OMRON

CLOGGED DETECTOR

D6A-N

The Clogged Conditions of Air Filters for detection Server Computers, including Workstation Servers.

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

Ordering

Model
D6A-N

Specifications and Rating

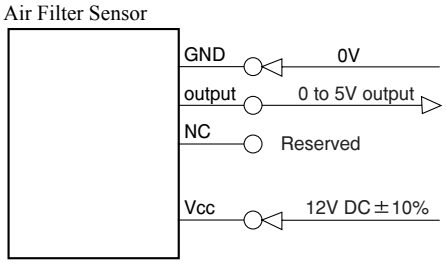
Mounting method	Front fixation secured with nylon rivets (see External Dimensions for the fixation dimensions of the Sensor)
Temperature device	NTC thermistor (epoxy resin coat)
Detection method	Velocity of the wind monitor method (80 ºC own heating type)
Connector	Japan Aviation Electronics Industry's IL-Z Series
Operating temperature	0 ºC to 45 ºC (with no icing)
Storage temperature	-25 ºC to + 65 ºC
Operating humidity	25 to 85%RH
Storage humidity	25 to 85%RH
Applicable gas	Air
Range of velocity of the 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.

Cortions : 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.

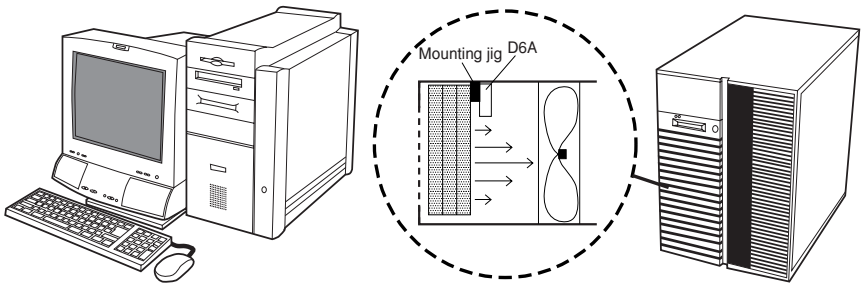
Performance

Head	Test method	Criteria
(1) Output voltage characteristics	• Power supply voltage: 12.0V DC • Load resistance: 1MΩ • Ambient temperature: 25 ± 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 the wind of 1.5m/sec. Output at velocity of the wind of 1.0m/sec.: -1.80V ± 0.45V Output at velocity of the wind of 0.5m/sec.: -4.25V ± 0.75V [Absolute value] (Reference value) • EVelocity of the wind of 0.5m/sec.: Output of 0.25V ± 1.2V • EVelocity of the wind of 1.0m/sec.: Output of 2.70V ± 1.35V • EVelocity of the wind of 1.5m/sec.: Output of 4.50V ± 1.35V
(2) Temperature characteristics	• Power supply voltage: 12.0V DC • Ambient temperature: 0 ºC to 45 ºC Relative humidity : 25% to 85% RH	[Relative value] Based on output (at 25 ºC) at a velocity of the wind of 1.5m/sec. Output at velocity of the wind of 1.0m/sec. : -1.80V ± 0.55V Output at velocity of the wind of 0.5m/sec. : -4.25V ± 0.90V
(3) Max. output voltage	• Power supply voltage: 13.2V DC • Velocity of the wind: 1.5m/sec. • Ambient temperature: 25 ± 5 ºC • Load resistance: 1MΩ	5.2V max.
(4) Current consumption	• Power supply voltage: 13.2V DC • Measured velocity of the wind: 1.5m/sec. • Ambient temperature: 25 ± 5 ºC • 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.	20MΩ min.
(6)Dielectric strength	Apply 500V AC for one minute between the whole terminals and the sensor frame.	Max. leak current of 1mA

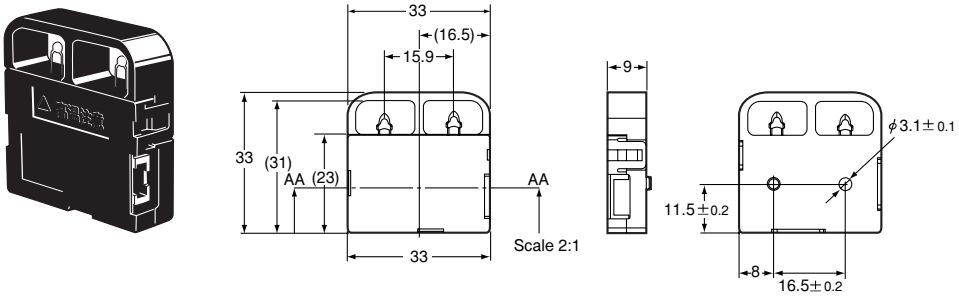
Electrical Connections



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, else the output voltage of the thermistor will drop.
(4) Check that the PCB is free of water or moistened dust, else the internal circuit will short-circuit.
(5) A maximum of 12V DC is applied to the terminals of the thermistor.
Do not touch them, else 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 ºC. 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, mulitiply by 0.03527.

Cat. No.A000-E1-1 **In the interest of product imrovement, specifications are subject to change without notice.**

OMRON Corporation
Electronics Components Company
Electronic & Mechanical Components Division H.Q.
C&C Sensor Department
Shiokoji Horikawa, Shimogyo-ku,
Kyoto, 600-8530 Japan
Phone:(81)75-344-7096 Fax: (81) 75-344-7049

Printed in Japan
1002-1M (1002) W