

Air Flow detector specifically to detect clogged conditions in air filters on servers and other types of computer equipment

- Detects the clogged conditions of air filters more efficiently than a conventional time totalling meter
- Adopts a velocity of the wind monitor employing an NTC thermistor to output 0 to 5V analog voltage signals



Ordering Information

Model
D6A-N

Specifications

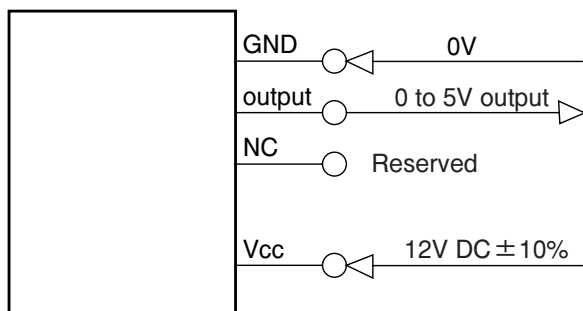
Mounting method	Front secured with nylon rivets (see External Dimensions for the dimensions of the Sensor)
Temperature device	NTC thermistor (epoxy resin coat)
Detection method	Velocity of wind monitor method (80 °C own heating type)
Connector	Japan Aviation Electronics Industry's IL-Z Series
Operating temperature	0°C to 45°C (with no icing)
Storage temperature	-25°C to + 65°C
Operating humidity	25 to 85%RH
Storage humidity	25 to 85%RH
Applicable gas	Air
Range of velocity of wind detection	0.5 to 1.5m/sec.
Mounting direction	Mount the Sensor so that the ventilation opening will be located vertical to the wind direction.
Drive power supply	12V DC asd ± 10%
Operating environmental conditions	The Sensor must be free of oil, moisture, and/or dust. Otherwise, the thermal diffusion characteristics of the Sensor will change.

Caution: Judge the degree of clogging condition from a voltage differential based on the initial voltage obtained when the filter is clean. One minute will be required for the stabilization of the Sensor after the Sensor is turned on.

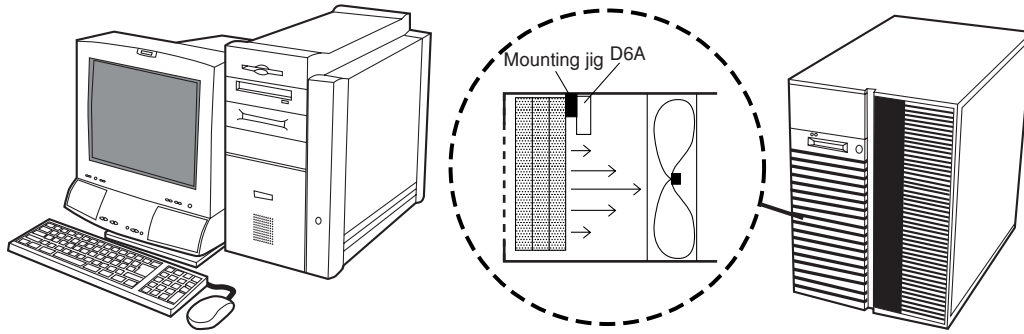
Performance

Head	Test Method	Criteria
(1) Output voltage characteristics	<ul style="list-style-type: none"> Power supply voltage: 12.0V DC Load resistance: 1MΩ Ambient temperature: 25 \pm 5 degrees, Relative humidity: 25% to 85% RH 	Output range: 0.2 to 5.0V (0 to 1.5m/sec.) [Relative value] Based on output at a velocity of wind of 1.5m/sec. Output at velocity of wind of 1.0m/sec.: -1.80V \pm 0.45V Output at velocity of wind of 0.5m/sec.: -4.25V \pm 0.75V [Absolute value] (Reference value) <ul style="list-style-type: none"> EVelocity of wind of 0.5m/sec.: Output of 0.25V \pm 1.2V EVelocity of wind of 1.0m/sec.: Output of 2.70V \pm 1.35V EVelocity of wind of 1.5m/sec.: Output of 4.50V \pm 1.35V
(2) Temperature characteristics	<ul style="list-style-type: none"> Power supply voltage: 12.0V DC Ambient temperature: 0°C to 45°C Relative humidity : 25% to 85% RH 	[Relative value] Based on output (at 25 °C) at a velocity of wind of 1.5m/sec. Output at velocity of wind of 1.0m/sec.: -1.80V \pm 0.55V Output at velocity of wind of 0.5m/sec.: -4.25V \pm 0.90V
(3) Max. output voltage	<ul style="list-style-type: none"> Power supply voltage: 13.2V DC Velocity of the wind: 1.5m/sec. Ambient temperature: 25 \pm 5°C Load resistance: 1MΩ 	5.2V max
(4) Current consumption	<ul style="list-style-type: none"> Power supply voltage: 13.2V DC Measured velocity of the wind: 1.5m/sec. Ambient temperature: 25 \pm 5°C Load resistance: 1MΩ 	60mA max.
(5) Insulation resistance	Measure the insulation resistance between the whole terminals and the sensor frame with a 100V DC insulation resistance tester	20M Ω min.
(6) Dielectric strength	Apply 500V AC for one minute between the whole terminals and the sensor frame.	Max. leak current of 1mA

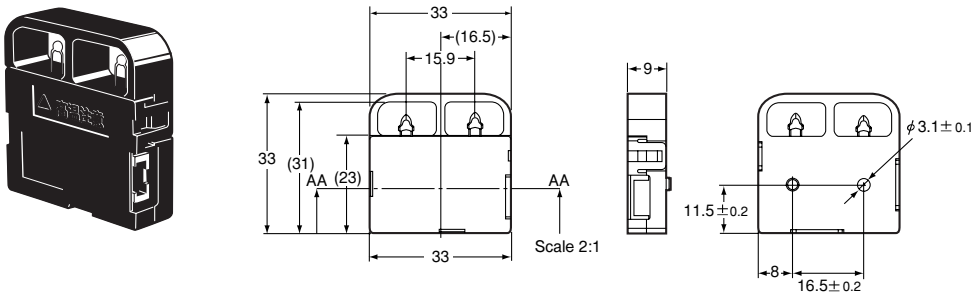
Electrical Connections



Application Example



External Dimensions



Cautions

HANDLING PRECAUTIONS

Storage

Pay the utmost attention as follows when storing the Sensor for long periods of time.

- (1) Select a storage venue in consideration of protecting the Sensor from dust and humidity.
- (2) Store the Sensor in the original packing materials

Mounting to Store computer

- (1) Perform a safety check if the Sensor is dropped.
- (2) Connect the Sensor to the connector securely.
- (3) Use Kitagawa Industries' NRP-345 nylon rivets to secure the Sensor.

Precautions for Operation

- (1) Do not apply a voltage of 13.2V DC or higher to the Sensor.
- (2) Keep clean the thermistor during maintenance. The output voltage of the thermistor will drop if there is any oil, moisture, and/or dust on the surface of the thermistor.
- (3) Do not bend the terminals of the thermistor while cleaning, otherwise the output voltage of the thermistor will drop.
- (4) Check that the PCB is free of water or moistened dust, otherwise the internal circuit will short-circuit.
- (5) A maximum of 12V DC is applied to the terminals of the thermistor.

Do not touch them, otherwise an electric shock may be received. When incorporating the Sensor into your product, describe this precaution in the maintenance manual of the product.

- (6) When the Sensor is turned on, the thermistor will heat to approximately 80°C. Touching the thermistor may result in burns.

When incorporating the Sensor into your product, describe this precaution in the maintenance manual of the product.

- (7) When disposing of the Sensor, be mindful of necessary risk prevention and environmental maintenance.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.