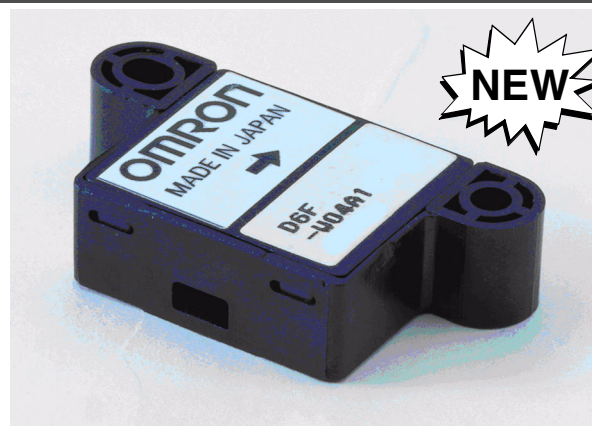


# MEMS Air Flow Sensor D6F-W

The unique dust separating structure, developed by Omron, is a compact and highly efficient Flow-Sensor.

- Dust resistant design prevents contamination in an efficient flow-sensor.
- $\pm 5\%$  Full-Scale repeatable accuracy achieves reliable air velocity measurement.
- Applications include clogged filter detection and Variable Air Volume (VAV) in ventilation.



## Ordering Information

Description	Gas	Flow range	Case	Model
Flow sensor	Air	0 - 1 m/s 0 - 4 m/s	Thermoplastic resin	D6F-W01A1 D6F-W04A1
Cable connector assembly	—	—	—	D6F-W cable

## Ratings

### ■ Absolute Maximum Rating

Item	Symbol	Rating	Unit
Power supply voltage	Vcc	26.4	VDC
Output voltage	Vout	6.0	VDC

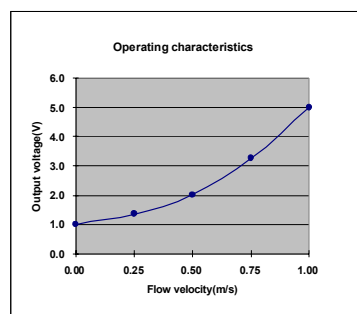
# Specifications

## ■ Sensors

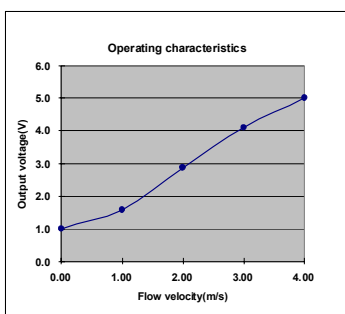
Model	D6F-W01A1	D6F-W04A1
Flow range	0 – 1 m/s	0 – 4 m/s
Flow velocity	25° C, 1 atmosphere	
Case material	Thermoplastic resin	
Application medium	Air	
Operating temperature	–10 to 60° C (with no ice or condensation)	
Operating humidity	Max. 85% (with no condensation)	
Storage temperature	–40 to 80° C (with no ice or condensation)	
Storage humidity	Max. 85% RH (with no condensation)	
Power supply voltage	10.8 to 26.4 VDC	
Output signal	Analog output 1 to 5 VDC (non-linear output) Load resistance min. 10k Ohm	
Current consumption	Max. 15mA (No load, Vcc = 12 to 24 VDC, 25° C)	
Insulation resistance	20M Ohm min. (DC 500 VDC, between lead terminal and the case)	
Dielectric withstanding voltage	500 VAC, 50/60Hz, for one minute. Leakage current is 1mA, max. (Between the lead terminals and the case)	

## ■ Output Characteristic

D6F-W01A1

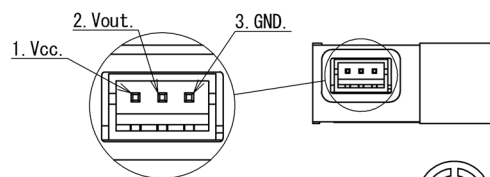


D6F-W04A1



**Note:** Air velocity is the value converted from the mass-flow in regulation wind tunnel phi 48 mm, at 25° C.  
The air velocity set to the Measurement Law is not shown; please confirm in a real environment.

## ■ Connection Method

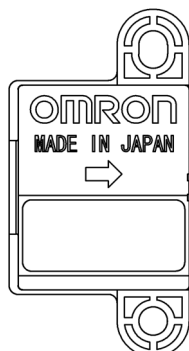


### Connector

S3B-ZR-SM2-TF

Made by JST Mfg. Do., Ltd.

- 1. Vcc.
- 2. Vout.
- 3. GND



## ■ Cable Option

Type	D6F-W CABLE
Contact	SZH-002T-P0.5
Wire	AWG #26 (A length of 200 mm)
Housing	ZHR-3

The connector linked to this product should use the following JST Mfg.Co.,Ltd.

Contact and an electric wire

- 1. Contact: SZH-002T-P0.5  
Wire? : AWG#28 to #26 or
- 2. Contact: SZH-003T-P0.5  
Wire? : AWG#32 to #28

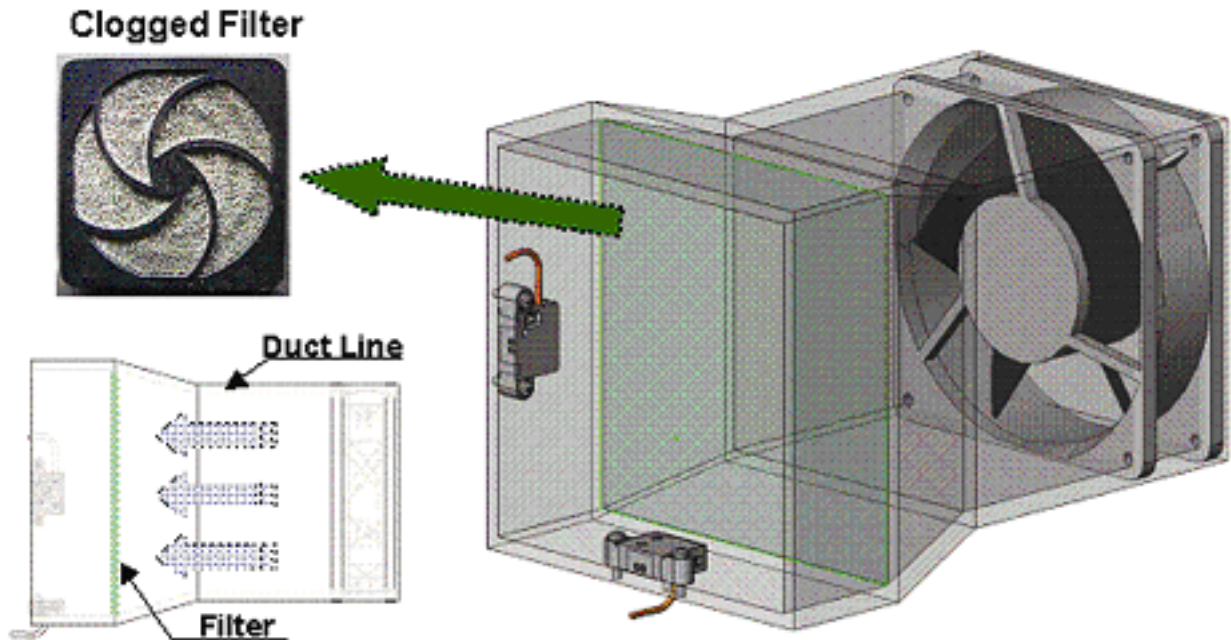
Housing: ZHR-3

## Application Example

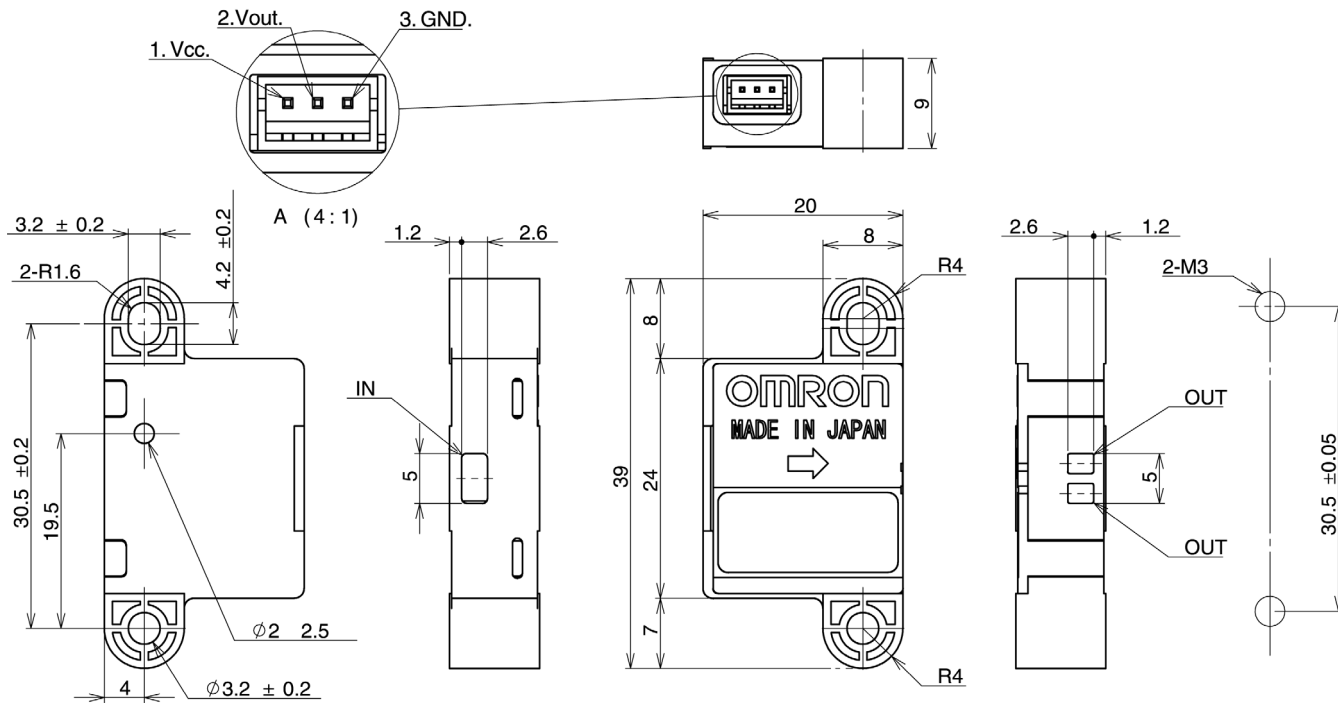
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### ■ Clog Avoidance

The D6F-W air flow sensor detects the pressure drop over the filter as it becomes more completely contaminated with particles. The moment the drop exceeds a certain threshold, a warning signal is sent out, indicating the need for filter replacement.



# Dimensions



# Omron Electronic Components, LLC

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### I. GENERAL

- Definitions:** The words used herein are defined as follows.
  - Terms:** These terms and conditions
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  - Delivery and shipping dates are estimates only; and
  - Seller will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
- Claims:** Any claim by Buyer against Seller for shortage or damage to the Products occurring before delivery to the carrier must be presented in detail in writing to Seller within 30 days of receipt of shipment.

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