

General Specifications

Model DF0
Electric to Pneumatic Converter

JUXTA

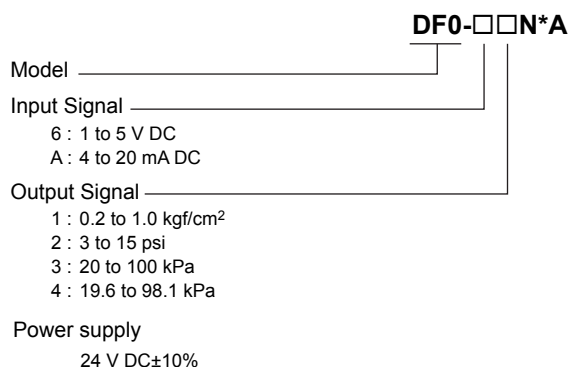
GS 77J05F10-01E

■ General

The DF0, a nest-mounting type DCS-supported E/P converter, receives 1-5 V DC or 4-20 mA DC signals from DCS, and converts them into pneumatic signals.

- A compact, high-performance model with a semiconductor pressure sensor.
- Orientation error is less than $\pm 0.1\%$.

■ Model and Suffix Codes



■ Ordering Information

Specify the following when ordering.

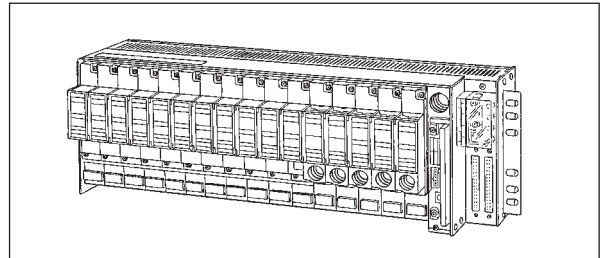
- Model and suffix codes: e.g. DF0-63N*A

■ Input/Output Specifications

Input signal: 1 to 5 V DC or 4 to 20 mA DC
Input resistance: 1 M Ω during power on, 100 k Ω during power off (1 to 5 V DC)
250 Ω (4 to 20 mA DC)
Output signal: 0.2 to 1.0 kgf/cm², 3 to 15 psi, 20 to 100 kPa or 19.6 to 98.1 kPa
Monitor output: 1 to 5 V DC (accuracy; $\pm 1\%$) for pneumatic output signals of 0 to 100%
Zero adjustment: -5 to +5%
Span adjustment: 95 to 105%

■ Standard Performance

Accuracy rating: $\pm 0.5\%$ of span
Maximum air supply: 60 NL/min
Maximum air exhaust: 60 NL/min
Insulation resistance: 100 M Ω or more at 500 V DC between input and power supply, input and aluminum die casting, and power supply and aluminum die casting.
Withstand voltage: 500 V AC/min. between input and power supply, input 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 $\pm 10\%$ (ripple content 5% p-p or less)
Supply pneumatic pressure: 140 kPa $\pm 10\%$ (supplied from the nest connected.)
Effect of power supply voltage fluctuations: $\pm 0.1\%$ of span or less for the fluctuation within the operating range of power supply voltage specification.
Effect of ambient temperature change: $\pm 0.4\%$ of span or less for a temperature change of 10°C.
Effect of pneumatic pressure fluctuation: $\pm 0.1\%$ of span or less for fluctuation of 140 kPa $\pm 10\%$.
Effect of mounting posture: $\pm 0.1\%$ of span for all directions.
Current consumption: 24 V DC 90 mA
Air consumption: 4 NL/min or less
Note: When you mount 9 or more units of DF0 to the same DCP, the pneumatic supply should be from 2 places.

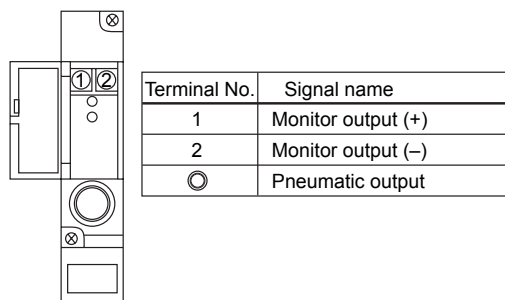
■ Mounting and Dimensions

Mounting method: Nest-mounting to the DCP, DMP (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) \times 23.6(W) \times 126(D) mm
Weight: Approx. 300 g

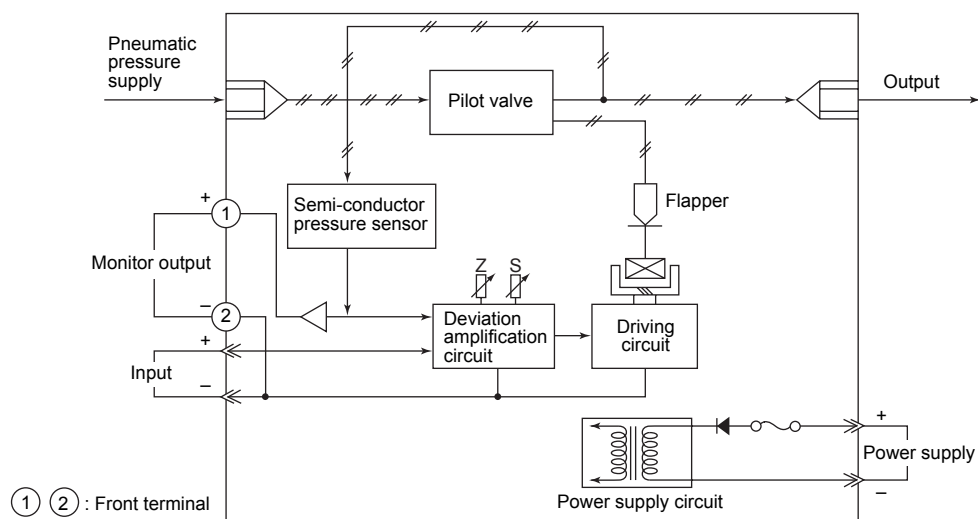
■ Standard Accessories

Tag number label: 1

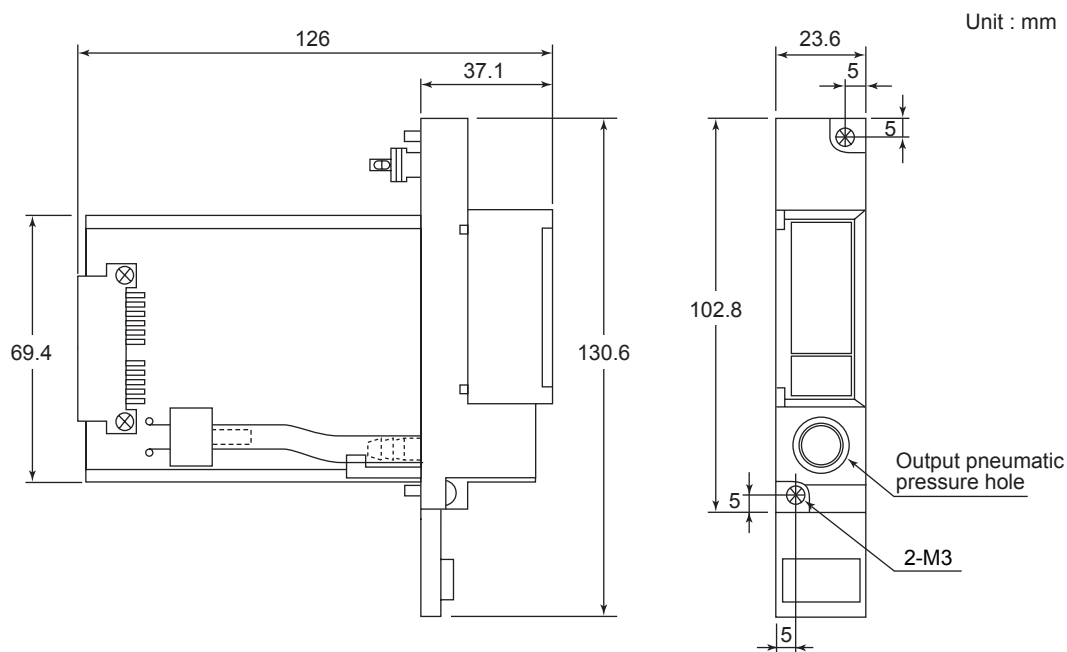
Terminal Assignments



Block Diagram



External Dimensions



■ 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.