

# D6F-AB71

## MEMS Flow Sensor

### Reduction of Piping time by quick joint connection

Air Analog

- Reduce the influence of pulsation flow by bypass flow path
- 30 L/min and 70 L/min of Air can be measured.
- Compact size of 30 × 84.6 × 32 mm (H × W × D).

RoHS Compliant



Refer to the *Common Precautions for the D6F Series* on page 40.



### Ordering Information

#### MEMS Flow Sensor

Flow Port Type	Applicable fluid	Flow rate range	Model
Quick joint P14	Air	0 to 30 L/min	D6F-30AB71-000
		0 to 70 L/min	D6F-70AB71-000

#### Accessory (Sold separately)

Type	Model
Cable	D6F-CABLE1

Note: Refer to *Accessories for the D6F Series* on page 39.

### Connections

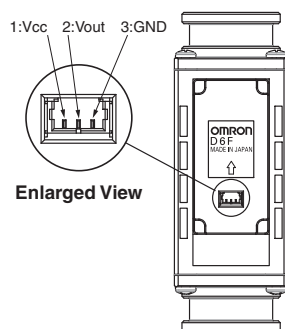
#### D6F-30AB71-000

#### D6F-70AB71-000

Pin No. 1: Vcc  
2: Vout  
3: GND  
Connector 53398-03\*\* (Made by Molex Japan)

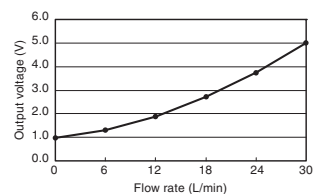
Use the following connectors for connections to the D6F:

Housing 51021-0300 (Made by Molex Japan)  
Terminals 50079 (Made by Molex Japan)  
Wires AWG28 to AWG26

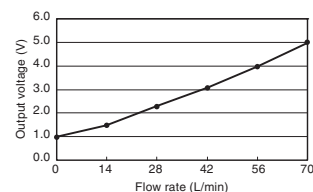


### Output Voltage Characteristics

#### D6F-30AB71-000



#### D6F-70AB71-000



#### D6F-30AB71-000

Flow rate L/min (normal)	0	6	12	18	24	30
Output voltage V	1.00 ±0.12	1.25 ±0.12	1.91 ±0.12	2.75 ±0.12	3.78 ±0.12	5.00 ±0.12

#### D6F-70AB71-000

Flow rate L/min (normal)	0	14	28	42	56	70
Output voltage V	1.00 ±0.12	1.43 ±0.12	2.25 ±0.12	3.14 ±0.12	4.06 ±0.12	5.00 ±0.12

Measurement conditions: Power-supply voltage 12±0.1 VDC, ambient temperature 25±5°C and ambient humidity 35 to 75%RH.

Model	D6F-30AB71-000	D6F-70AB71-000
Flow Range (See note 1.)	0 to 30 L/min	0 to 70 L/min
Calibration Gas (See note 2.)	Air	
Flow Port Type	Quick joint P14	
Electrical Connection	Three-pin connector	
Power Supply	10.8 to 26.4 VDC	
Current Consumption	15 mA max. with no load and Vcc of 12 to 24 VDC, GND = 0 VDC, 25°C	
Output Voltage	1 to 5 VDC (non-linear output, load resistance of 10 kΩ min.)	
Accuracy	±3%F.S. (25°C characteristic)	
Repeatability (See note 3.)	±0.3%F.S.	
Output Voltage (Max.)	5.7 VDC (Load resistance: 10 kΩ)	
Output Voltage (Min.)	0 VDC (Load resistance: 10 kΩ)	
Rated Power Supply Voltage	26.4 VDC	
Rated Output Voltage	6 VDC	
Case	PPS	
Degree of Protection	IEC IP40 (Excluding tubing sections.)	
Withstand Pressure	100 kPa	
Pressure Drop (See note 3.)	0.88 kPa	3.49 kPa
Operating Temperature (See note 4.)	−10 to +60°C	
Operating Humidity (See note 4.)	35 to 85%RH	
Storage Temperature (See note 4.)	−30 to +80°C	
Storage Humidity (See note 4.)	35 to 85%RH	
Temperature Characteristics	±3%F.S. for 25°C characteristic at an ambient temperature of −10 to +60°C	
Insulation Resistance	Between sensor outer cover and lead terminals: 20 MΩ min. (at 500 VDC)	
Dielectric Strength	Between sensor outer cover and lead terminals: 500 VAC, 50/60 Hz min. for 1 min (leakage current: 1 mA max.)	
Weight	75 g	

Note: 4. With no condensation or icing.

Note 1: The flow pan inlet and outlet ports conform to P14-type female quick-connect joints.  
(The tube inlet and outlet ports have the same shape.)  
\* P14 is the number of an O-ring specified in JIS B 2401.  
\* The O-ring groove in the male joint must conform to P14 in JIS B 2406.  
\* Please obtain a male joint separately.

Note 2: To mount the Sensor with 2.6-dia. holes, use P-type self-tapping screws with a nominal diameter of 3 mm and tighten them to a torque of 1.2 N·m max. The screw threads must engage for 5.5 mm min.

Note 3: Use the following connectors to connect to the Sensor.

Connector	: GHR-04V-S (JST)
Terminals	: SSSL-002T-P0.2 (JST)
Wires	: AWG26 to AWG30
Circuit numbers	: 1. Vcc, 2. SDA, 3. SCL, and 4. GND.