

Honeywell

THE S830A INDICATES THE NEED TO CLEAN THE ELECTRONIC AIR CLEANER, OR TO REPLACE THE AIR FILTERS OF FORCED AIR HEATING, AIR CONDITIONING, AND HEAT PUMP EQUIPMENT.

- A red CHANGE FILTER flag drops into the window on a pressure decrease because of filter loading.
- Flag also makes a set of contacts which may actuate an indicator light at the system panel or special thermostat subbase.
- Sturdy molded plastic case mounts easily on furnace blower compartment with a Tinnerman fastener, two screws, or mounting clips.
- Flag is manually reset by turning the black button on the S830A face.
- Adjustment screw on the S830A face provides manual adjustment for more or less frequent clogged filter indication.
- The S830A mounts directly on the blower compartment or at a remote location.

FILTER FLAG INDICATOR



S830A

SPECIFICATIONS

IMPORTANT

THE SPECIFICATIONS GIVEN IN THIS PUBLICATION DO NOT INCLUDE NORMAL MANUFACTURING TOLERANCES. THEREFORE, THIS UNIT MAY NOT MATCH THE LISTED SPECIFICATIONS EXACTLY. ALSO, THIS PRODUCT IS TESTED AND CALIBRATED UNDER CLOSELY CONTROLLED CONDITIONS, AND SOME MINOR DIFFERENCES IN PERFORMANCE CAN BE EXPECTED IF THOSE CONDITIONS ARE CHANGED.

MODEL: S830A Filter Flag Indicator. Includes mounting template, two screws and Tinnerman fastener.

ELECTRICAL RATING: Contacts make when flag drops into window. 1.5 amp running, 7.5 amp locked rotor at 24 Vac.

PRESSURE RANGE: 0.1 to 0.7 in. wc [0.025 to 0.17 kPa].

MAXIMUM OPERATING TEMPERATURE: 170 F [77 C].

INDICATORS: Red flag drops into window when filter is clogged, indicating need to change filter. The S830A can also turn on a warning light in Q539, Q611, Q672, and Q674 Thermostat Subbase models which have built-in warning lights.

DIMENSIONS IN in. [mm IN BRACKETS]: 3-1/4 [82.6] high, 2-1/4 [57.2] wide, 2 [50.8] deep from end of knob to base.

MOUNTING MEANS: Mounts directly on furnace blower compartment with 2 screws or Tinnerman fastener included. For flush mounting, plate and clip must be used (see Accessories section). For remote mounting, use two screws provided.

CASE: Sturdy molded plastic.

ACCESSORIES:

114748 Plate for flush mounting. Dimensions in in. [mm in brackets]: 3-1/16 [77.8] wide, 4 [101.6] high, 1/32 [0.8] thick. (Refer to Fig. 3.)

114729 Clip for flush mounting (2 required). (Refer to Fig. 3.)

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.

LOCATION

The S830 must be located where it can sense pressure conditions in the blower chamber between the filter and the blower. On differential pressure applications, the case and tubing must be located where it can sense the pressure DIFFERENCE between the return air plenum and the blower chamber. See Fig. 1.

The most desirable location for the case when mounted on the equipment is near a corner, where the sheetmetal is rigid. This prevents a bump or vibration from tripping the indicator. For remote mounting, the suction port and differential pressure port must be accessible.

CAUTION

Disconnect power supply to prevent electrical shock or equipment damage.

(continued on page 3)

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. Flush mounting accessories, 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 RESIDENTIAL DIVISION SALES OFFICE (CHECK WHITE PAGES OF PHONE DIRECTORY).
2. RESIDENTIAL DIVISION CUSTOMER SERVICE
HONEYWELL INC., 1885 DOUGLAS DRIVE NORTH
GOLDEN VALLEY, MINNESOTA 55422-4386 (612)542-7500

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

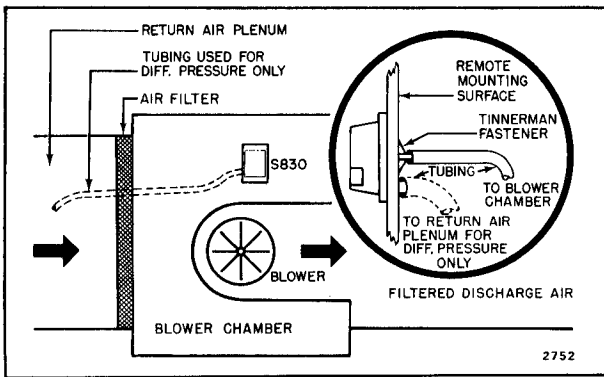


FIG. 1—MOUNTING LOCATION. INSET SHOWS REMOTE MOUNTING OF THE CASE.

MOUNTING

The S830 must be mounted in a vertical position with the CHANGE FILTER flag visible at the bottom.

If the S830 is used with an AT72 Transformer and electronic air cleaner, follow the instructions supplied with the air cleaner.

If the S830 is used for another type of installation—

1. Determine type of mounting—surface or flush.
2. Select proper mounting template. Fasten template (gummed back) level in the exact location selected for S830 (Fig. 1).
3. Attach the template instruction section alongside the mounting template.
4. Proceed to the applicable surface, flush or remote mounting section below.

SURFACE MOUNTING

1. Drill all holes indicated on template.
2. If the electrical switch is to be used, connect wires to the terminals on the back of the case (Fig. 4).
3. After connecting the wires, run them through the channel at the top or bottom of the case. If the wires are too thick, enlarge the channel with a small file.
4. Mount the case using the Tinnerman fastener and steadying lug (Fig. 2). An alternate method is to use two No. 6 sheetmetal screws (furnished), and remove the steadying lug or drill a hole for it in the mounting surface.

NOTE: Completely airtight seals are not necessary, but the case must be tight against the mounting surface.

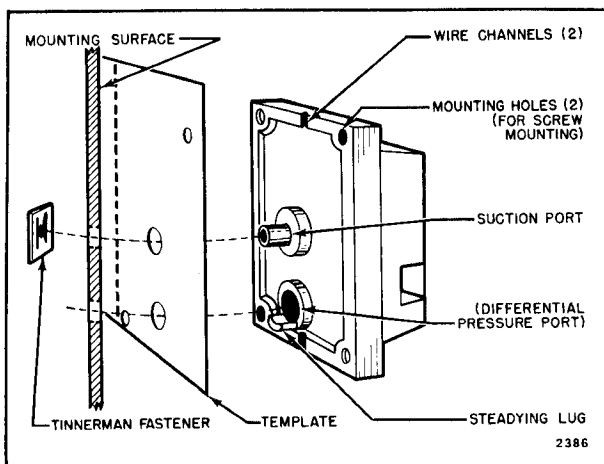


FIG. 2—SURFACE MOUNTING WITH TINNERMAN FASTENER.

FLUSH MOUNTING

1. Drill mounting holes indicated on template.
2. Cut out area inside broken lines on template.

NOTE: When cutting, stay within guide lines. If opening is too large, there will be no surface for mounting holes.

3. When placing the S830 in the flush mounted position, allow for the wiring. Drill a hole in the blower chamber large enough to run the wires through.

4. Run the wires through the drilled hole from outside blower chamber, pull through opening for mounting, and connect them to the S830 (Fig. 4).

NOTE: Tape or grommet should be placed in the drilled hole to prevent damage to the wiring insulation.

5. Fit flush mounting plate over face of S830. Snap spring clips into place on each side of case (Fig. 3).

6. Insert bottom of unit in mounting hole and swing top into opening so that flush mounting plate is tight against mounting surface.

7. Secure mounting plate to blower chamber with two No. 6 sheetmetal screws (furnished).

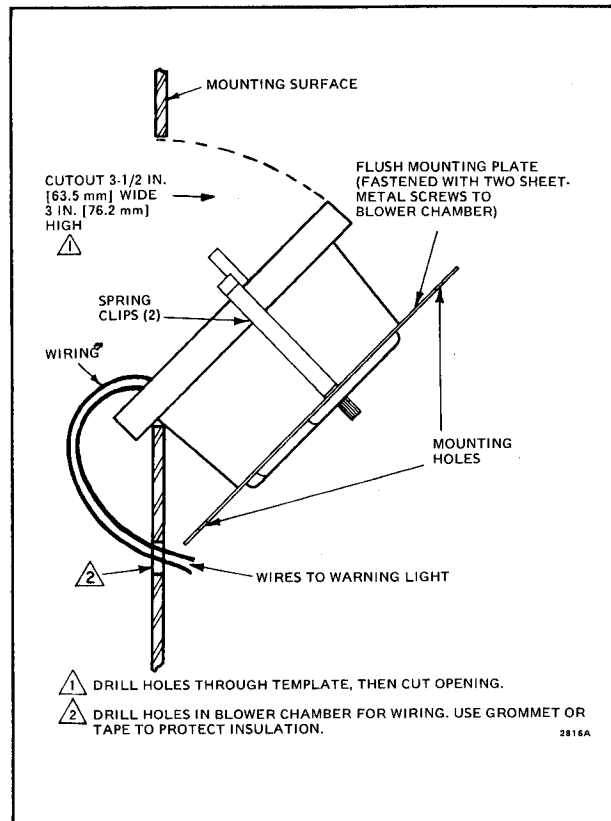


FIG. 3—FLUSH MOUNTING FROM OUTSIDE BLOWER CHAMBER.

REMOTE MOUNTING

If the case is remotely mounted, install as indicated under surface or flush mounting above and—

1. Run 1/4 in. [6.4 mm] ID flexible tubing from the suction port to the blower chamber. Tubing may be obtained at any hardware store.
2. Drill a hole in the blower chamber wall and insert the tubing.

DIFFERENTIAL PRESSURE MOUNTING

If case is mounted for a differential pressure application, install as indicated under surface or flush mounting and—

1. Carefully open the differential pressure port with a sharp, pointed object (Fig. 2).
2. If the case is mounted on the blower chamber, run 3/8 in. [9.5 mm] ID flexible tubing from the differential pressure port through the blower chamber and the filter to the return air plenum. Tubing may be obtained at any hardware store.

If the case is remotely mounted, drill a hole in the return air plenum, run 3/8 in., [9.5 mm] ID flexible tubing from the differential pressure port, and insert the tubing in the hole. Drill a hole in the blower chamber, run 1/4 in. [6.4 mm] ID flexible tubing from the suction port and insert the tubing in the hole.

NOTE: Avoid sharp bends and kinks in tubing. Make sure tubing is not under strain. Tubing must fit insert holes tightly. Tubing may be obtained at any hardware store.

WIRING

All wiring must comply with applicable electrical codes and ordinances. Disconnect power supply to prevent electrical shock or equipment damage.

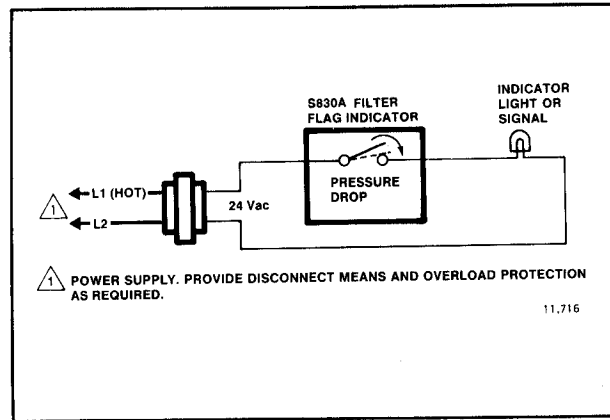


FIG. 4—TYPICAL HOOKUP FOR S830A. CIRCUIT IS ACTIVATED WHEN S830A FLAG DROPS.

OPERATION

When the furnace air filter (disposable, washable, or electronic) becomes clogged, the suction increases on the downstream side of the filter, causing air to be drawn through a port on the back of the S830. When suction becomes greater than the set point of the S830, it releases the red flag marked CHANGE FILTER. The


flag shows in the clear plastic window on the front of the case. The S830A may be wired to a remote filter light on a thermostat subbase (Fig. 4). The contacts make to actuate the light when the air filter needs cleaning or changing. See wiring instructions furnished with subbase.

ADJUSTMENTS AND CHECKOUT

The S830 must be adjusted to suit each individual application. Always clean the filter before adjusting the setting. Dampers and registers should be in normal position. For 2-speed blowers, adjust the S830 for the higher speed.

TO RESET FLAG: Turn black knob on cover in direction of arrow until flag latches out of sight.



TO ADJUST THE SETTING

1. Turn the adjusting screw clockwise  until tight. Do not overtighten; the threads may strip out.
2. Turn on the system blower (high speed on 2-speed blowers).
3. Reset flag if necessary.
4. With sheets of paper, cover 2/3 of the upstream (return air duct) side of filter surface. The 1/3 uncovered area should be in the center of the filter(s).

5. Turn the adjusting screw counterclockwise until the flag drops.
6. Turn off the blower.
7. Remove paper from filter and reset flag.

NOTE: During normal service the flag may drop before the filter reaches the time-to-clean condition, as the result of a bump or vibration. To avoid cleaning filters unnecessarily, reset the flag. If it trips again when the blower is operating, replace or clean the filter.

It may be necessary to adjust the setting after changing the type of filter or making changes in the duct system, damper, or register openings.

Minor adjustments can be made. Turning the ADJUSTMENT screw in the "+" or counterclockwise  direction causes the flag to drop earlier. The filter will then be changed more often. Turning the screw in the "-" or clockwise  direction gives less frequent filter changes.