

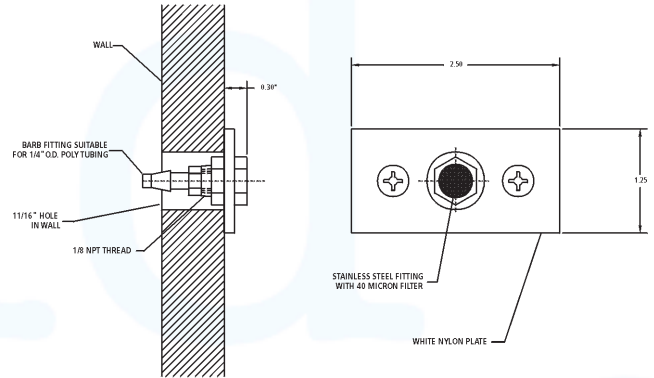
MODEL AST-1 Static Pressure Probe



ORDERING INFORMATION MODEL AST-1

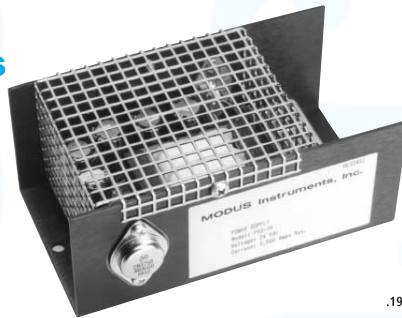
SPECIFICATIONS

This pressure probe conveniently terminates the end of a 1/4" O.D. plastic tubing at the point where static pressure is being measured.



TYPICAL INSTALLATION OF STATIC PRESSURE PROBE

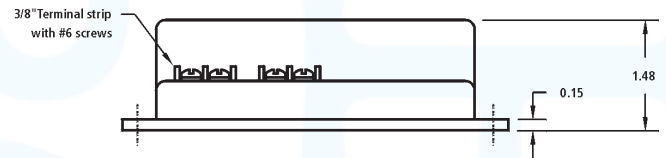
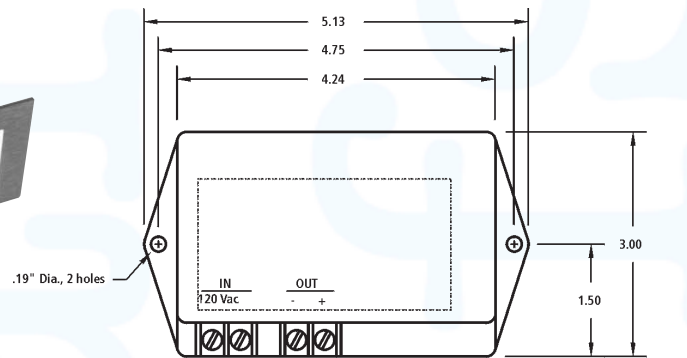
Power Supplies 120 Vac IN/Vdc OUT



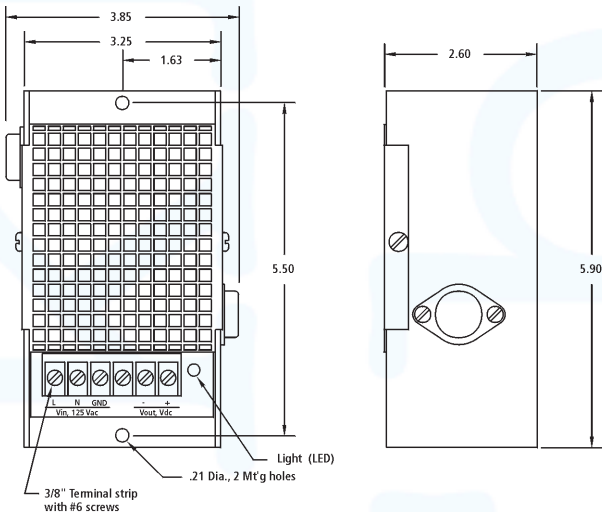
DESCRIPTION

Modus offers three models of small AC to DC power supplies. The low output ripple and good voltage stability under varying load and line power conditions make these power supplies well suited for powering control instruments and transmitters, such as 4-20 mA current loops.

These power supplies are conservatively rated for long life and do not require derating within the temperature, current output and line voltage operating ranges.



POWER SUPPLY, Model PS1-



POWER SUPPLY, Model PS2- OR PS3-

SPECIFICATIONS

Performance

All power supplies are current-limited and internally protected to prevent damage from accidental short circuits. A status light (LED) indicates the presence of an output voltage on the PS2- and PS3-models. Isolation between input and output is 1500 Vrms minimum and the output is floating to allow grounding where it is most convenient. The Input voltage range is 105 to 135 Vac 50/60 Hz.

Environmental

Operating temperature: 0°C to 52°C (32°F to 125°F)

Electrical Connections

Wiring is by means of 3/8" terminal strip with #6 screws

Physical

Weights: PS1-0.52 Lb (236 g), PS2-1.38 Lb (625 g), PS3-1.56 Lb (707g)

ORDERING INFORMATION

Order Number (Order by Model Number, see Table below)

Model No	Output Current	Output Voltage	Typ. Load Regulation*
PS1-12	150mA	12 Vdc ± 0.5 V	10mV
PS1-24	70mA	24 Vdc ± 1.2 V	22mV
PS2-12	625mA	12 Vdc ± 0.5 V	18mV
PS2-24	365mA	24 Vdc ± 1.0 V	25mV
PS3-24	625mA	24 Vdc ± 1.0 V	25mV

SERIES SD Surge Dampener

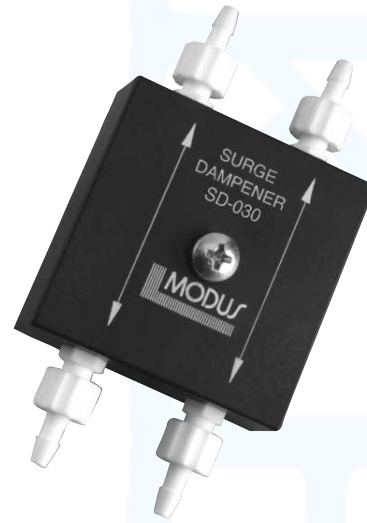
GENERAL

The surge dampener, when used with Modus capacitive pressure transmitters, absorbs rapid pressure fluctuations in high or low pressure lines and steadies the output signal. Three models are offered with time delays of: 15, 30 and 60 seconds. The time delay is defined as the elapsed time for the output signal to reach 90% of the steady-state value after a step change in pressure of 0.1 inches of water occurs in the low or high pressure line. Each surge dampener has two independent channels.

Typical applications are smoothing out airflow signals and room pressure signals which may vary suddenly when doors are opened or closed. The use of a surge dampener is recommended when pressure is displayed on a digital panel meter and the least significant digit must be stabilized.

For best performance, both the high and low pressure ports of the transmitter should be connected to the surge dampener. The time delay specifications of 15, 30 and 60 seconds assume that both ports are connected to the surge dampener. The time delay is based on tubing length of approximately one foot between the damper and the measuring instrument. The time delay may be increased by increasing the length of tubing between the measuring instrument and the surge damper.

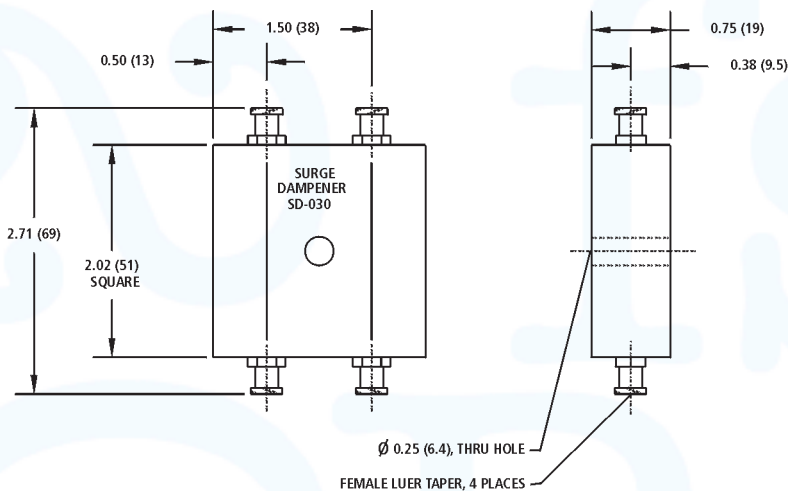
Each surge dampener includes a kit consisting of 3 different types of barb fittings to accommodate tubing ranging from 1/8" to 7/32" I.D. (3 to 6 mm I.D.), and a #10x1" lg. sheet metal screw for installation on a wall, if desired. This surge dampener is easily installed.



ORDERING INFORMATION

Model Number

SD-015	15 second time delay
SD-030	30 second time delay
SD-060	60 second time delay



DIMENSIONS ARE IN INCHES (MILLIMETERS)

SERIES A

Static Pressure Fittings

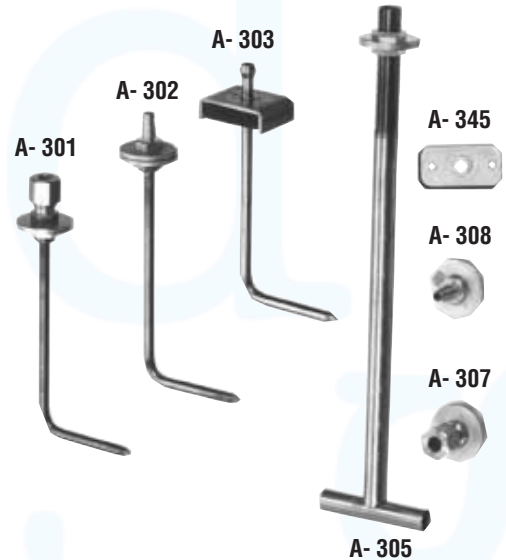
DESCRIPTION

These pressure fittings are used with pressure transmitters, switches, manometers and gages to measure static pressure drops across air filters, cooling coils, blower inlets, discharge outlets, etc. The angled tips shown have 4" insertion depth. Each sensor has 4 radially drilled .040" holes. All, except model A-303, mount in a 7/16" hole in a duct. For portable use, a magnet holds model A-303 in place.

Model A-305 is used where a very low actuation or sensing point is required or where response time is critical. Model A-307 and A-308 are suitable for use in low velocity systems or where the need for accuracy is less critical.

ORDER INFORMATION

- A-301** - Static pressure tip for 1/4" metal tubing
- A-301-SS** - Same as A-301 in stainless steel
- A-302** - Static pressure tip for 1/8", 5/32", 3/16" ID flexible clear plastic tubing
- A-305** - Static pressure tip for low resistance applications furnished with two hex jam nuts two mounting washers for duct mounting and 1/8" NPT pressure connection



- A-305-SS** - Same as A-305 in stainless steel
- A-307** - Static pressure fitting for 1/4" OD metal tubing
- A-308** - Static pressure fitting for 1/8", 5/32", 3/16" ID flexible clear plastic tubing or 1/4"OD polyethelene tubing
- A-345** - Flange for mounting A-301, A-302, A307, A 308, or 1/8" dia. pitot tube when the interior of the duct is not accessible
Aluminum plate with gasket and sheet metal screws

Pitot Tubes

DESCRIPTION

Pitot tubes are made of stainless steel. They are furnished with an air velocity calculator, velocity chart, and instructions.

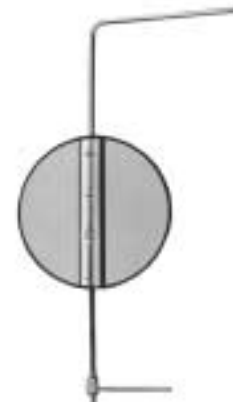
ORDERING INFORMATION

Standard Type, 5/16"dia.(temperature to 1500°F)

Model	Length
160-8	8"
160-12	12"
160-18	18"
160-24	24"
160-36	36"
160-48	48"
160-60	60"

For Standard Type Only

- Suffix-P- Integral packing gland mounting stainless steel with NPT male and graphite seal (Teflon may be substituted)
- A-372- Reducing type bushing stainless steel 3/4" to 1/2"
- A-373- Reducing type bushing stainless steel 1" to 1/2"
- Suffix-CF- Integral compression fitting adapter, solid brass, 1/8" male pipe thread
- A-158- Split flange and gasket assembly for mounting tube on duct
- A-374- Compression union for connecting pitot tube to metal tubing. Two required



Pitot Tubes

Pocket Type, 1/8"dia.(temperature to 800°F)

Model	Length
3" tip	
166-6	6"
166-12	12"
1.5" tip	
167-6	6"
167-12	12"

For Pocket Type Only:

- Suffix-CF- Integral compression fitting adapter, solid brass 1/8" male pipe thread and split ferrule
- A-345- Flange for mounting the pitot tube when the interior of the duct is not accessible. Aluminum plate with gasket and sheet metal screws

MODEL FF-1 In-Line Air Filters

DESCRIPTION

Modus 0.1 micron disposable filter insures many years of trouble free operation for transmitters and switches where air contains petroleum based oil and dirt. Replacement is indicated when a red color appears on the surface of the filter tube. Unit is not recommended where chemical and solvent resistance is required.



Model FF-1 In Line Air Filter

ORDERING INFORMATION

MODEL FF-1

Fittings

DESCRIPTION

The following fittings are made of white nylon. They are suitable for 1/8" and 5/32" ID flexible clear plastic tubing or 1/4" OD polyethylene tubing.



1/8" NPT Adapter



Tee

ORDERING INFORMATION

1/8" NPT Adapter

Model Description

FA-10 Pkg of 10

FA-50 Pkg of 50

FA-100 Pkg of 100

ORDERING INFORMATION

Tee

Model Description

FT-10 Pkg of 10

FT-50 Pkg of 50

FT-100 Pkg of 100



Union

ORDERING INFORMATION

Union

Model Description

FU-10 Pkg of 10

FU-50 Pkg of 50

FU-100 Pkg of 100

MODEL AN-1A Annunciator

DESCRIPTION

This single-point annunciator provides a visual and audible warning of an alarm condition occurring at a remote location. It operates, either with the Room Pressure Monitor Model RPM-1 which supplies the necessary power to the annunciator, or with any dry contact and an external power supply.

Alarm Sequence

Under normal conditions, the green LED is "STEADY ON." When an alarm condition occurs, the green LED turns off, the red LED "FLASHES ON" and the audible alarm "PULSES ON." Momentarily pressing the acknowledge button silences the audible alarm but the red LED stays "FLASHING ON," as a reminder, until the alarm fault is corrected. When the conditions are normal again, the annunciator resets itself. The green LED returns to "STEADY ON," the red LED and audible alarm are "OFF."

SPECIFICATIONS

Behind the front panel are two potentiometers. One potentiometer provides a variable time delay from the moment the alarm is received by the annunciator, until it responds to the time delay. This delay may be adjusted between 5 and 45 seconds. The annunciator will not change to the alarm mode if the alarm condition disappears before the end of the time delay. This eliminates nuisance alarms caused by short transients.

The other potentiometer sets the volume of the audible alarm, from zero to maximum. The volume is also a function of the power supply voltage. The external power supply to the annunciator can be between 5 and 32 Vdc, with a maximum supply current of 13 mA. The maximum volume levels that can be expected from a distance of 1 meter at various supply voltages are outlined below:

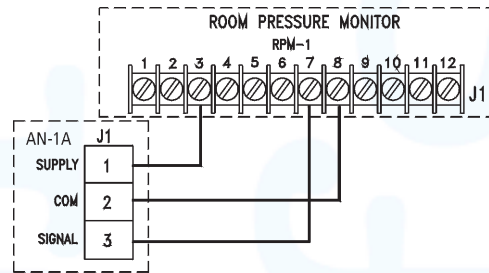
External Supply	Max. Volume
5 Vdc	80 db
8 Vdc	92 db
12 Vdc	98 db
18 Vdc	103 db
24 Vdc	108 db

The input signal may be either a dry contact or a voltage. The input voltage may be as high as the supply voltage. The alarm mode occurs when the input signal exceeds 2.5 Volts. When the signal is a dry contact, the contact must be closed under normal conditions. The current through the contacts is 1 mA.

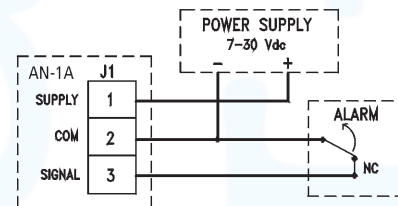
The annunciator is designed for flush installation in a wall. The front panel is the same size as the standard electrical wall plate (2-3/4" x 4-1/2"). It is supplied with a standard plastic (PVC) switch box, 2-13/16" deep. This box includes four integral clamps, swing arms and ears. Other boxes with a minimum depth of 1-1/4" may be substituted by the user.



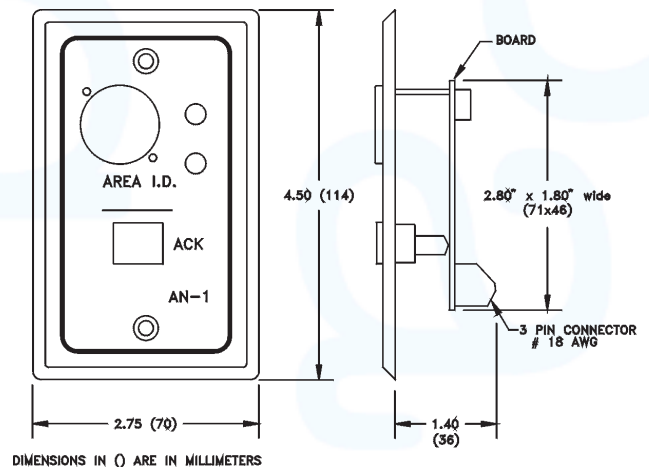
WIRING DIAGRAMS



a. Wiring to the Room Pressure Monitor Model RPM-1



b. Wiring to dry relay contact with external power supply



DIMENSIONS IN Ø ARE IN MILLIMETERS

ORDERING INFORMATION

Order Number
AN-1A