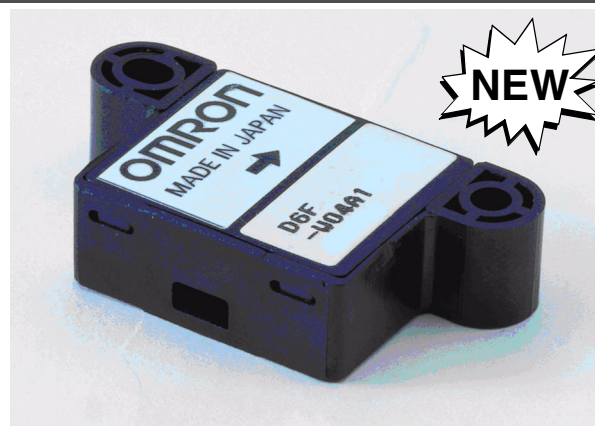


# MEMS Air Flow Sensor D6F-W

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

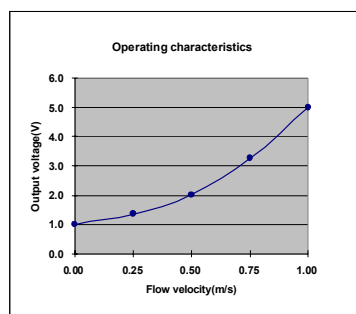
# Specifications

## Sensors

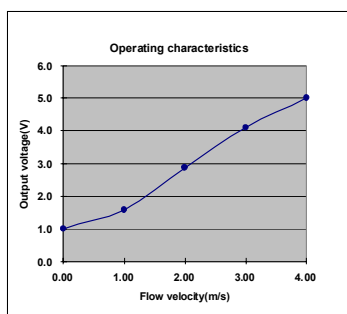
Model	D6F-W01A1	D6F-W04A1
Flow range	0 – 1 m/s	0 – 4 m/s
Flow velocity	25° C, 1 atmosphere	
Case material	Thermoplastic resin	
Application medium	Air	
Operating temperature	–10 to 60° C (with no ice or condensation)	
Operating humidity	Max. 85% (with no condensation)	
Storage temperature	–40 to 80° C (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

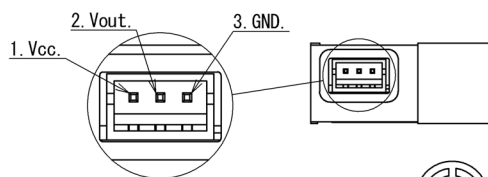


D6F-W04A1



**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

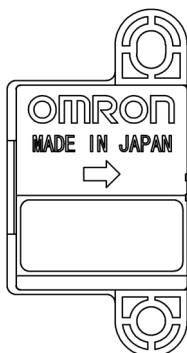


### Connector

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

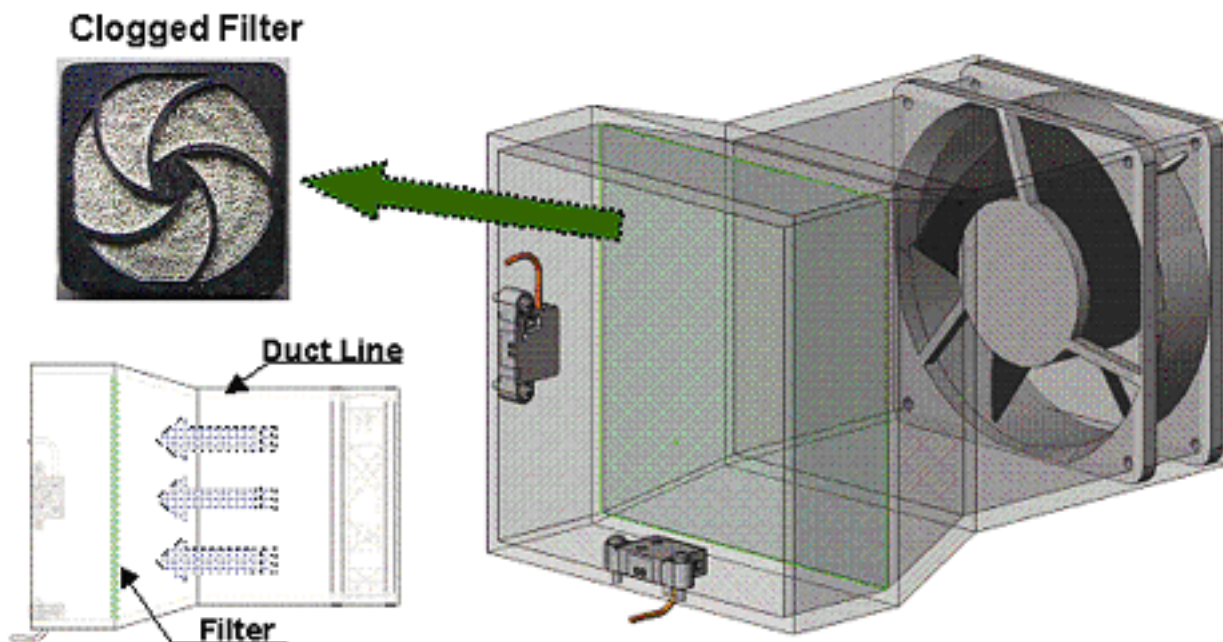
Housing: ZHR-3

## 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.





# Omron Electronic Components, LLC

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