

# General Specifications

## Model DP3 Pulse to Analog Converter (Free Range Type)

JUXTA

GS 77J05P03-01E

### General

The DP3 is a nest-mounting type DCS-supported pulse-to-analog converter that receives pulse-train signals and converts them into DC voltage or DC current signals proportional to the frequency.

- Internal filter can be set to eliminate chattering. (In cases where the input frequency range is up to 100Hz, the pulse width is 3ms or more)
- On-site adjustment for setting the zero/span, low cut point, I/O monitoring etc. can be performed from the host system or a handy terminal.

### Model and Suffix Codes

**DP3-□6□\*A**

Model \_\_\_\_\_

Transmitter power supply \_\_\_\_\_

1 : Transmitter power supply (12 V ±10%)  
2 : Transmitter power supply (24 V ±10%)

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%

Note: If analog integration is used in the following cases, the MXD-Q (JUXTAM series universal computing unit) is recommended instead.

- For integration counter use
- For the conversion from DC to pulse; a repeat of "steady inputs" and "inputs near 0%"

### Ordering Information

Specify the following when ordering.

- Model and suffix codes: e.g. DP3-26A\*A
- Input range: e.g. 0 to 1 kHz
- Low cut point: e.g. 0.02 Hz

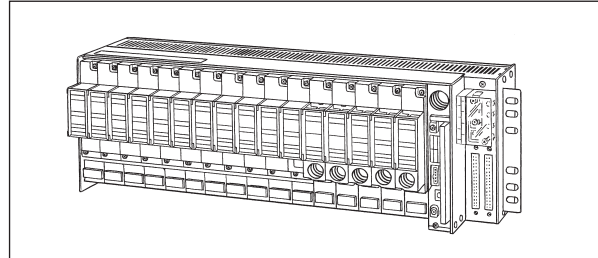
### Input/Output Specifications

Input signal:

2-wire type: Voltage-free contact pulse, voltage pulse, or current pulse (transmitter power supply available)

3-wire type: Voltage pulse or current pulse (transmitter power supply available)

Input frequency:  $F_0$  to  $F_{100}$  Hz  
 $(0 \text{ Hz} \leq F_0 \leq F_{100}/2 \text{ Hz})$   
 $(0.1 \text{ Hz} \leq F_{100} \leq 10 \text{ kHz})$   
 $F_0=0\% \text{ input, } F_{100}=100\% \text{ input}$



Input resistance: Contact pulse or voltage pulse; 15 kΩ or more

Internal load resistance: 200 Ω/510 Ω/1 kΩ (selectable with switch inside)

Rated power: 0.5W (12V DC power supply)  
2W (24V DC power supply)

Low cut point setting range:  $0.01 \text{ Hz} \leq F_{\text{cut}} \leq F_{100}$

The input less than the low cut point ( $F_{\text{cut}}$ ) is equivalent to the output of 0Hz. If the low cut point is not specified, the factory default is set to 0.01 Hz.

Voltage pulse input level:

Low level ( $V_L$ ): -1 to +8 V DC

High level ( $V_H$ ): 2 to 24 V DC

Swing width:  $V_H - V_L \geq 2 \text{ V}$

Input pulse width: Pulse width with a duty of  $50 \pm 30\%$  when the input is 100%.

Input filter: Time constant; approx. 10 ms. (On/Off are set by the jumper pin respectively. The factory default is set to Off.)

Output 1 signal: 1 to 5 V DC

Output 2 signal: DC current or DC voltage signal (DC current can be outputted from either the front terminals 3-4 or the connector.)

Zero adjustment: ±10%

Span adjustment: ±10%

### Standard Performance

Accuracy rating:

Output 1: ±0.3% 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: 2 intervals of input + 50 ms, 63% response (10 to 90%)

Insulation resistance: 100 MΩ or more at 500 V DC

between input and output, output and power supply, and input and power supply.

Withstand voltage: 1500 V AC/min. between input and (output and power supply.)

500 V AC/min. between output and power supply.

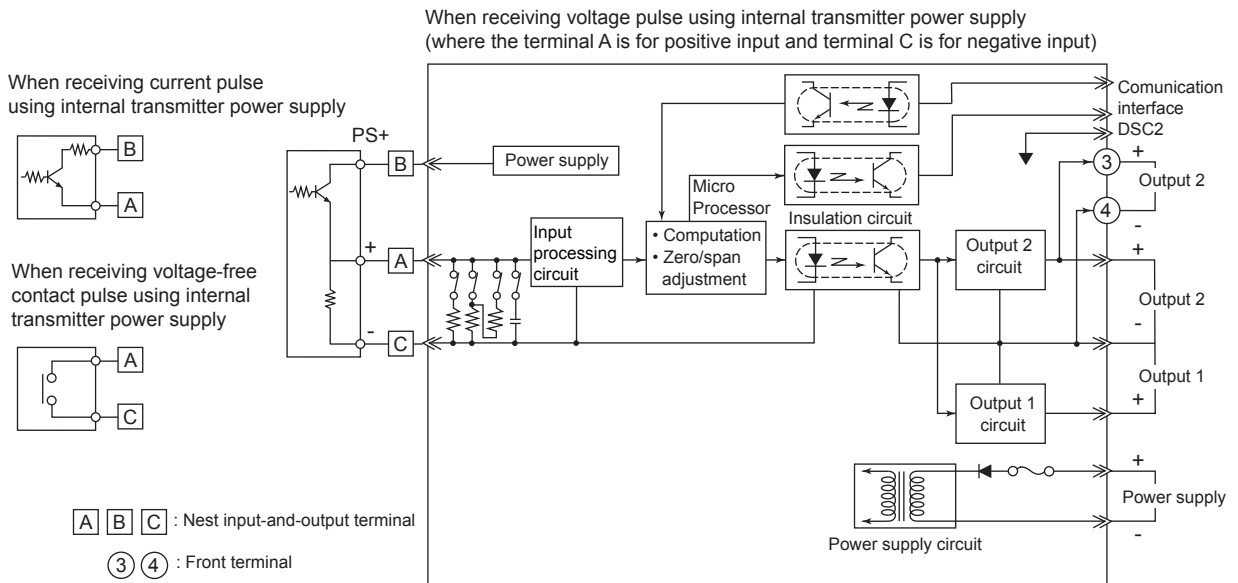
### ■ Environmental Conditions

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: ±0.2% of span or less for a temperature change of 10°C.  
 Current consumption: 4 V DC 90 mA (4 to 20 mA), 60 mA (1 to 5 V)

### ■ Mounting and Dimensions

Mounting method: Nest-mounting (Signals and power supply are connected through back board and connector)  
 Connection method: Connection to M4 screw terminals of the exclusive nest  
 External dimensions: 130.6(H)×23.6(W)×126(D) mm  
 Weight: Approx. 120 g

### ■ Block Diagram



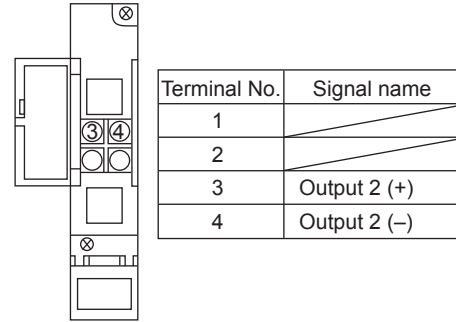
### ■ Standard Accessories

Tag number label: 1  
 Range 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



### External Dimensions

