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**

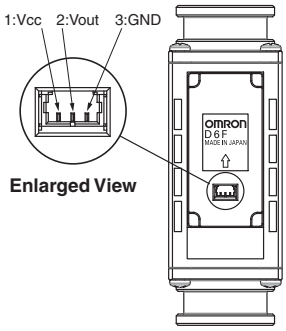
Note: Refer to *Accessories for the D6F Series* on page 39.

Connections

D6F-30AB71-000
D6F-70AB71-000

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

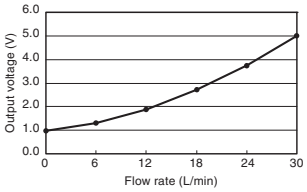
Use the following connectors for connections to the D6F:
Housing 51021-0300 (Made by Molex Japan)
Terminals 50079 (Made by Molex Japan)
Wires AWG28 to AWG26



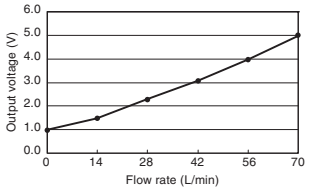
Enlarged View

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.

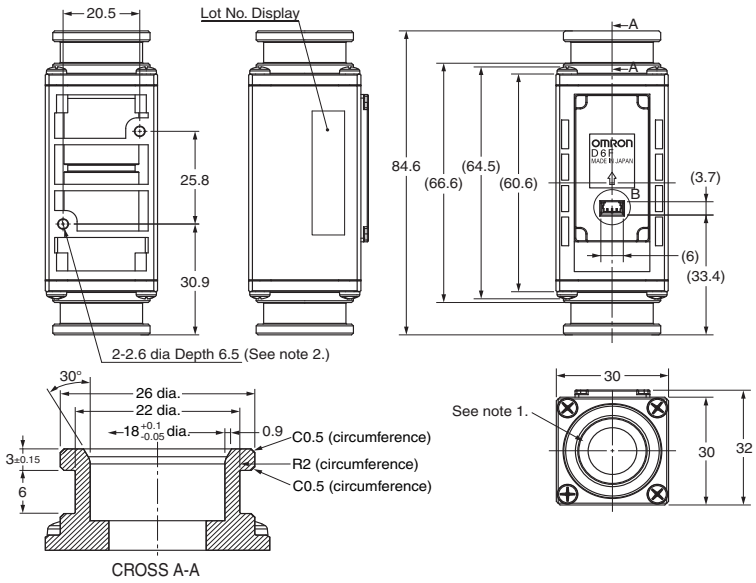
Characteristics/Performance

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	

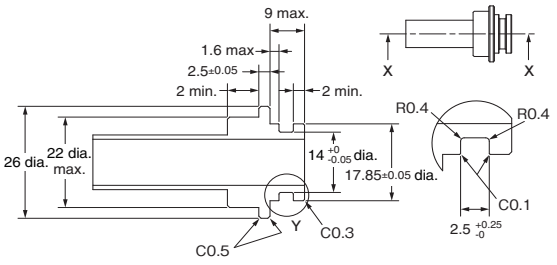
Note: 1. Volumetric flow rate at 0°C, 101.3 kPa.
Note: 2. Dry gas (must not contain large particles, e.g., dust, oil, or mist.)
Note: 3. Reference (typical)
Note: 4. With no condensation or icing.

Dimensions (Unit: mm)

● MEMS Flow Sensors
D6F-30AB71-000
D6F-70AB71-000



Recommended Quick joint male P14 type



If using a Rc3/8 converter joint, the following is recommended.
REGAL JOINT CO., LTD eigyou@rgl.co.jp
Converter male joint (Rc3/8-Quick male joint): Adapter Rc3/8-QJM14
O ring: O ring P14 fluororubber (material)

Note 1. The flow path 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 : SSHL-002T-P0.2 (JST)
Wires : AWG26 to AWG30
Circuit numbers : 1. Vcc, 2. SDA, 3. SCL, and 4. GND.