## **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  $30 \times 84.6 \times 32$  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)

Туре	Model	
Cable	D6F-CABLE1	

#### **Connections**

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

Pin No. 1: Vcc

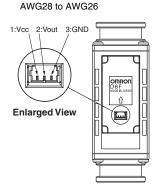
2: Vout

3: GND

Connector 53398 (Made by Molex Japan)

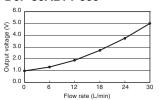
Use the following connectors for connections to the D6F:

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

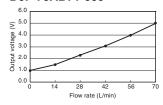


## **Output Voltage Characteristics**

#### D6F-30AB71-000



#### D6F-70AB71-000



#### D6F-30AB71-000

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

#### D6F-70AB71-000

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

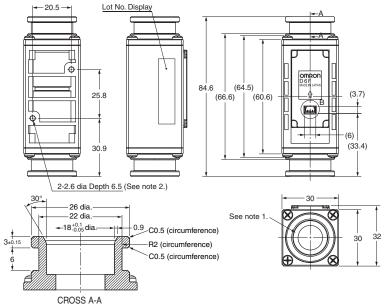
## **Characteristics/Performance**

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 k $\Omega$ 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



- 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.)
- (The tube linle and outlet ports have the same snape.)

  \* 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.

  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)

: SSHL-002T-P0.2 (JST) Terminals

Wires : AWG26 to AWG30
Circuit numbers : 1. Vcc, 2. SDA, 3. SCL, and 4. GND.

## Cable (Sold separately)

#### **D6F-CABLE1**

