

# MEMS Flow Sensor

# D6F-01/02/05

## High Accuracy Mass Flow Sensing

- Small size
- Fast response
- Applicable to air, non-corrosive gas, natural gas
- Applications include: medical respiratory equipment, analysis apparatus, combustion control



## Ordering Information

Case	Gas	Flow range	Notes	Model
PPS	Air*	0-1L/min	Integral orifice	D6F-01A1-110
		0-2L/min		D6F-02A1-110
Aluminum	LNG* (13A)	0-5L/min	—	D6F-05N2-000

## Ratings

### ■ Absolute Maximum Rating

Item	Symbol	Rating	Unit
Power supply	$V_{CC}$	26.4	VDC
Output voltage	$V_{OUT}$	6	VDC

### ■ Recommendation Condition

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Power supply	$V_{CC}$	—	10.8	—	26.4	VDC
Operating temperature	$T_{ORR}$	—	-10	—	60	°C
Output voltage (max.)	$V_{OH}$	$V_{CC} = 12 \text{ to } 24 \text{ VDC } I_{OH} = 5 \text{ mA}$	5	—	5.7	VDC
Output voltage (min.)	$V_{OL}$	$V_{CC} = 12 \text{ to } 24 \text{ VDC } I_{OH} = 5 \text{ mA}$	0	—	1	VDC

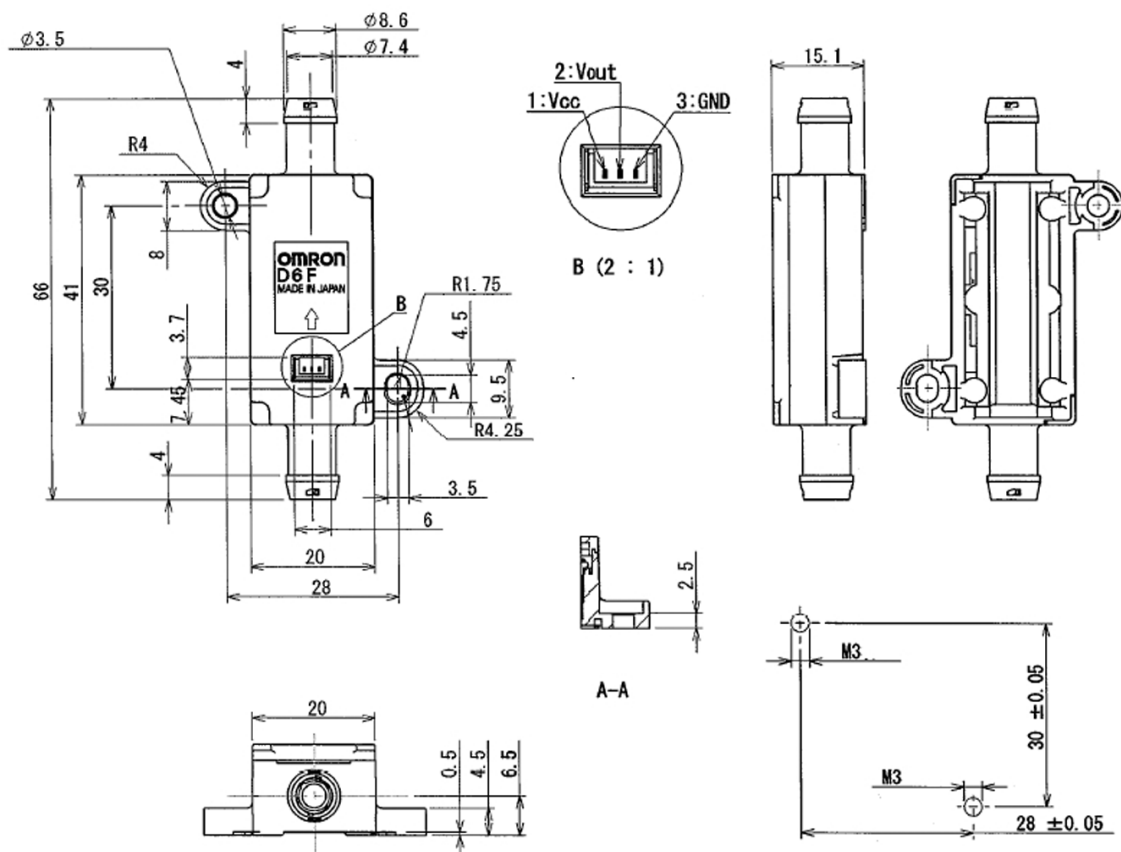
# Characteristics

Model	D6F-01A1-110	D6F-02A1-110	D6F-05N2-000
Rated quality range	0-1L/min		0-5L/min
Joint type	Press-fit type (Press-fit min. external diameter: 7.4 mm, Press-fit max. external diameter: 8.6 mm) (passage diameter: 4 mm)		Rc 1/4 screw
Case material	PPS		Aluminum
Applicable gas	Air*		LNG*
Withstand pressure	200kPa (about 30 psi)		
Repeat accuracy	±3% F.S. max		
Operating temperature	-10 to 60 degrees (with no icing or condensation)		
Operating humidity	Under 85% RH (with no icing or condensation)		
Storage temperature	-40 to 80 degrees (with no icing or condensation)		
Storage humidity	Under 85% RH (with no ice or no dew)		
Output signal	Analog Output 1-5 VDC		
Current consumption	No-Load $V_{CC} = 12$ to $24$ VDC, $V_{SS} = 0V$ 25 deg. C, max 15 mA		
Insulation resistance	More than 20M Ohm (500 VDC, between lead terminal and case)		
Dielectric strength	500 VAC, 50/60 Hz, for 1 minute. (Leakage current typ <1 mA.) Between the lead terminals and the base		
Orifice	Integral	Integral	Not applicable

# Dimensions

Unit: mm

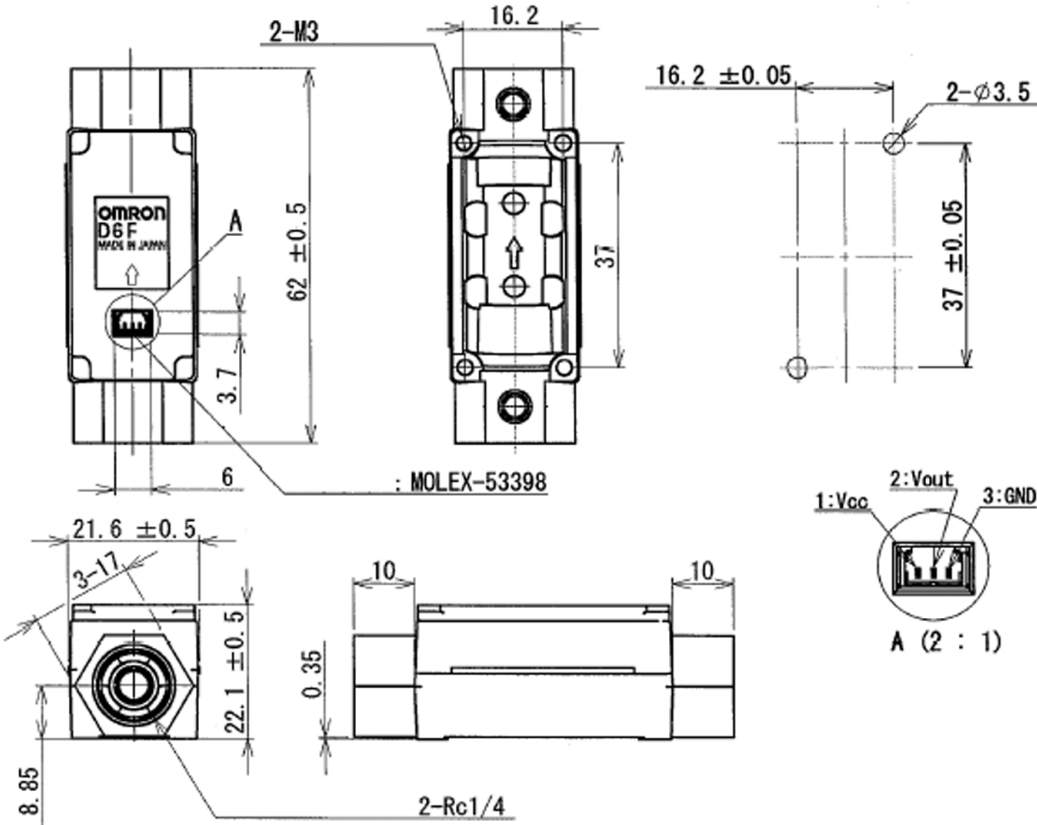
**D6F-01A1-110**  
**D6F-02A1-110**



**Note:** Mount using an M3 pan head screw, tightened to 0.59 N•m max. torque.

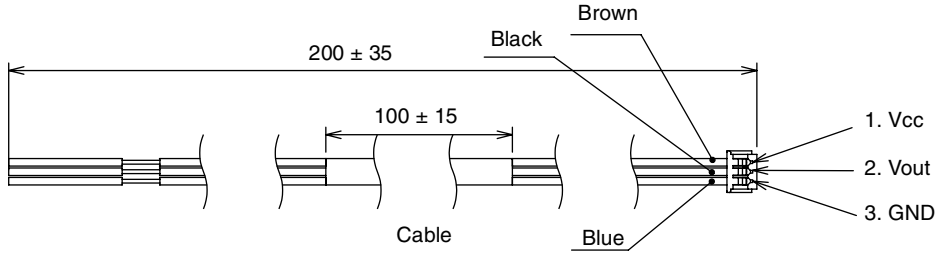
Unit: mm

D6F-05N2-000



Note: Mount using an M3 pan head screw, tightened to 0.59 N•m max. torque.

Applicable Cable for D6F



Housing: Molex - 51021  
Terminal: Molex - 50079  
Wire: 26-28 AWG

# Omron Electronic Components, LLC

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### 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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- Prices/Payment:** All prices stated are current, subject to change without notice by Seller. Buyer agrees to pay the price in effect at time of shipment. Payments for Products received are due net 30 days unless otherwise stated in the invoice. Buyer shall have no right to set off any amounts against the amount owing in respect of this invoice.
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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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- Suitability:** IT IS THE BUYER'S SOLE RESPONSIBILITY TO ENSURE THAT ANY OMRON PRODUCT IS FIT AND SUFFICIENT FOR USE IN A MOTORIZED VEHICLE APPLICATION. BUYER SHALL BE SOLELY RESPONSIBLE FOR DETERMINING APPROPRIATENESS OF THE PARTICULAR PRODUCT WITH RESPECT TO THE BUYER'S APPLICATION INCLUDING (A) ELECTRICAL OR ELECTRONIC COMPONENTS, (B) CIRCUITS, (C) SYSTEM ASSEMBLIES, (D) END PRODUCT, (E) SYSTEM, (F) MATERIALS OR SUBSTANCES OR (G) OPERATING ENVIRONMENT. Buyer acknowledges that it alone has determined that the Products will meet their requirements of the intended use in all cases. Buyer must know and observe all prohibitions of use applicable to the Products/s.
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  - Use in consumer Products or any use in significant quantities.

- Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
  - 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.
  - Motorized Vehicle Application:** USE OF ANY PRODUCT/S FOR A MOTORIZED VEHICLE APPLICATION MUST BE EXPRESSLY STATED IN THE SPECIFICATION BY SELLER.
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- Warranty:** Seller's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Seller (or such other period expressed in writing by Seller). SELLER MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT ALL OTHER WARRANTIES, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS.
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- Change In Specifications:** Product specifications and description may be changed at any time based on improvements or other reasons. It is Seller's practice to change part numbers when published ratings or features are changed, or when significant engineering changes are made. However, some specifications of the Product may be changed without any notice.
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- Amendment:** These Terms constitute the entire agreement between Buyer and Seller relating to the Products, and no provision may be changed or waived unless in writing signed by the parties.
- 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.
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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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