Electro-Mechanical Air Velocity Sensors
LS and FS Series

LS Series

Description: LS airflow sensors are cooling effect monitors that provide a positive indication of the presence of airflow. Independent of the air temperature, these units are used to operate an alarm or shutdown device when airflow drops below a preset level.

Operations: LS airflow sensors utilize a differential expansion principle in which the air entering the inlet circulates and cools an electrically heated internal element. Varied voltage source designs available. When the airflow drops below the nominal setting, the temperature of the heated element rises quickly causing the operation of a contact (either N.O. or N.C.). This inherent thermal delay avoids contact operation on brief interruptions of airflow. On restoration of air flow the sensor will automatically reset after a brief cooling period.

Advantages

- Small size meets MIL shock/vibration/ ambient requirements.
- Operate down to -55°C if continually energized.
- High reliability/enhanced MTBF rate.
- Self contained sensor/switch, no additional circuitry required.
- Built in time delay ignores transient air flow losses.

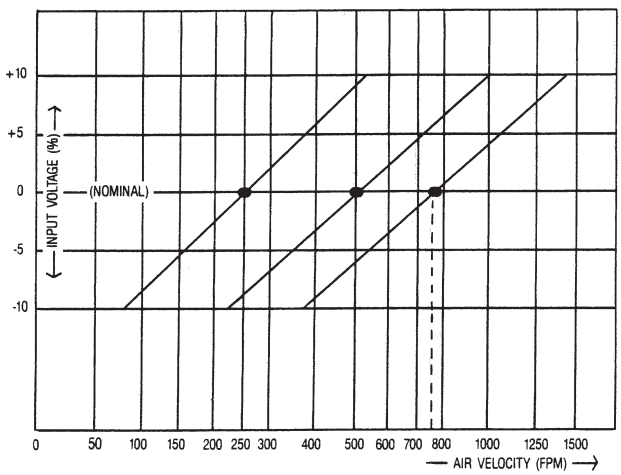
Applications

- Computer/peripheral systems
- Shipboard ventilation/exhaust systems
- Fire control systems
- MIL communications systems
- MIL radar systems
- Weapons systems

Specifications

Heater Voltage:	5V., 12V., 28V., or 115V. AC/DC Other voltages available
Input Power:	4 Watts, nominal
Contact Rating:	2A. resistive up to 115V. AC 1A. resistive up to 32V. DC
Usable Voltage Range:	± 10% of nominal, see voltage variation chart at right
Setting:	Per table, page 12
Response Time:	1 to 20 seconds (depending on setting and air velocity prior to stoppage)
Temperature Range:	-55°C - 85°C, energized
Vibration:	10g to 500 Hz.
Shock:	50g for 11 msec.

LS Series Airflow Sensors
Input Voltage vs. Setting



FS Series

Description: FS airflow sensors are cooling effect monitors that provide a positive indication of the presence of airflow. Independent of the air temperature, these units are used to operate an alarm or shutdown device when airflow drops below a preset level.

Operations: FS airflow sensors utilize a differential expansion principle in which the air entering the inlet circulates and cools an electrically heated internal element. Varied voltage source designs available. When the airflow drops below the nominal setting, the temperature of the heated element rises quickly causing the operation of a contact (either N.O. or N.C.). This inherent thermal delay avoids contact operation on brief interruptions of airflow. On restoration of air flow the sensor will automatically reset after a brief cooling period.

Advantages

- Economical Price
- Self contained sensor/switch requires no additional circuitry
- Not sensitive to air temperature
- Sturdy construction
- Plug in mounting, sockets and mounting assemblies available from manufacturer
- Minimum interference with airflow

Mounting

Warren G-V makes sockets (9 pin style) available as well as a mounting-assembly complete with terminal posts for input and alarm leads as illustrated on front cover.

Specifications

Heater Voltage:	5V., 12V., 24V., or 115V. AC/DC Other voltages available
Input Power:	2.5 Watts, normal
Contact Rating:	2A. resistive up to 115V. AC 1A. resistive up to 32V. DC
Usable Voltage Range:	± 10% of nominal
Setting:	Per table, page 12
Response Time:	1 to 20 seconds at rated voltage (depending on setting and air velocity prior to stoppage)
Temperature Range:	0°C to 85°C

SERIES LS

Refer to Table and Specify Model				
Heater Voltage AC/DC	Contact Configuration S.P.S.T. (#)	Air Flow (*) (Linear Feet Per Minute)		
		250 F.P.M.	500 F.P.M.	750 F.P.M.
5V.	N.O.	LS-6025	LS-6027	LS-6029
	N.C.	LS-6052	LS-6054	LS-6056
12V.	N.O.	LS-6031	LS-6033	LS-6035
	N.C.	LS-6058	LS-6060	LS-6062
28V.	N.O.	LS-5053	LS-5011	LS-5057
	N.C.	LS-5054	LS-5022	LS-5058
115V.	N.O.	LS-5055	LS-5001	LS-5059
	N.C.	LS-5056	LS-5016	LS-5060

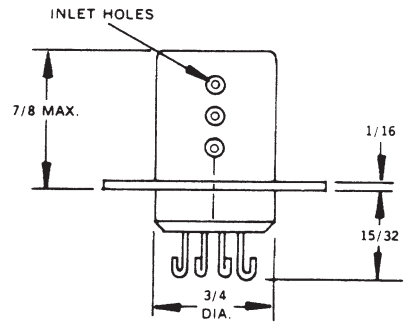
(*) Nominal Factory Setting. Tolerance ± 100 Ft./Min. at Rated Voltage
(#) N.O.: Contacts close on loss of air flow.
N.C.: Contacts open on loss of air flow.

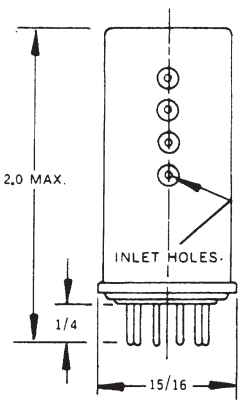
SERIES FS

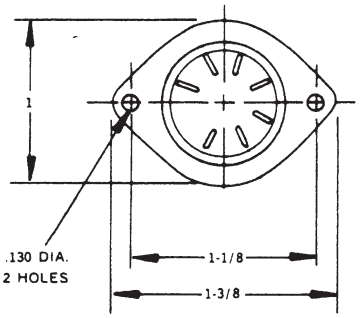
Refer to Table and Specify Model				
Heater Voltage AC/DC	Contact Configuration S.P.S.T.	Air Flow (*) (Linear Feet Per Minute)		
		250	500	750
5V.	N.O. N.C.	FS-1119 FS-1110	FS-1117 FS-1108	FS-1115 FS-1106
12V.	N.O. N.C.	FS-4111 FS-4116	FS-4109 FS-4114	FS-4107 FS-4112
24V.	N.O. N.C.	FS-2101 FS-2102	FS-2131 FS-2132	FS-2133 FS-2134
115V.	N.O. N.C.	FS-3101 FS-3102	FS-3131 FS-3132	FS-3133 FS-3134

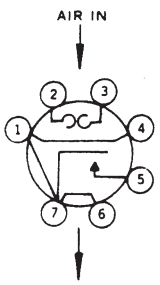
* Nominal Factory Setting. Tolerance ± 100 Ft./Min.
(Consult factory for thresholds below 150 Ft/Min.)
** N.O.: Contacts close on loss of air flow. N.C. Contacts open on loss of air flow.
Sockets Available:
PN: 4-1-250 Socket/Terminal Assembly
A1003 Socket Only

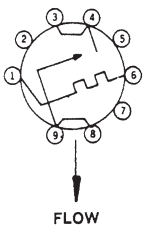
OUTLINE DIMENSIONS











WIRING CONNECTIONS

Use standard miniature 9 pin socket

All dimensions in inches

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