

INSTALLATION INSTRUCTIONS



PG21 & PG21E Pilfergard Door Alarms

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DESCRIPTION

The PG21 and PG21E are surface-mounted microprocessor-controlled door alarms. The PG21 is a basic battery-operated unit. The PG21E has provisions for an external power supply; external reed-switch contacts for multiple-door monitoring; and a built-in Form-C relay for connection to a fire or burglary alarm panel or other device.

The units mount on the interior of the door with a magnetic actuator on the frame; or, if external wiring is required (PG21E only), vice versa. Full clockwise rotation of the installed standard mortise cylinder (not supplied) will alternately arm and disarm the unit. A selectable Annunciator feature beeps to signal opening of the door while the unit is disarmed. Opening the door, removal of the cover or any attempt to defeat the device with a second magnet, when armed, will activate the alarm. The units may be operated from outside the door with the addition of a standard rim cylinder. A test button and LED are used to check status; the unit is armed, pressing the button will light the LED.

SPECIFICATIONS

Dimensions: 9" x 2½" x 2⅜" (22.8cm x 6.3cm x 6.8cm) (LxWxD)

Finish: Metallic Silver (PG21MS, PG21E); Metallic Bronze (PG21MB); Red (PG21RD)

Power Requirements: 9-Volt Alkaline Battery (supplied). (The PG21E may be used with Model PP100 (optional) or other power supply providing 9–12Vdc at 500mA.)

Battery Life: Continuous Alarm, 3 hours; 2-Minute Shutdown, see Table 1 below.

Alarms/Year	Battery Life (Months)
1	17.6
2	17.4
3	17.1
4	16.8
5	16.6
6	16.3
7	16.1
8	15.8
9	15.6
10	15.4

Table 1. Battery Life with 2-Minute Shutdown option.

Sounding Device: Piezo electronic sounder, sweep siren, 110dB at 10 feet

Shipping Weight: 1lb, 10oz.

INSTALLATION

Note: In many applications, the need for a template may be eliminated by using the Magnet Alignment procedure in step 11. If outside key control or remote wiring is required, however, the template must be used.

1. Referring to the illustration at right,

(a) install mortise cylinder (Alarm Lock Model CEM, optional) into the cover from the outside with the key slot at the 6 o'clock position;

(b) install the Spacer (P4607), then screw the Lock Ring (P1267) onto the Cylinder as shown and tighten using the Spanner Wrench (P4577) supplied.

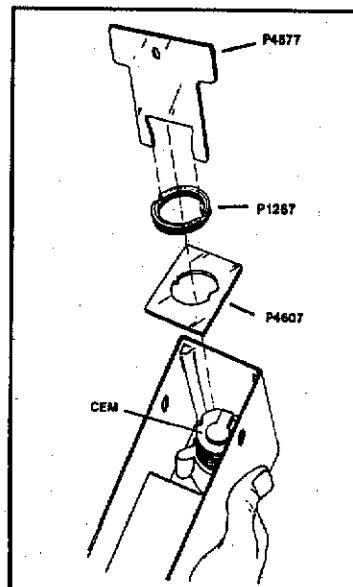


Fig. 1. Installing mortise cylinder.

2. If using a template, select the proper template for the specific type of door. (If not using a template, proceed to step 6.)

3. Mark and drill 9/64" holes per template directions on the door and jamb. (Four holes for baseplate and two holes for magnetic actuator.) **Note:** Certain narrow-stile doors require only two holes for mounting plate.

4. **Model PG21E only:** Mark and drill 3/8" hole per template for remote wiring to a control panel.

5. **For outside key control only:** Drill 1/4" hole as shown on template. Install a rim-type cylinder (not supplied) through the door and allow the flat tailpiece to extend 5/16" beyond the door. Position cylinder, keeping key slot pointing down (6 o'clock position) and tighten cylinder screws.

6. Knock out the necessary holes from the baseplate and install on the door with #8 sheet-metal screws supplied. If an outside cylinder is used, make sure that rim cylinder tailpiece fits into cross slot of ferrule.

7. Connect the battery; a chirp will sound. (This ensures that power is properly connected.) **Important:** Press the small CLEAR button at the lower-left corner of the circuit board (see Fig. 2).

8. Remove the jumper only on the side of the unit that the magnet will not be installed.

9. Select jumper options (J1–J4) as follows. Refer to Fig. 2. The unit is factory supplied with the Annunciator option enabled (J3 installed) and 2-Minute Shutdown alarm selected (J4 removed).

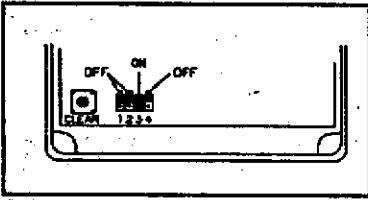


Fig. 2. CLEAR Button and Jumpers.

Important: Changes in the jumper configuration do not become effective until the unit is subsequently armed.

J1: Entry Delay. Alarm will sound 15 seconds after any unauthorized entry if unit is armed. This feature is used for authorized entry. Disarming within 15 seconds will prevent an alarm. To enable Entry Delay, install J1 across both pins.

J2: Exit Delay. Unit will be activated after 15 seconds each time unit is armed to allow authorized exit without an alarm. To enable Exit Delay, install J2 across both pins.

J3: Annunciator. Unit will sound for 2 seconds whenever the door is opened while disarmed. To disable the Annunciator, remove J3.

J4: Continuous/2-Minute Shutdown. With J4 on, an alarm will sound continuously until the battery is depleted. With J4 off, the alarm will silence after two minutes and the unit will rearm (if the door is closed). The LED will start flashing to indicate that an alarm has occurred (*Alarm Memory*). *Alarm Memory* is cleared after about 4 hours or when the unit is rearmed. **Note:** If the door is still open after two minutes, the alarm will restart.

Note: Jumper J4 is connected at the factory to only one pin of the 2-pin connector (off). To select *Continuous* alarm, remove J4 and reinstall it across both pins.

10. Install the cover onto the baseplate, checking that the slide switch on the PC board fits into the cam hole. Secure the cover with #6-32 screws supplied. **Note:** The longest screw is the tamper screw. *If not using a template, do not install the tamper screw until the magnet has been aligned and secured as follows.*

11. (If the unit has been installed with the aid of a template, proceed to step 12.) After power-up, but before the tamper screw is installed, the unit will be in the *Magnet Alignment Mode*.

a. Place the magnet against the wall, adjacent to the bottom of the unit. Slowly slide the magnet upward. The LED will come on, indicating closure of the reed switch, then go out. Mark the door jamb at the bottom of the magnet. (**Note:** Sliding the magnet still further will cause the LED to light again; ignore subsequent indications.)

b. Similarly, place the magnet against the wall, adjacent to the top of the unit. Slowly slide the magnet downward. The LED will come on, then go out once again (see Note in step 11a). Mark the door jamb at the top of the magnet.

12. Install the magnetic actuator so that it is centered between the two marks. Use the two #8 sheet-metal screws supplied. **Note:** On steel frames, it is sometimes necessary to install a non-magnetic shim between the magnetic actuator and the frame. This is done to prevent the steel frame from absorbing the magnet's magnetic field, which could cause a constant or occasional false alarm condition. The shim should be 1/2" x 2 1/2" x 1/8" thick non-magnetic material such as plastic, bakelite or rubber.

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STANDBY MODE

After the magnet has been aligned and mounted, the tamper screw may be installed. This will place the unit in its regular Standby Mode (disarmed).

WIRING (PG21E only)

External wiring to the PG21E requires that the unit be mounted on the frame with the magnet on the adjacent door. (The PG21E may be mounted on a door with the addition of a Model 271 Flexible Cable.) All wiring is made at its terminal strip. Wiring connections are summarized in the Wiring Diagram shown in Fig. 3.

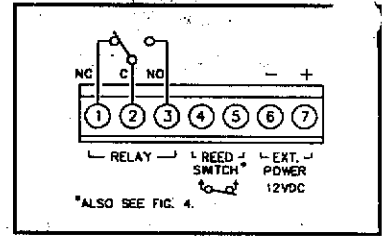


Fig. 3. Wiring Diagram.

Wiring connections are summarized in the Wiring Diagram shown in Fig. 3.

Relay (Terminals 1–3). Terminal 1 = Normally Closed; Terminal 2 = Common; Terminal 3 = Normally Open.

Reed Switch (Terminals 4 & 5). Connect external reed-switch contacts to Terminals 4 and 5 and *remove both jumpers*. **Note:** If reed switches are wired in series as shown in Fig. 4, several doors may be monitored simultaneously. Using #22AWG wire, maximum wiring distance should not exceed 50 feet.

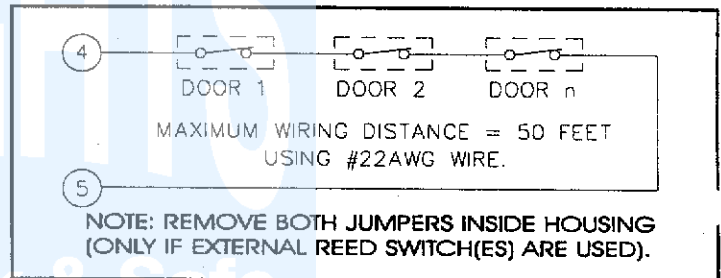


Fig. 4. Multiple door monitoring.

Power (Terminals 6 & 7). Connect an external power supply: positive (+) to Terminal 7; negative (-) to Terminal 6. Leave the internal battery in as a backup battery. If using the Alarm Lock PP100 Power Supply, connect the two battery clips to the unit and the internal battery as labeled.

FIELD TEST

1. With the door closed, turn the key fully clockwise, then release. A brief tone will sound indicating that the unit is armed (with or without delays, see options in *INSTALLATION*: step 9).

2. Push test button; the LED will come on for one second verifying that unit is armed. (If unit is disarmed, LED will not come on.) **Note:** If the test button is held down longer than 2 seconds, the sounder will be tested.

3. Open the door. A sweep siren alarm should sound.

4. *Model PG21E only:* On alarm, the relay will activate and remain latched for as long as the sounder is on. Relay contacts are rated at 125Vac/dc at 1/2A.

5. To reset the alarm, turn key fully clockwise once again then release. The unit is now disarmed.

Low Battery. In operation, whether armed or disarmed, the LED will blink about once every 4 hours when checking battery status. When the battery becomes weak, the unit will chirp and the LED will flash about once per minute to indicate the need for replacement.

EXPLODED VIEW

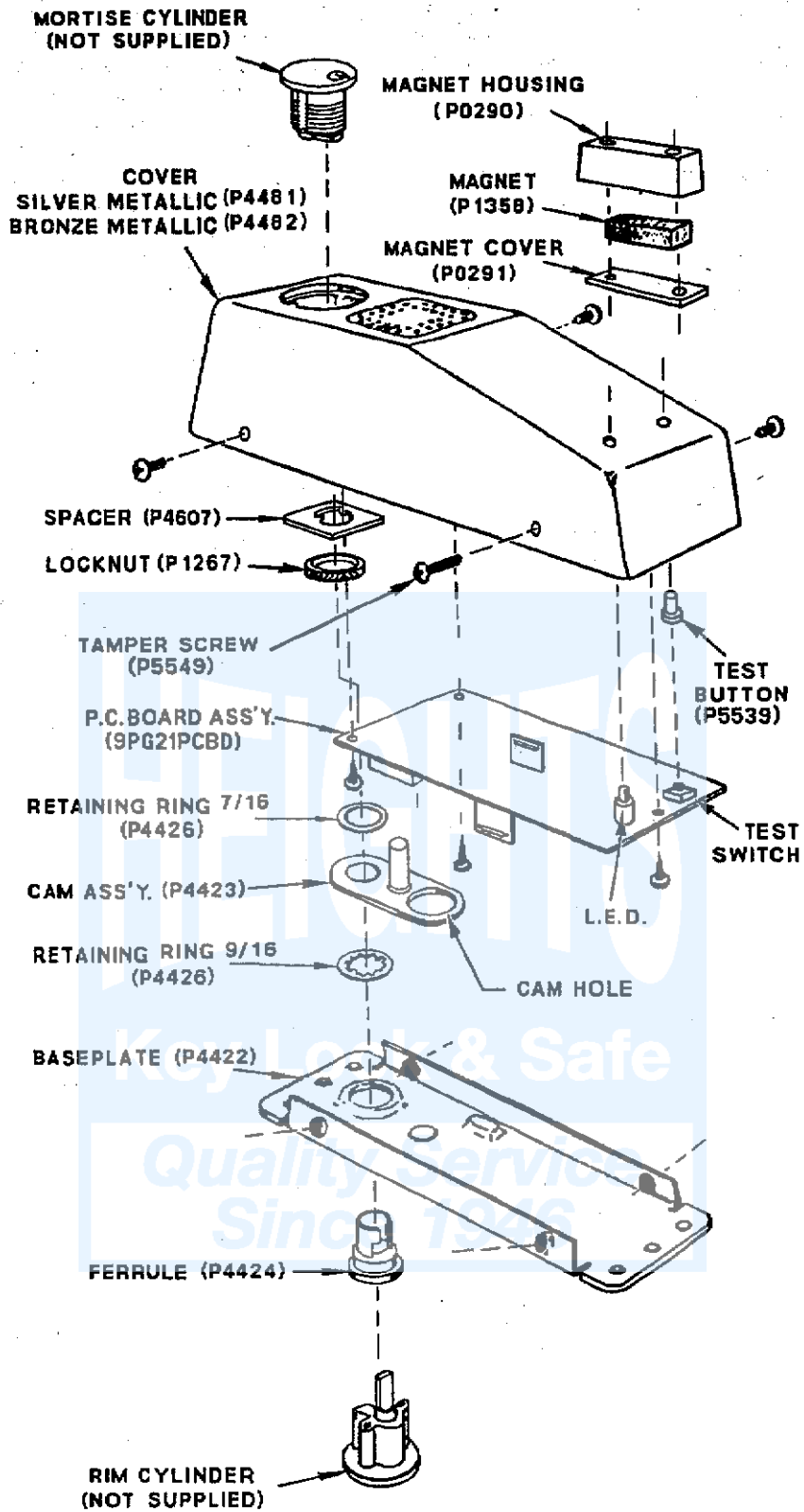


Fig. 5. Exploded view with part numbers.