

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.

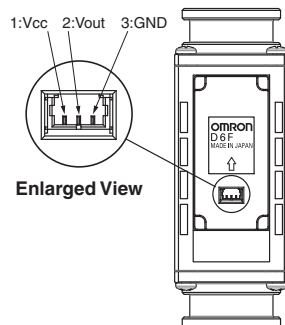
Connections

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

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

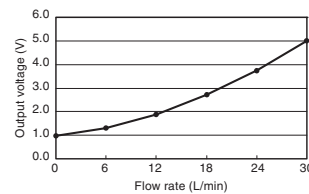
Use the following connectors for connections to the D6F:

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

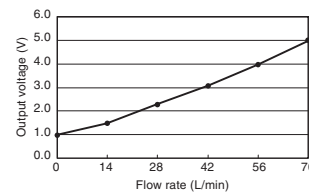


Output Voltage Characteristics

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	1.25	1.91	2.75	3.78	5.00
	±0.12	±0.12	±0.12	±0.12	±0.12	±0.12

D6F-70AB71-000

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

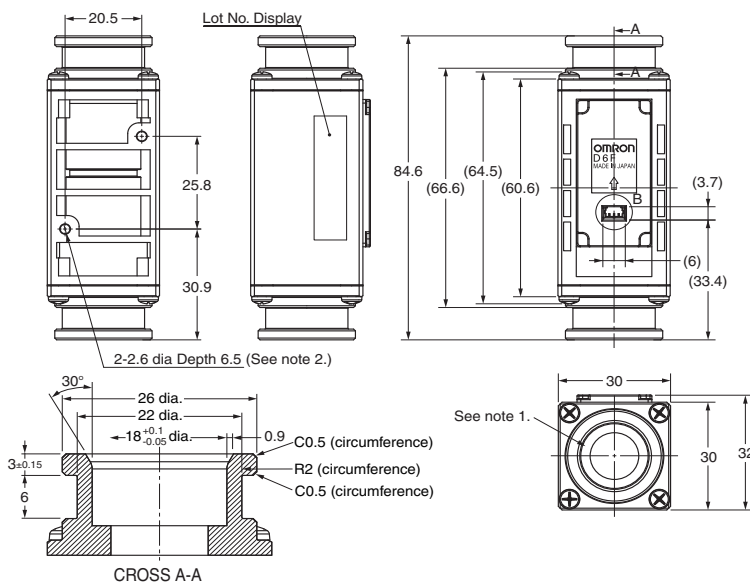
Note 4. With no condensation or icing.

Dimensions (Unit: mm)

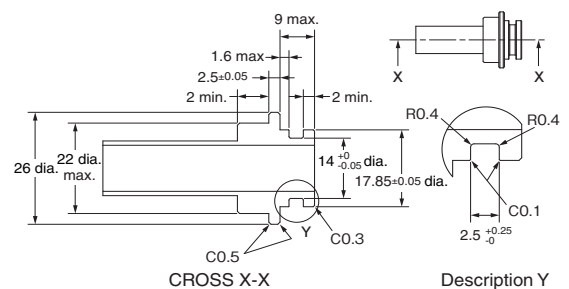
MEMS Flow Sensors

D6F-30AB71-000

D6F-70AB71-000



Recommended Quick joint male P14 type



CROSS X-X

Description Y

If using a Rc3/8 converter joint, the following is recommended.
 REGAL JOINT CO., LTD <http://www.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 : SSLH-002T-P0.2 (JST)
 Wires : AWG26 to AWG30
 Circuit numbers : 1. Vcc, 2. SDA, 3. SCL, and 4. GND.