

# General Specifications

## Model DF0 Electric to Pneumatic Converter



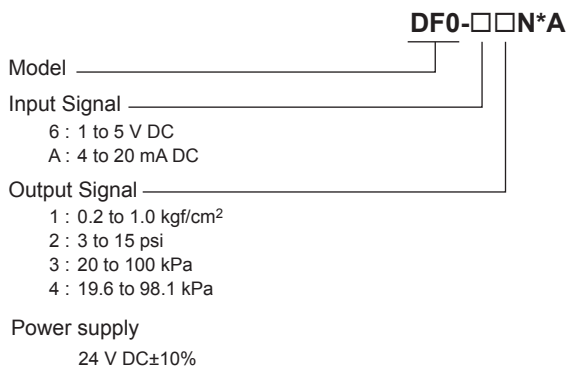
GS 77J05F10-01E

### ■ 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.

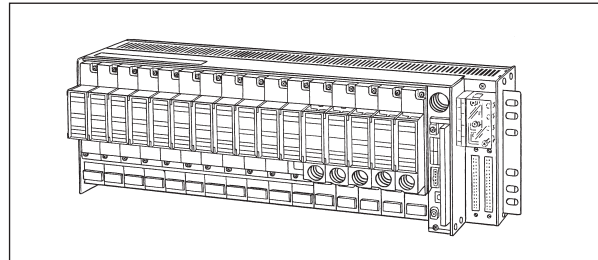
- Model and suffix codes: e.g. DF0-63N\*A

### ■ Input/Output Specifications

Input signal: 1 to 5 V DC or 4 to 20 mA DC  
 Input resistance: 1 M $\Omega$  during power on, 100 k $\Omega$  during power off (1 to 5 V DC)  
 250  $\Omega$  (4 to 20 mA DC)  
 Output signal: 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  
 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 $\Omega$  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.

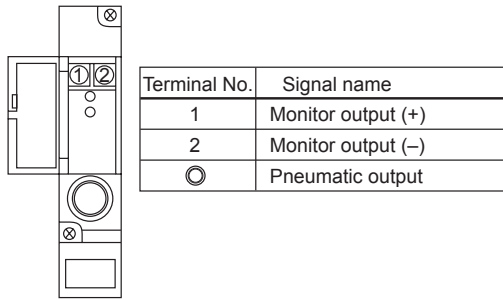
### ■ Mounting and Dimensions

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

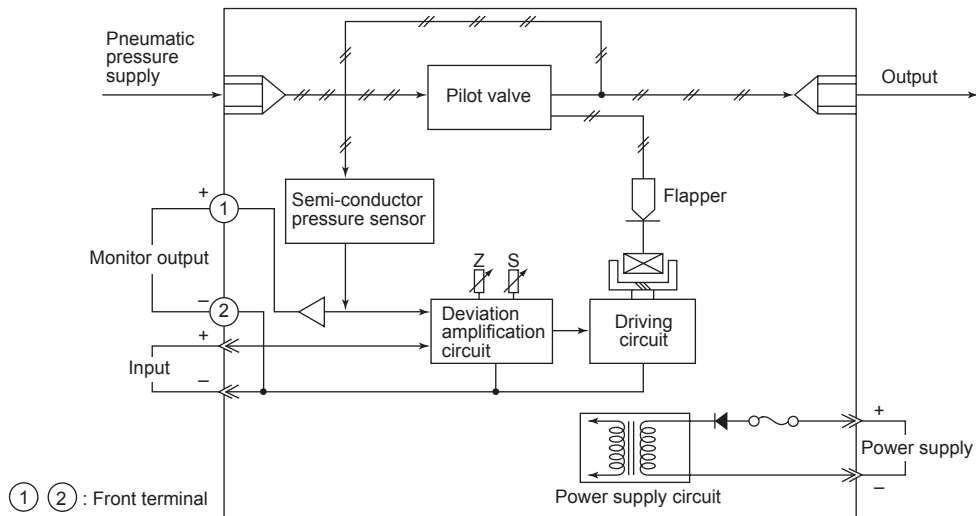
### ■ Standard Accessories

Tag number label: 1

## Terminal Assignments



## Block Diagram



## External Dimensions

