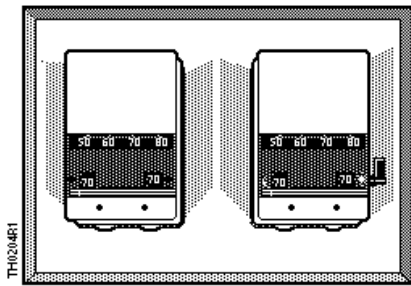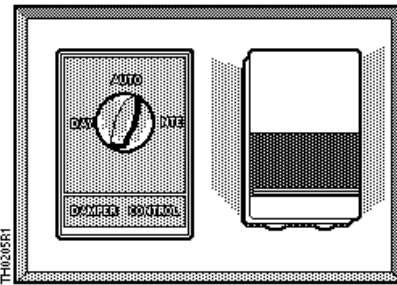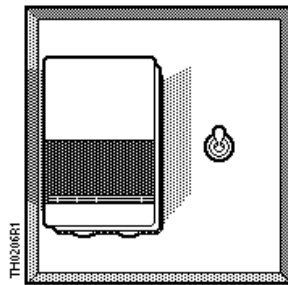# SIEMENS

Powers™ Controls

Multiple Sensor/Switch Finish Plate Kits

| Two Thermostats | Pneumatic Switch and Thermostat | Temperature Sensor and Electric Switch |

Description

This technical bulletin describes the use of finish plate kits to provide a low-cost means of mounting multiple sensors or sensor/switch combinations at the same location in a room. The finish plates are designed so various combinations of pneumatic devices (thermostats, hygrostats, transmitters, and switches), electric sensors and electric switches can be mounted side by side. They can be mounted over standard electrical boxes or over an opening cut in masonry or drywall.

Product Numbers

See Table 1.

Accessories

Tubing loop eight inches (203 mm) long with plug-in adapters or 1/4-inch (6.4 mm) OD plastic tubing, pkg. of 10 — 192-481

Mounting clips with screws for 1/2-inch (13 mm) or 5/8-inch (16 mm) drywall, pkg. of 20 — 182-685

Warning/Caution Notations

WARNING:	⚠	Personal injury/loss of life may occur if you do not perform a procedure as specified.
CAUTION:	⚠	Equipment damage, or loss of data may occur if you do not perform a procedure as specified.

Table 1. Product Numbers.

Kit Number	Finish	Use With These Devices	See Figure	Electrical Rough-In Box*			
				Drywall	Appleton Number*	Masonry	Appleton Number*
192-729	Brushed Stainless Steel	Pneumatic or Electric Sensor Under Powerstar Cover. Plus		4" Square × 2-1/8"D Box w/Bracket	4SDVB SPL-PL		
192-730	Desert Beige	Electric Toggle Switch	11	1/2" Raised Cover for 1-Device	8468A	3-3/4" H x 3-5/8" W x 3-1/2"D Box	M1-350
192-731	Brushed Stainless Steel	Pneumatic or Electric Sensor Under Powerstar Cover or		or 4-11/16" Square × 2-1/8"D Box	4SJD-SPL	or 3-3/4" H x 3-5/8" W x 3-1/2"D Box	M2-350
192-732	Desert Beige		12	1/2" Raised Cover for 1-Device	8485A		
		SW151 Pneumatic Switch **		1/2"Raised Cover for 2-Devices.	8486A		
		or					
		SW786 Pneumatic Switch ** 786-0500 786-0520		Adjustable Bar Hanger, If Required	SX115		
192-734	Desert Beige	Any Combination of Two: Pneumatic or Electric Sensor Under Powerstar Cover or		4-1/2" H × 8-5/8" W × 1-5/8" D Box	3G5075	3-3/4" H x 5-7/16" W x 3-1/2"D Box	M3-350
		SW1 5 1 Pneumatic Switch ** or	13	3/4" Raised Cover for 2-Devices	3GC-75	Low Voltage Partition, If Required	LVP-350
		SW786 Pneumatic Switch ** 786-0600 786-0520					

*Other sizes of boxes or covers and other manufacturers can be used.

** These devices require a 3-1/2" deep box.

Application

These applications illustrate the use of a single finish plate to provide multiple function sensing and/or control.

1. Four separate temperature setpoints. As an example, using two day-night thermostats, the following setpoints are possible: cooling day 78°F, cooling night 85°F, heating day 72°F, and heating night 55°F. An application would be heating and cooling coil control with night set back and set up for heating and cooling, also manual override and free energy band for both heating and cooling modes.
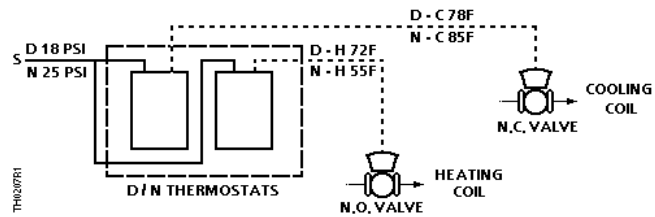

Figure 1. Four Separate Temperature Setpoints.

2. Three separate temperature setpoints. As an example, using a single temperature and day-night thermostat, the following setpoints are possible: cooling day 78°F, heating day 72°F, and heating night 55°F. An application would be control of a fan powered terminal box.
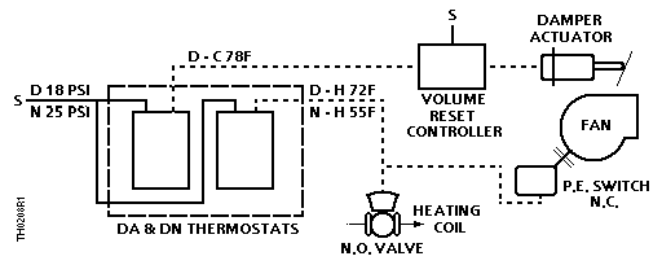

Figure 2. Three Separate Temperature Setpoints.

3. Temperature and humidity setpoints. As an example, using a free energy band thermostat and a hygrostat, the following setpoints are possible: heating 72°F, cooling 78°F, and heating humidity 40% rh. An application would be control of heating, cooling, and humidity coils. For single setpoint temperature and humidity control, transmitters and receiver controllers could be used.
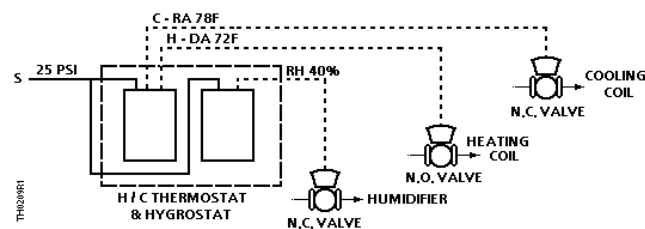

Figure 3. Temperature and Humidity Setpoints.

**Application,
Continued.**

4. Pneumatic temperature setpoint and fan control. An application would be a thermostat controlling a coil valve and a pneumatic selector switch controlling the fan through a PE switch.
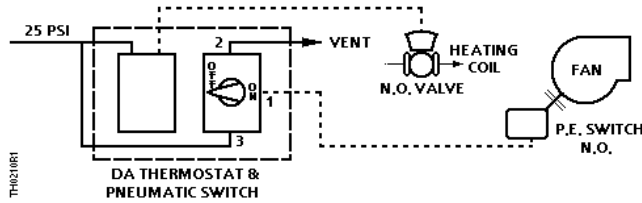

Figure 4. Pneumatic Temperature Setpoint and Fan Control.

5. Thermostat and electronic sensor. An application would be a thermostat controlling the space temperature by positioning a valve and damper actuator while the electronic sensor monitors the space temperature.
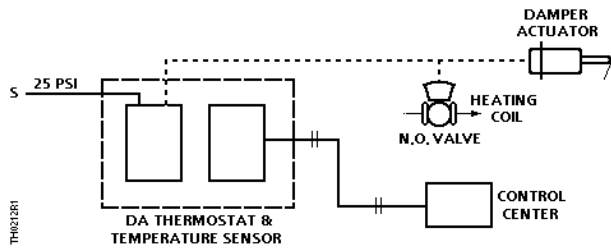

Figure 5. Thermostat and Electronic Sensor.

6. Electric temperature setpoint and fan control. An application would be an electronic sensor, through a programmable control unit, controlling a coil valve and damper actuator. An electric high-low-off toggle switch controls a fan.
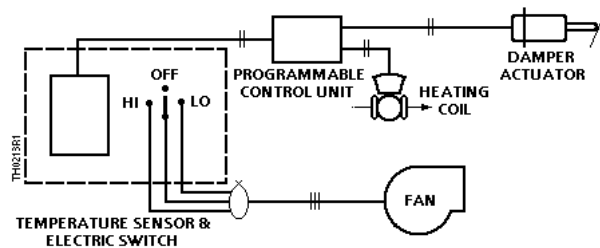

Figure 6. Electric Temperature Setpoint and Fan Control.

7. Electronic sensor and light switch. An application would be an electronic sensor through a programmable control unit positioning a damper actuator. The light switch controls lights in the space.
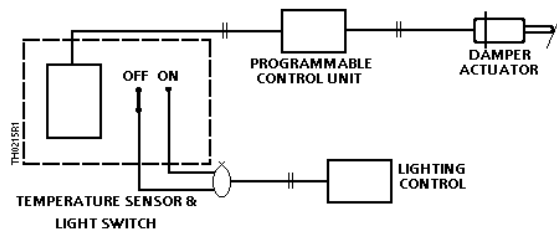

Figure 7. Electronic Sensor and Light Switch.

Installation

Without Rough-in Box

See Figures 11 through 13. They show the assembly of finish plate and mounting plate to rough-in box.

1. Select appropriate template, 2 or 3 gang cutout, from back of installation instructions 129-103 provided in finish plate kit. A reduced illustration of side 2 of 129-103 is shown in Figure 8.

2. Tape template to wall.

3. Drill required mounting holes and make cutout.

4. When installing commercial wall-type light switch to finish plate, drill two (2) additional "C" holes, if necessary, to provide clearance for screws that hold switch to finish plate.

5. Plastic anchors and screws are provided. When using them, place in "A" or "B" holes drilled with template.

6. If mounting clip kit 182-685 (pkg. of 20) is used, place clips over the drilled "A" or "B" holes. When installing a pneumatic switch, mounting clips must be installed as shown in Figure 9.

WARNING:

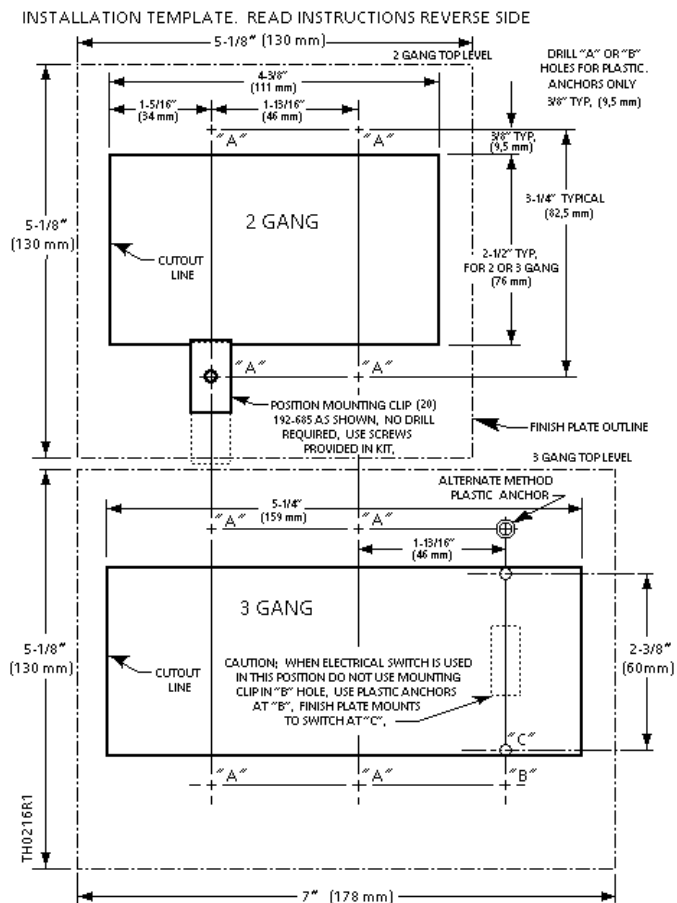When installing a light switch, use plastic anchors.
Do not use clips.

INSTALLATION TEMPLATE. READ INSTRUCTIONS REVERSE SIDE

Figure 8. Reduced Size Installation Template without Rough-In Box.
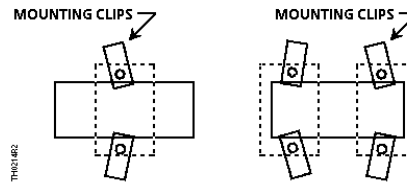
Installation, Continued

Figure 9. Mounting Clip Position.

With Rough-In Box

1. From product ordering table select the appropriate size electrical rough-in box for the type of wall construction.

2. Mount box to wall studs using box with bracket or adjustable bar hanger before drywall or plaster installation.

Mounting Plate

1. Pull tubing and/or wiring into position in wall cutout or rough-in box.

2. Fasten mounting plate or plates to wall or rough-in box as shown in Figure 10.

3. Where arrow indicates, push mounting plate toward center of cutout (or rough-in box) so screws are at extreme ends of the slots.
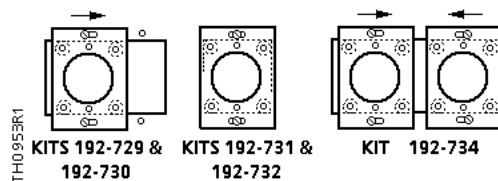

Figure 10. Mounting Plate Fastening.

Sensor Mounting

1. Attach finish plate to mounting plate or plates.

2. Pneumatic Sensors

   a. Remove wall plate from thermostat.

   b. Attach pneumatic tubing to plug in terminals and slide terminals into place in wall plate.

   c. Attach wall plate to finish plate. Don't kink tubing when attaching wall plate.

   d. Don't forget the external restrictors on applicable sensors.

   e. Plug thermostat into wall plate and attach cover.

3. Electric Sensors

   a. Remove cover and unsnap sensor mounting board from wall plate.

   b. Pull wires from wall through insulating pad in center of wall plate.

   c. Attach wall plate to finish plate.

   d. Connect wires from wall to leads on sensor mounting board.

   e. Snap sensor mounting board to wall plate and attach cover.

Installation, Continued

Pneumatic Switch Mounting

1. If rough-in box is used, it must be 3-1/2 inches deep to provide adequate space for switch fittings and tubing. Select electrical box for one or two switch mounting, See Figures 12 and 13.

2. Pull pneumatic tubing into position in electrical box or access opening.

3. Fasten mounting plate to electrical box or mounting clips.

4. For one switch mounting, remove and discard the two speed nuts (4) from the finish plate (1) shown in Figure 12.

5. Install pneumatic fittings and attach tubing to switch.

6. Insert pneumatic switch through hole in finish plate from the back.

7. Fasten the switch mounting plate to the switch with two flat head screws provided with switch.

8. One-switch mounting using 192-731 or 192-732 kits:

   a. Attach switch plate and finish plate to the mounting plate with screws provided in the finish plate kit.

   b. Do not kink tubing when attaching the finish plate.

9. One- or two-switch mounting using all other kits:

   a. Attach the switch plate to the finish plate with screws provided in finish plate kit.

   b. Attach finish plate to mounting plate or plates with screws provided in finish plate kit. Don't kink tubing when attaching finish plate.

10. Complete switch installation, that is, dial plate, bezel, and knob.

The installation is now complete.

Electric Switch Mounting

1. Electrical wiring must be in accordance with local and national electrical codes. Make sure all electrical connections are properly insulated.

2. Toggle Switch

   a. Connect leads to switch. Cover each terminal with tape or other insulation.

   b. Insert toggle switch through hole in finish plate and lock in place with nut provided with switch.

   c. Fasten finish plate to mounting plate with screws provided with finish plate kit.

3. Light Switch

   a. Connect lead to switch. Cover switch terminals with tape or other insulation.

   b. Mount switch to wall or rough-in box.

   c. Fasten the finish plate to the mounting plate and switch with screws provided in kit. Use the two socket head screws to attach finish plate to switch.

The installation is now complete.

Dimensions

Table 2. Kit Parts List (See Figures 11 through 13).

Item	Description	Kit Number and Quantity		
		192-729 192-730	192-731 192-732	192-744
1	Finish Plate	1	1	1
2	Mounting Plate	1	1	2
3	Flat Hd Screw 6-32 × 9/16" LG	4	4	8
4	Speed Nut 6-32 Type J	2	4	4
5	Plastic Anchor	2	2	4
6	Flat Hd Screw 6-20 × 1" LG	2	2	4
7	Socket Hd Screw 6-32 × 3/8" LG	0	0	0
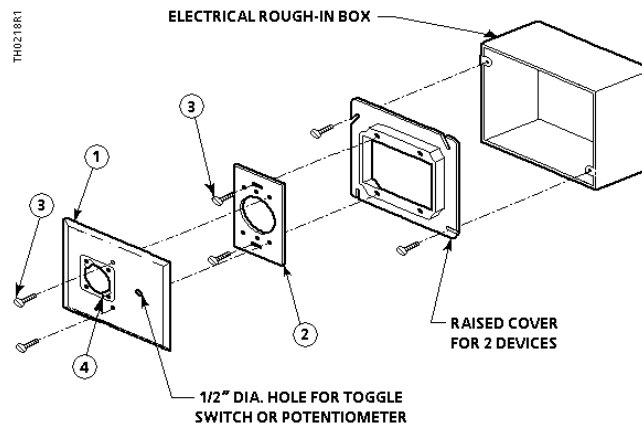
Figure 11. Drywall or Plaster Installation.
Dimensions of the Finish Plate are 5-1/8 × 5-1/8 Inches (130 × 130 mm).
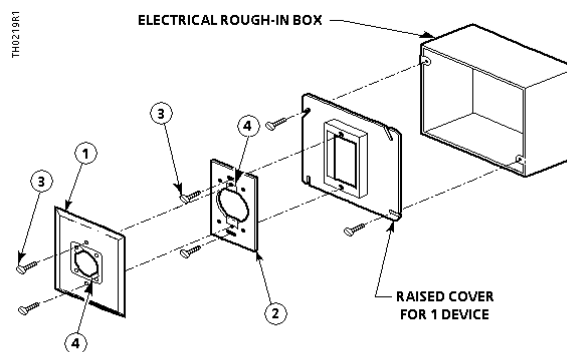
Figure 12. Drywall or Plaster Installation.
Dimensions of the Finish Plate are 5-1/8 × 5-1/8 Inches (130 × 130 mm).
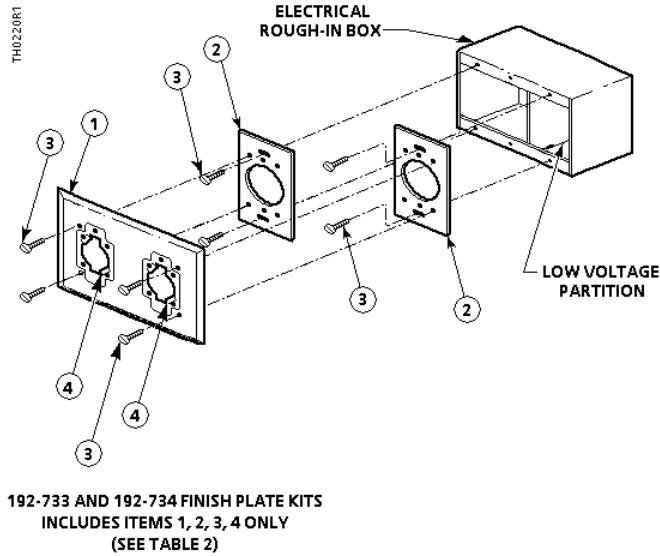
Dimensions,
Continued

Figure 13. Masonry Installation.
Dimensions of the Finish Plate are 5-1/8 × 7 Inches (130 × 179 mm).

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