

MEMS Flow-Sensor D6F-V03A1

The unique dust separating structure, developed by OMRON is a compact and highly efficient FLOW-SENSOR.

- A dust-resistant design has been taken into consideration, by the original dust segregation structure, of OMRON.
- +/-10% Full-Scale repeatable accuracy achieves consistent air velocity measurement.
- Applications include clogged-filter detection and air velocity.



Sensor specification

Type	D6F-V03A1
Flow Range	0 – 3 m/s @ 25° C, 1 atmosphere
Case Material	Thermoplastic resin
Gas	Air
Ambient Temperature	-10 to +60° C (with no condensation)
Using Humidity	Max. 85% RH (with no condensation)
Storage Temperature	-40 to +80° C (with no condensation)
Preservation Humidity	Max. 85% RH (with no condensation)
Power Supply Voltage	3.15 to 3.45 VDC
Output Signal	Analog output 0.5 to 2 VDC (non-linear output) Load resistance min. 10kΩ
Current Consumption	Max. 15mA (No-load, V _{CC} = 3.3 VDC, 25° C)
Insulation Resistance	20Mohm min. (500VDC, between lead terminal and the case)
Dielectric Withstanding Voltage	Leakage current is 1mA max. (at 500 VAC, 50/60Hz for one minute). 500VAC, 50/60Hz judged at 1mA max. (between the lead terminals and the case)

Absolute maximum rating

Item	Symbol	Rating	Unit
Power supply voltage	V _{CC}	12.0	VDC
Output voltage	V _{OUT}	3.0	VDC

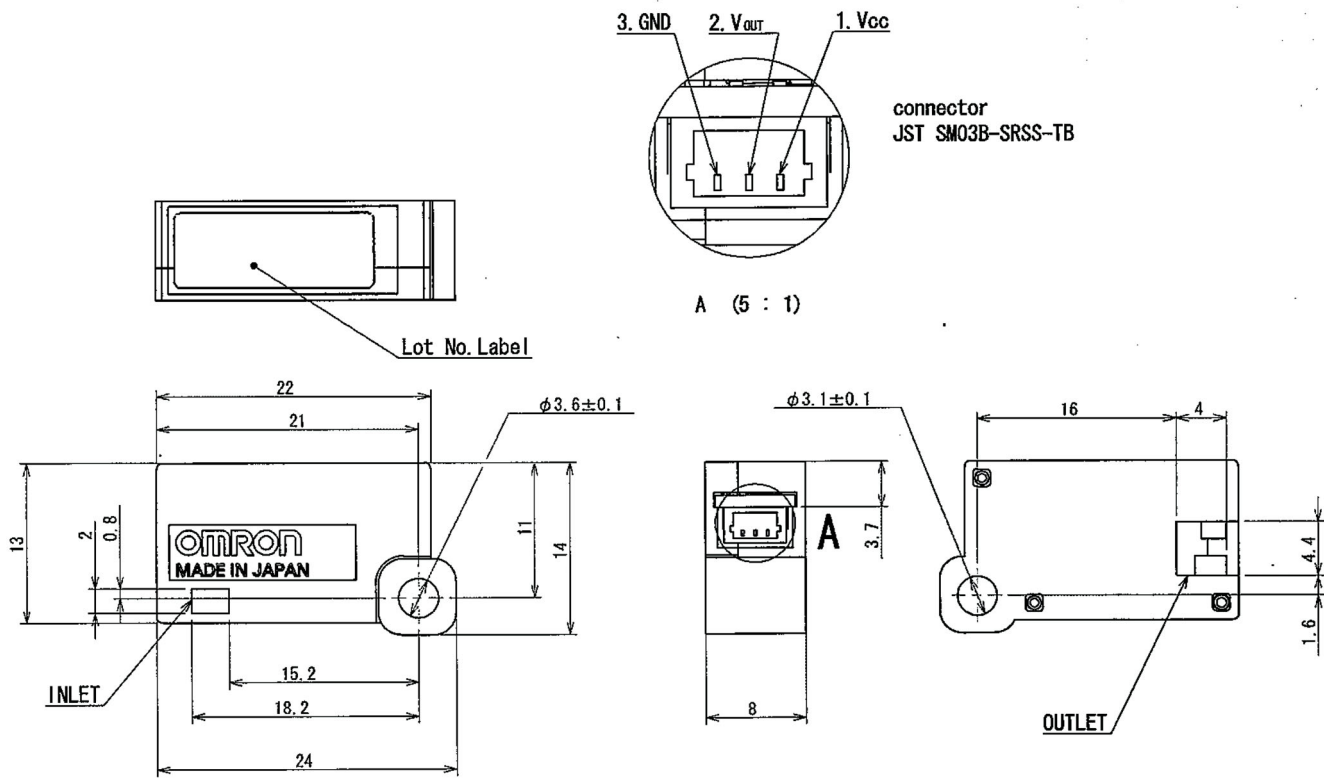
Output characteristic

Flow Velocity (m/sec)	0	0.75	1.50	2.25	3.00
Output Voltage (VDC)	0.50 ±0.15	0.70 ±0.15	1.11 ±0.15	1.58 ±0.15	2.00 ±0.15

Measurement condition: Power-supply voltage 3.3VDC, ambient temperature 25° C and dry air.

- Note:**
1. Air velocity is the value converted from the mass-flow in OMRON regulation wind tunnel phi48mm.
 2. The air velocity, set to the Measurement Law, is not shown. Please confirm in a real use environment in use.
 3. Temperature characteristics:
Over ambient temperature range -10 to +60° C: within ±20% F.S. of detected characteristics
Of at +25° C.

Dimensions



Omron Electronic Components, LLC

Terms and Conditions of Sales

I. GENERAL

- Definitions:** The words used herein are defined as follows.
 - Terms:** These terms and conditions
 - Seller:** Omron Electronic Components LLC and its subsidiaries
 - Buyer:** The buyer of Products, including any end user in section III through VI
 - Products:** Products and/or services of Seller
 - Including:** Including without limitation
- Offer/Acceptance:** These Terms are deemed part of all quotations, acknowledgments, invoices, purchase orders and other documents, whether electronic or in writing, relating to the sale of Products by Seller. Seller hereby objects to any Terms proposed in Buyer's purchase order or other documents which are inconsistent with, or in addition to, these Terms.
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- Currencies:** If the prices quoted herein are in a currency other than U.S. dollars, Buyer shall make remittance to Seller at the then current exchange rate most favorable to Seller; provided that if remittance is not made when due, Buyer will convert the amount to U.S. dollars at the then current exchange rate most favorable to Seller available during the period between the due date and the date remittance is actually made.
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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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 - Use in consumer Products or any use in significant quantities.

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 - Systems, machines, and equipment that could present a risk to life or property.
- Prohibited Use:** NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
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- Export Controls:** Buyer shall comply with all applicable laws, regulations and licenses regarding (a) export of the Products or information provided by Seller; (b) sale of Products to forbidden or other proscribed persons or organizations; (c) disclosure to non-citizens of regulated technology or information.

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- Severability:** If any provision hereof is rendered ineffective or invalid, such provision shall not invalidate any other provision.

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 - (iii) Use in consumer products or any use in significant quantities.
 - (iv) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this product.

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ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

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

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