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^2
- 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) Current signal (24 mA or less)	0 : (Custom order) Voltage signal (±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

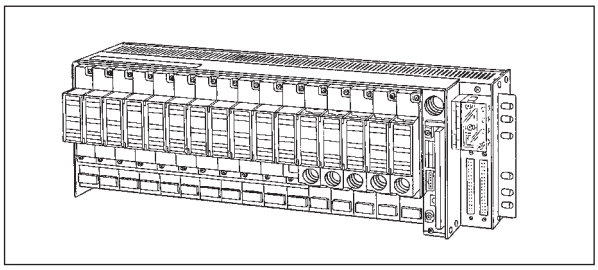
Input signal: Dry non-corrosive gases of 0.2 to 1.0 kgf/cm^2, 3 to 15 psi, 20 to 100 kPa or 19.6 to 98.1 kPa

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

YOKOGAWA

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GS 77J05F01-01E

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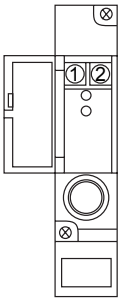
■ Custom Order Specifications

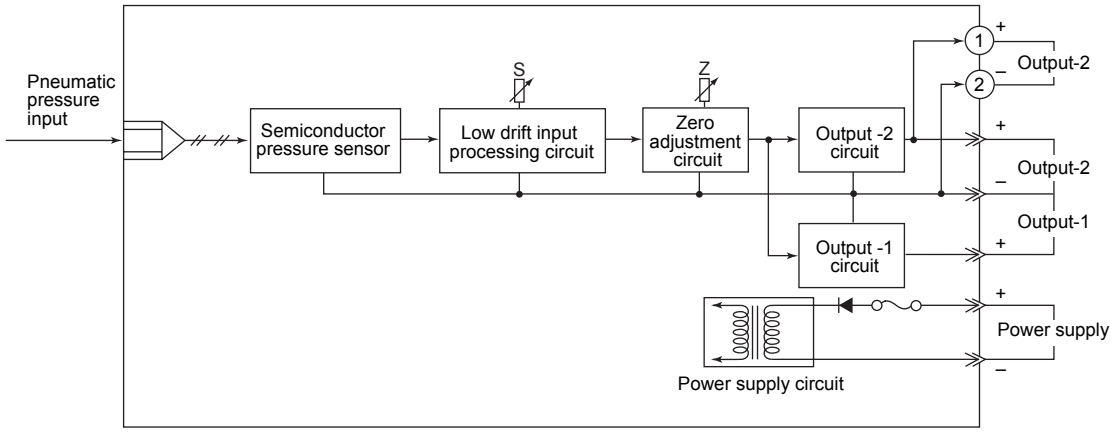
	Current signal	Voltage signal
Output range (DC)	0 to 24 mA	-10 to +10 V
Span (DC)	1 to 24 mA	10 mV to 20 V
Zero elevation	0 to 200%	-100 to +200%

■ Terminal Assignments



Terminal No.	Signal name
1	Output 2 (+)
2	Output 2 (–)
◎	Pneumatic Input

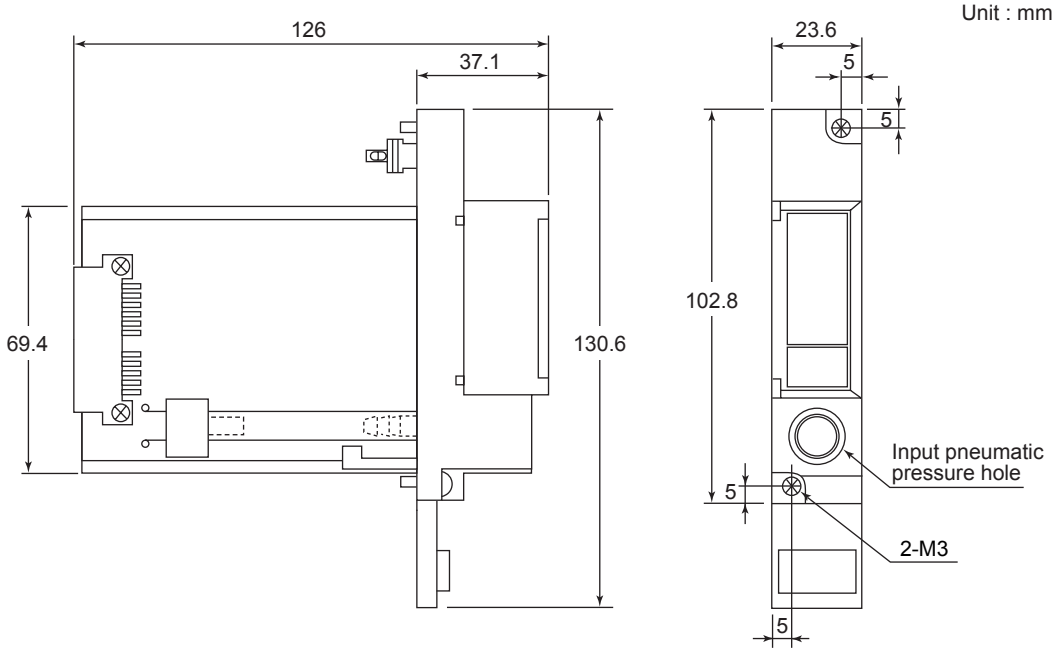
■ Block Diagram



① ② : Front terminal

■ External Dimensions

Unit : mm



■ Basic Conditions and Individual Contracts at the Time of Purchase

The warranty for this product is defined in the basic conditions and individual contracts at the time of purchase. The individual conditions are as follows.

• Handling of non-conforming products

If Yokogawa verifies a non-conformity of the product that is attributable to Yokogawa within the warranty period, we will deliver an equivalent product.

Yokogawa can not provide a free evaluation of non-conforming products. The investigation of the non-conforming products will be performed at the expense of the customer.