to prevent electrical shock or equipment damage.

Location

Subbase without Remote-Mounted Temperature Sensor
Install the subbase about 5 ft (1.5m) above the floor in an area with good air circulation at average temperature. See Fig. 1.

Do not install the subbase where it can be affected by:
— drafts, or dead spots behind doors and in corners.
— hot or cold air from ducts.
— radiant heat from sun or appliances.
— concealed pipes and chimneys.
— unheated (uncooled) areas such as an outside wall behind the thermostat.

Subbase with Remote-Mounted Temperature Sensor(s)
Install the subbase in an area that is accessible for setting and adjusting the temperature and settings.

Install the remote-mounted sensor(s) about 5 ft (1.5m) above the floor in an area with good air circulation at average temperature. See Fig. 1.

Do not mount the sensor(s) where it can be affected by:
— drafts, or dead spots behind doors and in corners.
— hot or cold air from ducts.
— radiant heat from sun or appliances.
— concealed pipes and chimneys.
— unheated (uncooled) areas such as an outside wall behind the thermostat.

If more than one remote sensor is required, they must be arranged in a temperature averaging network consisting of two, three, four, five or nine sensors. See Fig. 2 through 6.
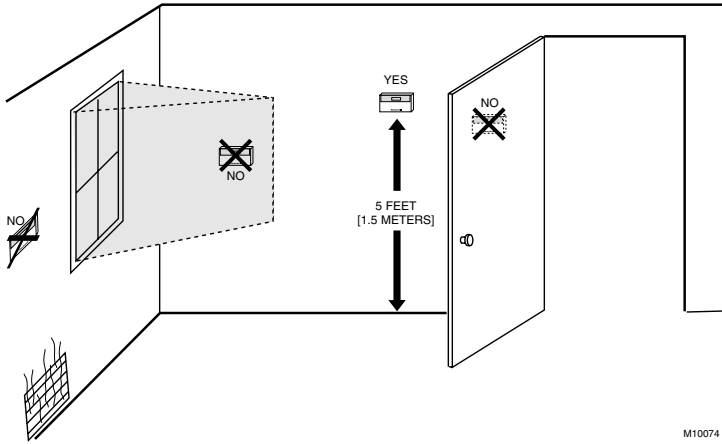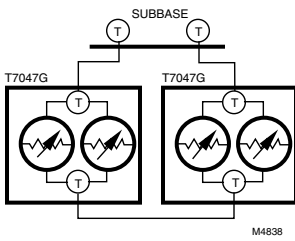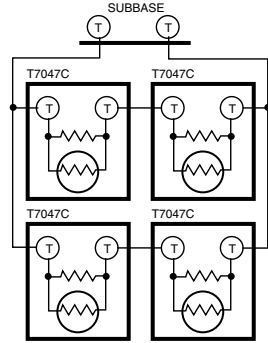
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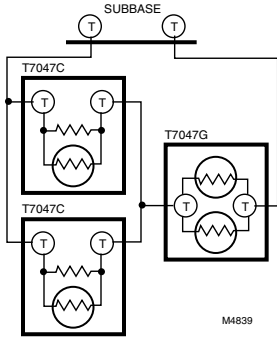**Fig. 1. Typical location of thermostat or remote-mounted sensor.**

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Fig. 2. Two T7047G Sensors providing a temperature averaging network for a T7100/Q7100 Thermostat/Subbase.
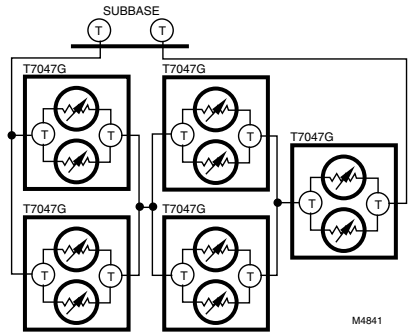

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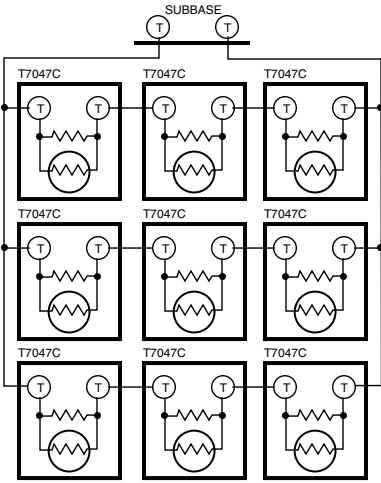**Fig. 4. Four T7047C Sensors providing a temperature averaging network for a T7100/Q7100 Thermostat Subbase.**

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Fig. 3. Two T7047C Sensors and one T7047G Sensor providing a temperature averaging network for a T7100/Q7100 Thermostat/Subbase.

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Fig. 5. Five T7047G Sensors providing a temperature averaging network for a T7100/Q7100 Thermostat/Subbase.

Fig. 6. Nine T7047C Sensors providing a temperature averaging network for a T7100/Q7100 Thermostat/Subbase.

Subbase Installation

The subbase can be mounted horizontally on the wall or a 2 in. x 4 in. wiring box. Position the subbase horizontally on the wall or on a 2 in. x 4 in. wiring box.

1. Position and level the subbase (for appearance only). The thermostat will function properly even when not level.
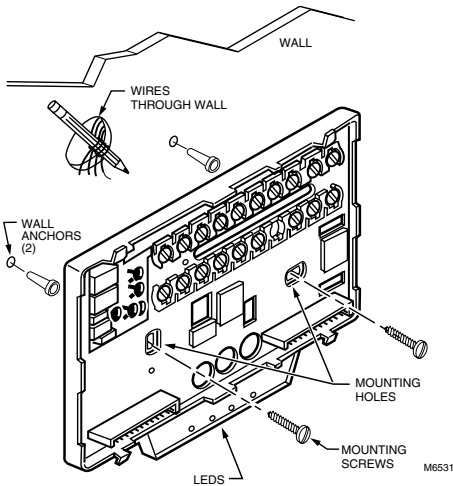2. Use a pencil to mark the mounting holes. See Fig. 7.

Fig. 7. Mounting the subbase.

3. Remove the subbase from the wall and drill two 3/16 inch holes in the wall (if drywall) as marked. For firmer material such as plaster or wood, drill two 7/32 inch holes. Gently tap anchors (provided) into the drilled holes until flush with the wall.
4. Position the subbase over the holes, pulling wires through the wiring opening.
5. Loosely insert the mounting screws into the holes.
6. Tighten mounting screws.

WIRING

All wiring must comply with local electrical codes and ordinances. Refer to Fig. 9 through 15 for typical hookups. A letter code is located near each terminal for identification.

⚠ CAUTION
Disconnect power before wiring to prevent electrical shock or equipment damage.

1. Loosen the terminal screws on the back of the thermostat and connect the system wires. See Fig. 8.

IMPORTANT
   Use 18 gauge, color-coded thermostat cable for proper wiring.

2. Securely tighten each terminal screw.
3. Push excess wire back into the hole.
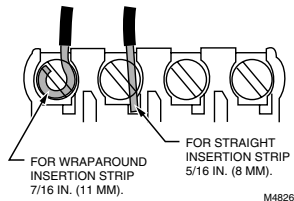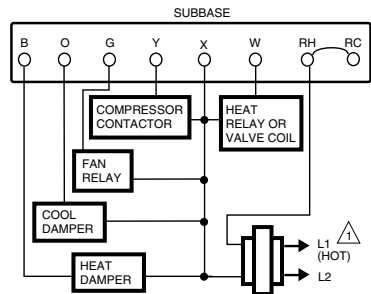4. Plug the hole with nonflammable insulation to prevent drafts from affecting the thermostat.

Fig. 8. Proper wiring technique.

Fig. 9. Typical hookup of Q7100A1044 in a one-stage heat and one-stage cool conventional system.

CAUTION:
EQUIPMENT DAMAGE WILL OCCUR IF POWER IS CONNECTED TO THE D TERMINALS.

POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

JUMPER RC TERMINAL TO RH TERMINAL WHEN INSTALLED ON A SYSTEM WITH ONE TRANSFORMER.
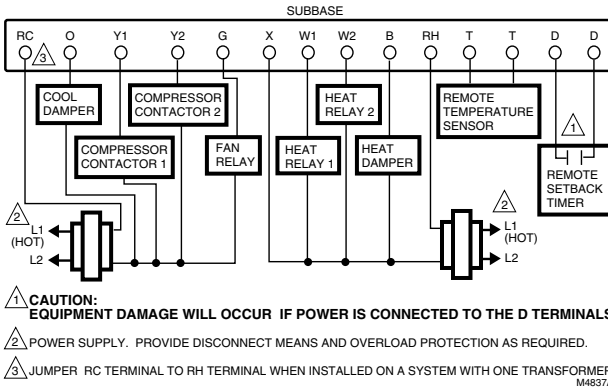
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Fig. 10. Typical hookup of Q7100A1010 in a two-stage heat and two-stage cool conventional system with two transformers.

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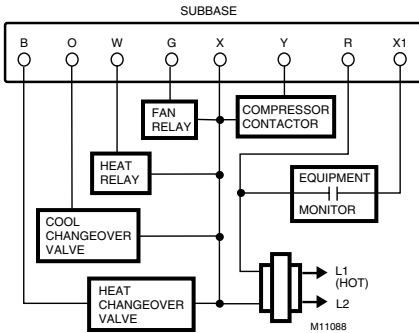**Fig. 11. Typical hookup of Q7100C1024 in a one-stage heat and one-stage cool heat pump system.**

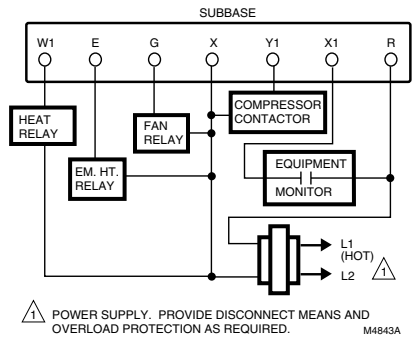POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

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Fig. 12. Typical hookup of Q7100D in a one-stage heat and one-stage cool heat pump system.
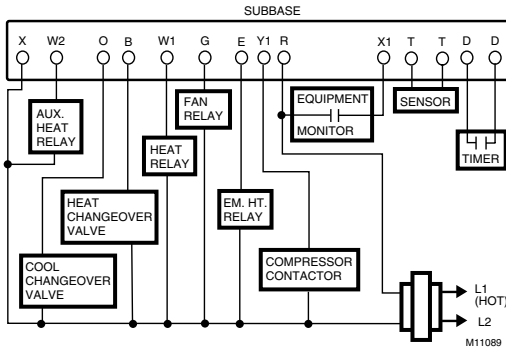

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Fig. 13. Typical hookup of Q7100C1016 in a two-stage heat and one-stage cool heat pump system. Includes remote temperature sensor and remote setback timer.

1. CAUTION: EQUIPMENT DAMAGE WILL OCCUR IF POWER IS CONNECTED TO THE D TERMINALS.

2. POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

3. EM. HEAT RELAY DOES NOT CYCLE. TO TURN OFF THE EM. HEAT, GO TO SYSTEM SELECTION AND CHOOSE HEAT.

4. SELECT MODELS HAVE LEDS.

5. X2 AND X4 NEED TO BE JUMPERED TO TERMINAL X.
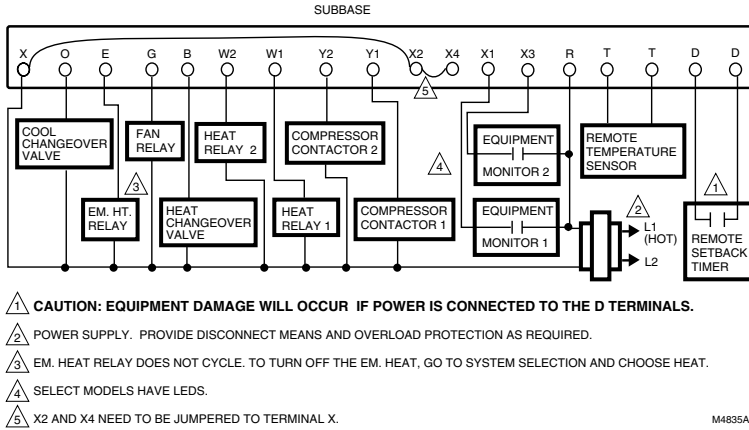
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Fig. 14. Typical hookup of Q7100C1008 in a two-stage heat and two-stage cool heat pump system. Includes remote temperature sensor and remote setback timer.

1. CAUTION: EQUIPMENT DAMAGE WILL OCCUR IF POWER IS CONNECTED TO THE D TERMINALS.

2. POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

3. SELECT MODELS HAVE LEDS.

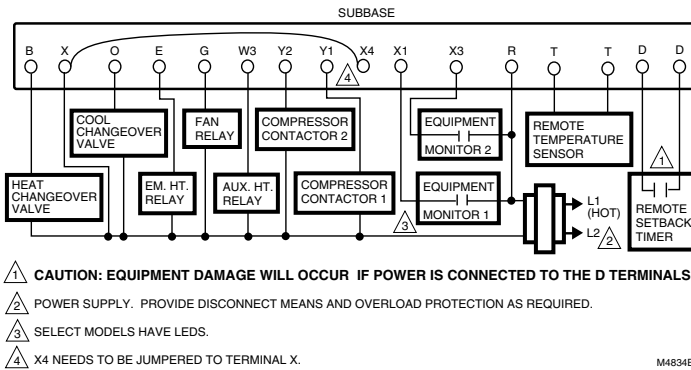4. X4 NEEDS TO BE JUMPERED TO TERMINAL X.

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Fig. 15. Typical hookup of Q7100C1073 in a three-stage heat and one-stage cool heat pump system. Includes remote temperature sensor and remote setback timer.

Mounting Thermostat on Subbase

Mount the thermostat on the subbase after the subbase is installed.

1. Engage tabs at the top of thermostat and subbase. See Fig. 16.
2. Press lower edge of case to close and latch.

NOTE: To remove the thermostat from the wall, first pull out at the bottom of the thermostat; remove top last.

IMPORTANT
   Refer to the thermostat installation instructions for Installer Setup, Settings, Installer Self-Test and Troubleshooting information.
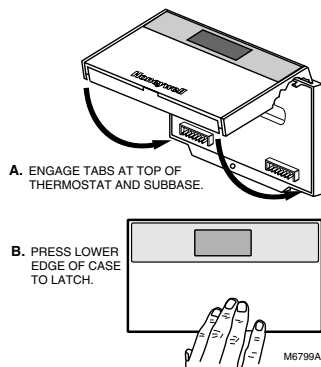

A. ENGAGE TABS AT TOP OF THERMOSTAT AND SUBBASE.

B. PRESS LOWER EDGE OF CASE TO LATCH.

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Fig. 16. Mounting thermostat on subbase.

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