

# General Specifications

## Model DF1 Pneumatic to Electric Converter

**JUXTA**

GS 77J05F01-01E

### ■ General

The DF1, a nest-mounting type DCS-supported P/E converter, converts pneumatic signals into DC current or DC voltage signals.

- No orientation errors.
- A compact, high-performance model with a semiconductor pressure sensor.

### ■ Model and Suffix Codes

**DF1-□6□\*A**

Model \_\_\_\_\_

Input Signal \_\_\_\_\_

1 : 0.2 to 1.0 kgf/cm<sup>2</sup>  
2 : 3 to 15 psi  
3 : 20 to 100 kPa  
4 : 19.6 to 98.1 kPa

Output 1 Signal \_\_\_\_\_

6 : 1 to 5 V DC

Output 2 signal \_\_\_\_\_

A : 4 to 20 mA DC	1 : 0 to 10 mV DC
B : 2 to 10 mA DC	2 : 0 to 100 mV DC
C : 1 to 5 mA DC	3 : 0 to 1 V DC
D : 0 to 20 mA DC	4 : 0 to 10 V DC
E : 0 to 16 mA DC	5 : 0 to 5 V DC
F : 0 to 10 mA DC	6 : 1 to 5 V DC
G : 0 to 1 mA DC	7 : -10 to +10 V DC
Z : (Custom order)	0 : (Custom order)

Current signal      Voltage signal  
(24 mA or less)      (±10 V or less)

Power supply: 24 V DC±10%

### ■ Ordering Information

Specify the following when ordering.

- Model and suffix codes: e.g. DF1-36A\*A

### ■ Input/Output Specifications

Input signal: Dry non-corrosive gases of 0.2 to 1.0 kgf/cm<sup>2</sup>, 3 to 15 psi, 20 to 100 kPa or 19.6 to 98.1 kPa

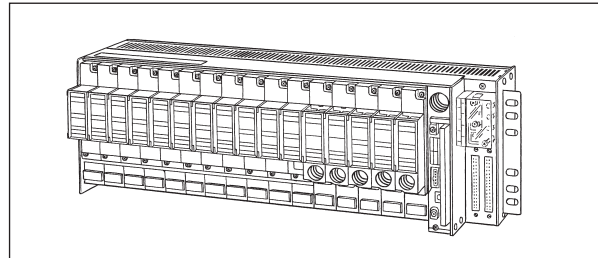
Allowable input pressure: 200 kPa or less

Allowable load resistance:

DC current output	Allowable load resistance	DC voltage output	Allowable load resistance
4 to 20 mA	750 Ω or less	0 to 10 mV	250 kΩ or more
2 to 10 mA	1500 Ω or less	0 to 100 mV	250 kΩ or more
1 to 5 mA	3000 Ω or less	0 to 1 V	2 kΩ or more
0 to 20 mA	750 Ω or less	0 to 10 V	10 kΩ or more
0 to 16 mA	900 Ω or less	0 to 5 V	2 kΩ or more
0 to 10 mA	1500 Ω or less	1 to 5 V	2 kΩ or more
0 to 1 mA	15 kΩ or less	-10 to +10 V	10 kΩ or more

Zero adjustment: -5 to +5%

Span adjustment: 95 to 105%



### ■ Standard Performance

Accuracy rating:

Output 1: ±0.5% of span

Output 2: Relative error between output-1 and 2 is within ±0.2%.

Accuracy is not guaranteed for output level less than 0.5% of the span of a 0 to X mA output range type.

Response speed: 100 ms, 63% response (10 to 90%)

Insulation resistance: 100 MΩ or more at 500 V DC between output and power supply, output and aluminum die casting, and power supply and aluminum die casting.

Withstand voltage: 500 V AC/min. between output and power supply, output and aluminum die casting, and power supply and aluminum die casting.

### ■ Environmental Conditions

Operating temperature range: 0 to 50°C

Operating humidity range: 5 to 90% RH (no condensation)

Power supply voltage: 24 V DC±10% (ripple content 5% p-p or less)

Effect of power supply voltage fluctuations: ±0.1% of span or less for the fluctuation within the operating range of power supply voltage specification.

Effect of ambient temperature change: ±0.4% of span or less for a temperature change of 10°C.

Current consumption: 24 V DC 80 mA (4 to 20mA DC), 50mA (1 to 5V DC)

### ■ Mounting and Dimensions

Mounting method: Nest-mounting (Signals and power supply are connected through back board and connector)

Connection method: Connection to I/O card; via dedicated cable (connector)

Air connection: Rc1/4 (PT1/4 female screw)

External dimensions: 130.6(H)×23.6(W)×126(D) mm

Weight: Approx. 150 g

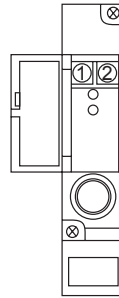
### ■ Standard Accessories

Tag number label: 1

### ■ Custom Order Specifications

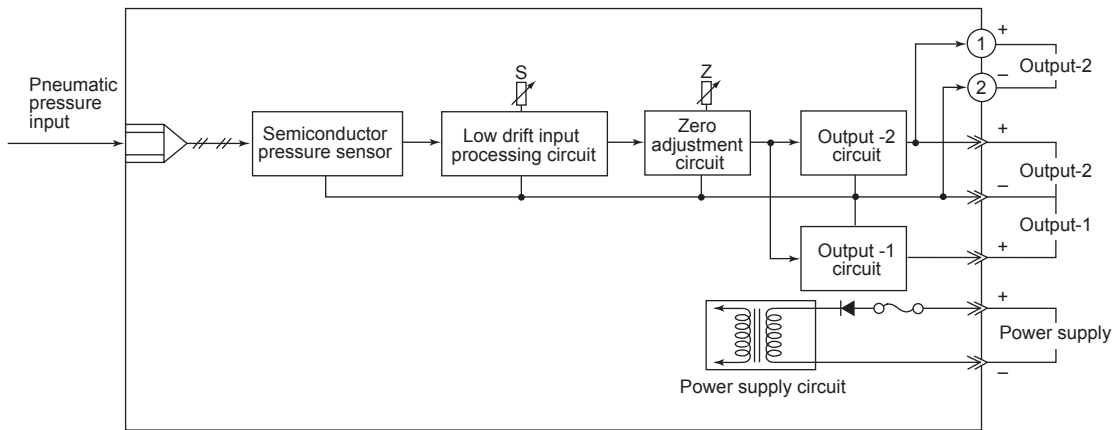
	Current signal	Voltage signal
Output range (DC)	0 to 24 mA	-10 to +10 V
Span (DC)	1 to 24 mA	10 mV to 20 V
Zero elevation	0 to 200%	-100 to +200%

### ■ Terminal Assignments



Terminal No.	Signal name
1	Output 2 (+)
2	Output 2 (-)
⊙	Pneumatic Input

### ■ Block Diagram



① ② : Front terminal

### ■ External Dimensions

