



WHITE-RODGERS

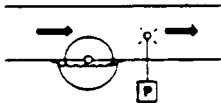
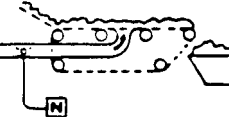
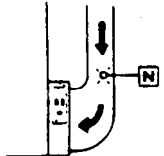
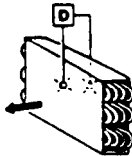
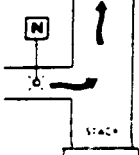
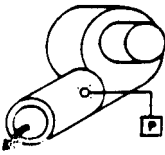
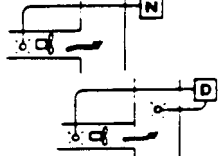
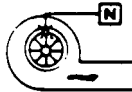
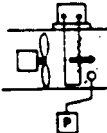




- INSTRUCTIONS -

TYPE 770-1 AIR SWITCH

With SPDT Switch Action
(Responds to Positive, Negative,
or Differential Pressure)

The Type 770-1 has a SPDT switch that can be actuated by a positive pressure, negative pressure, or a differential of pressure. These two features, plus its field adjustable "operating range", give this control unmatched versatility on a wide variety of applications, some of which are shown below.

TYPICAL APPLICATIONS

 <p>POWER HUMIDIFIERS Switch permits unit to operate whenever there is proper air movement.</p>	 <p>PROCESS DRYING Switch monitors negative pressure to stop conveyor or process, and provides alarm signal on fan failure. Ideal for bulk chemicals, food processing, grain drying.</p>
 <p>ELECTRONIC AIR CLEANERS Switch permits power to cleaner whenever blower of system is operating.</p>	 <p>REFRIGERATION EQUIPMENT Switch responds to pressure drop across refrigeration coils to signal alarm condition or automatically initiate or terminate defrost cycle.</p>
 <p>NATURAL DRAFT BOILERS Switch signals insufficient draft, provides safety limit to stop firing on lack of draft, starts again on sufficient draft.</p>	 <p>GAS-FIRED UNITS Switch proves sufficient air flow before permitting gas valve to open and ignition to occur.</p>
 <p>INDUCED DRAFT BOILERS Proves operation of I.D. fan by sampling draft or air flow. Shuts off firing equipment on fan failure.</p>	 <p>FORCED DRAFT BOILERS Proves operation of blower by sampling positive or negative pressures for firing control and safety.</p>
 <p>DUCT STRIP HEATERS Switch proves air movement across heaters by positive pressure in front of heater. Turns off heater to prevent burn-out on insufficient air flow.</p>	<p>LEGEND</p> <ul style="list-style-type: none">  Negative Pressure  Positive Pressure  Pressure Differential  Pressure Sample Line

SPECIFICATIONS

ELECTRICAL RATING
15 AMP 125/250/277 VAC N.I.
1/4 HP 125 VAC.
1/2 HP 250 VAC.

ELECTRICAL SWITCH
Single pole, double
throw snap action switch

CONTROL SET POINT
Adjustable

FIELD ADJUSTABLE
On pressure rise at .05
to 12" w.c.

CONDUIT OPENING
7/8" diameter opening
accepts 1/2" cor. u.

RECOMMENDED OPERATING POSITION
Diaphragm vertical

OPERATING TEMPERATURE RANGE
-40 to 180° F.

SAMPLE LINE CONNECTORS
Male externally threaded 7/16"-24
UNS 2 A thread complete with nut
and self aligning ferrule.

SAMPLE LINE CONNECTIONS
Connectors will accept 1/4" O.D.
rigid or semi rigid tubing. Slip
on tubing adaptors optional.

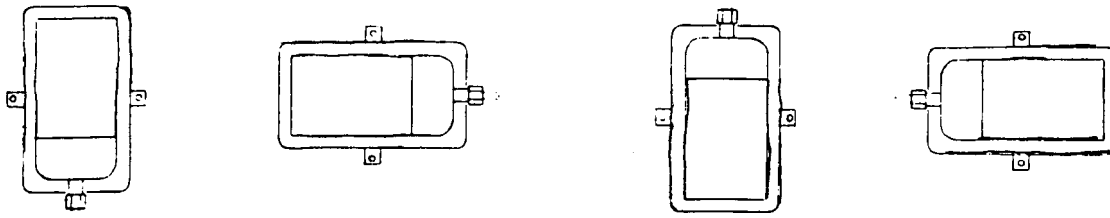


WHITE-RODGERS DIVISION
EMERSON ELECTRIC CO
9797 REAVIS ROAD
ST LOUIS MISSOURI 63123

Printed in U.S.A.

PART No. 37-4898A
Replaces 37-4395
9110
4324
Rev D

MOUNTING INSTRUCTIONS



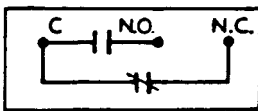
The Air Switch must be mounted to a vertical surface, as shown in above drawings to assure that diaphragm will be in a vertical plane.

SEE BACK PAGE FOR MOUNTING DIMENSIONS.

WIRING

All wiring should be done according to local and national electrical codes and ordinances.

Fig. 1 - SPDT Switch of Type 770-1.



(Without pressure applied to diaphragm, switch contacts are in position shown.)

The SPDT switch can be actuated by a positive or negative pressure, or by a differential of pressure. This control is ideally suited for residential applications such as Electronic Air Cleaners and Humidifiers, but it is equally well suited for commercial installations, including applications where alarm circuits are required.

Fig. 2 - Typical Air Cleaner Installation.

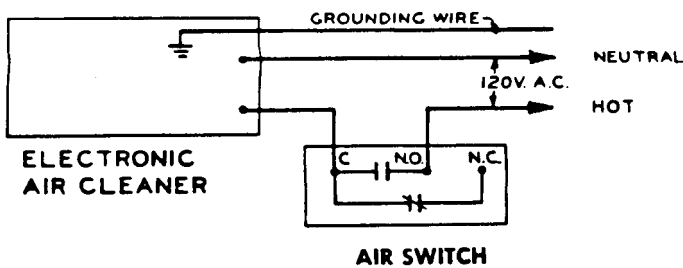
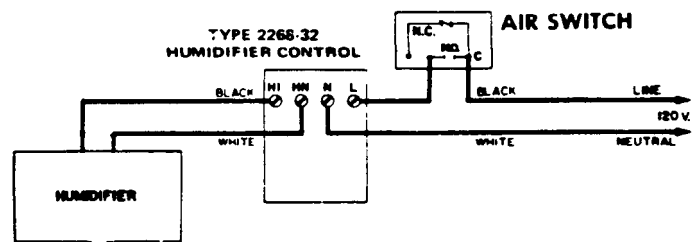
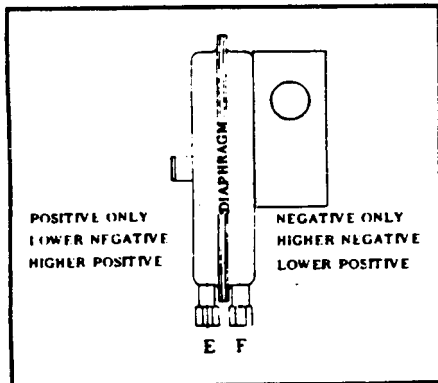


Fig. 3 - Typical Humidifier Installation.



SAMPLE LINE CONNECTIONS



Male externally threaded with nut and self-aligning ferrule.

POSITIVE PRESSURE ONLY:

Connect sample line to E; F remains open to atmosphere.

NEGATIVE PRESSURE ONLY:

Connect sample line to F; E remains open to atmosphere.

TWO NEGATIVE SAMPLES:

Connect highest negative sample to F; lower sample to E.

TWO POSITIVE SAMPLES:

Connect highest positive sample to E; lower sample to F.

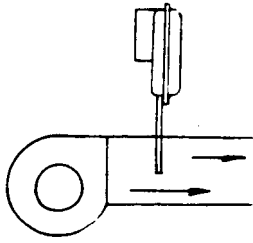
ONE POSITIVE AND ONE NEGATIVE:

Connect positive sample to E; connect negative sample to F.

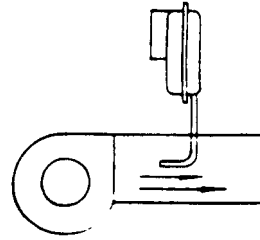
SEE NEXT PAGE FOR LOCATION OF SAMPLE LINES.

LOCATION OF SAMPLE LINES

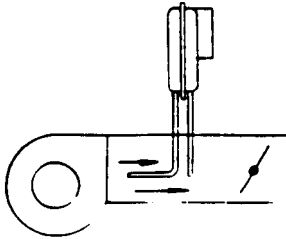
FAN OPERATION OR TRUE AIRFLOW WITH LITTLE OR NO STATIC PRESSURE. PROBE MUST BE PERPENDICULAR TO FLOW.



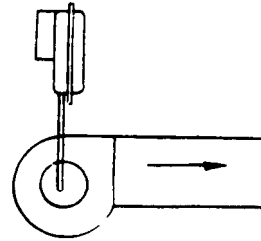
FAN OPERATION OR AIR FLOW WITH NO STATIC PRESSURE.



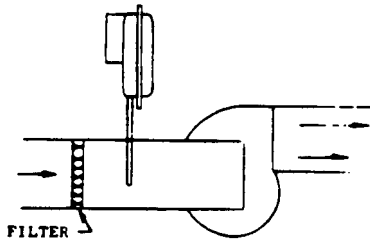
FAN OPERATION AND TRUE AIR FLOW WITH VARYING AMOUNTS OF STATIC PRESSURE. PROBE MUST BE PERPENDICULAR TO FLOW.



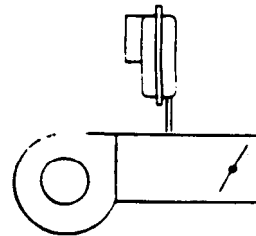
SUCTION OR FAN OPERATION.



NEGATIVE PRESSURE INCREASES AS FILTER GETS DIRTY.



PROVE POSITIVE STATIC PRESSURE.

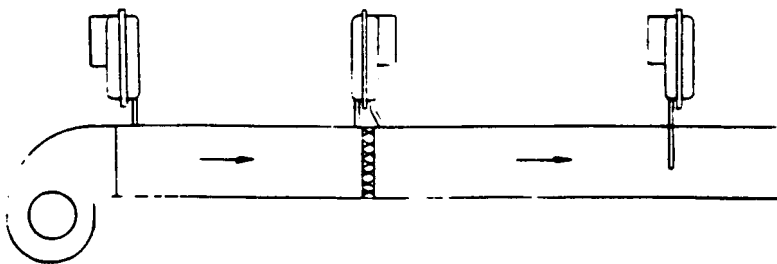


3 WAYS TO PROVE FILTER ON POSITIVE PRESSURE.

POSITIVE STATIC PRESSURE INCREASES AS THE FILTER GETS DIRTY.

DIFF. ACROSS FILTER CHANGES AS IT GETS DIRTY.

FLOW IS REDUCED AS FILTER GETS DIRTY.



PRESSURE CONVERSION TABLE

1" Water = .0361 lbs/sq. in. or .0735 in. Mercury
 1" Mercury = 12.6 in water or .491 lbs/sq. in.
 1 PSI = 27.7 in. water or 2.036 in. Mercury

ADJUSTMENT

Merely turn the knurled knob clockwise to field adjust the "operate range" from .05" to 12.0" W.C.

MOUNTING DIMENSIONS

