

MEMS Flow Sensor

D6F-01N/02L/05N**High Accuracy Mass Flow Sensing for Natural Gas and Propane Applications**

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

**Ordering Information**

Case	Calibration gas	Flow range**	Model
Aluminum	Natural Gas*	0-1L/min	D6F-01N2-000
	Propane Gas*	0-2L/min	D6F-02L2-000
	Natural Gas*	0-5L/min	D6F-05N2-000

* Contact Omron for other gases.

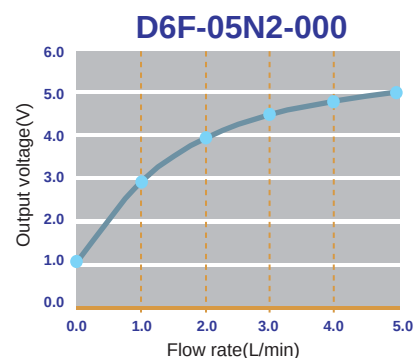
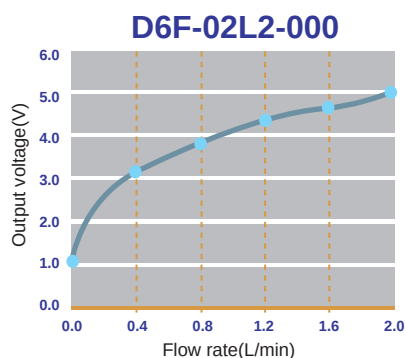
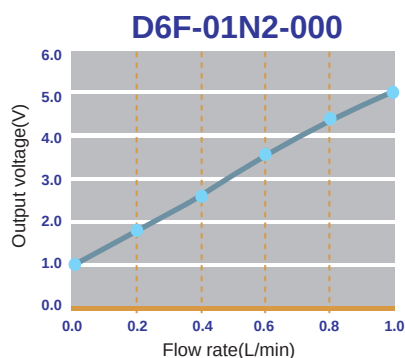
**Mass flow converted to volumetric flow (standard liters per minute) at 0° C and 1 atm.

Ratings**■ Absolute Maximum Rating**

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

■ Electrical Performance

Item	Symbol	Condition	Min.	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

Operating Characteristics

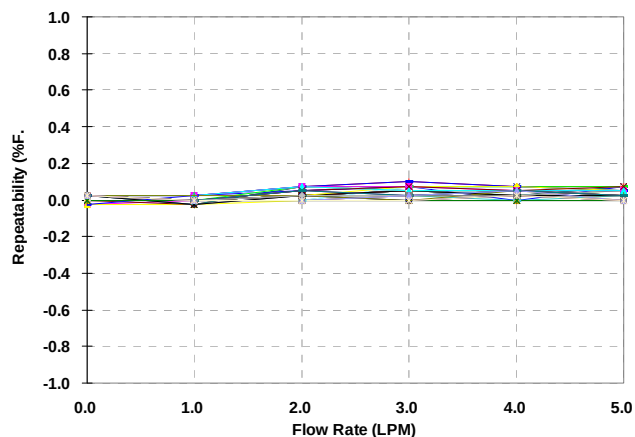
Characteristics

Model	D6F-01N2-000	D6F-02L2-000	D6F-05N2-000
Flow range	0-1L/min	0-2L/min	0-5L/min
Joint type	Rc 1/4 screw		
Case material	Aluminum		
Applicable gas	Natural Gas	Propane	Natural Gas
Withstand pressure	200kPa (about 30 psi)		
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		

Accuracy Test Results (typical performance)

D6F-05N2

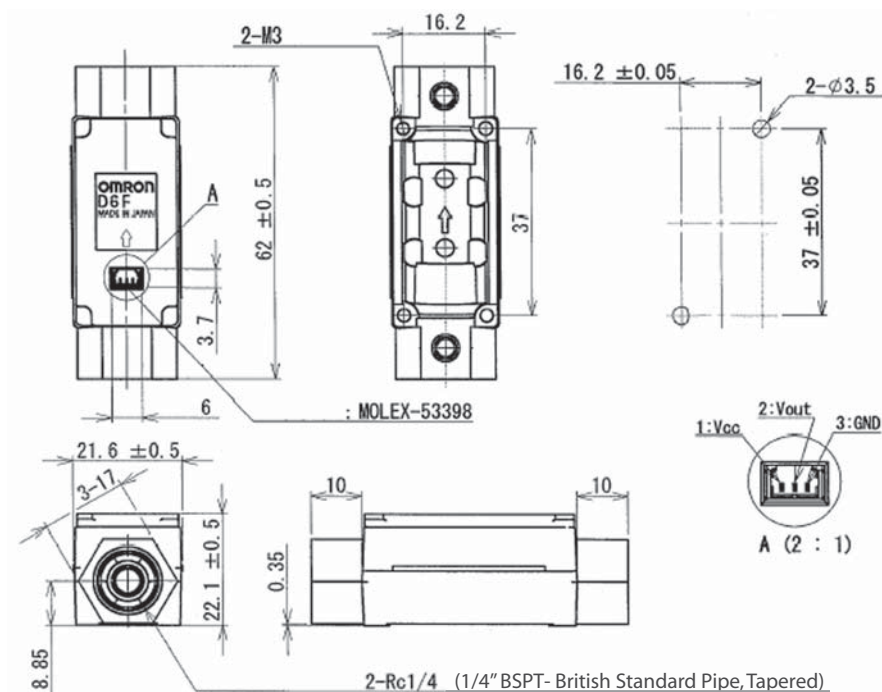
(5 samples, repeated 10 times each)



Dimensions

Unit: mm

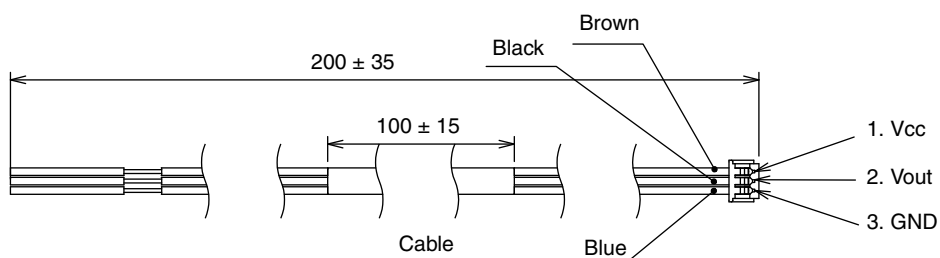
D6F-01N2-000, D6F-02L2-000, D6F-05N2-000



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

Applicable Cable for D6F (included)

part number: D6F-CABLE1 (for replacement cables)



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

Omron Electronic Components LLC

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- Definitions:** The words used herein are defined as follows.
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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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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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