

General Specifications

Model DP1
Pulse Repeater

JUXTA

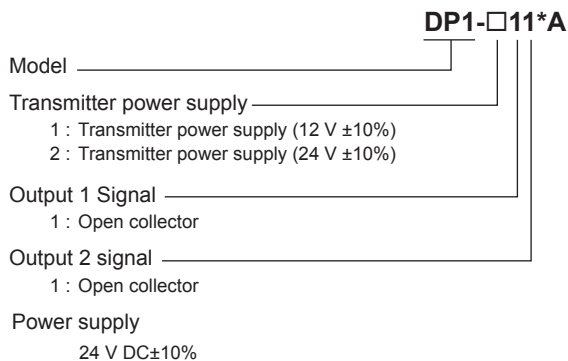
GS 77J05P01-01E

■ General

The DP1 is a nest-mounting type DCS-supported pulse repeater that receives pulses from voltage-free contacts, open collector contacts, voltage, and current, and converts them into isolated transistor-contact pulses.

- 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)

■ Model and Suffix Codes



■ Ordering Information

Specify the following when ordering.

- Model and suffix codes :e.g. DP1-111*A

■ 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: $0 < FR \leq 6$ kHz (FR=input frequency)
If the input is voltage pulse and the swing is 5 V or more, $0 < FR \leq 10$ kHz

Input resistance: 15 kΩ or more (for contact or voltage pulse)

Internal load resistance (for current pulse):
200 Ω, 510 Ω, 1 kΩ (selectable with switch inside)

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

Minimum input pulse width: ON; 60 μs, OFF; 60 μs

Transmitter power supply: 12 V DC±10%, 24 V DC±10%, 30mA or less

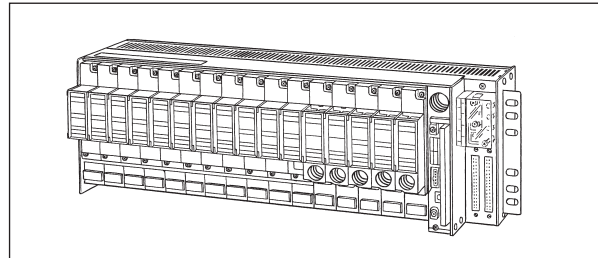
Contact input type: Relay contact or transistor ON/OFF contact

Contact resistance:

Close: 200 Ω or less,
Open: 100 kΩ or more

Contact capacity: 15 V DC, 15 mA or more

Filter: Switch selectable for set or release (filter time constant; 10 ms)



Swing width: $V_H - V_L \geq 3$ V

Voltage V_L (low level): -1 to +8 V DC

Voltage V_H (high level): 3 to 24 V DC

Output signal: Transistor contact (open collector)

The specifications are the same for both output 1 and 2.

Output frequency: Same as input frequency

Output contact capacity: 30 V DC, 30 mA maximum

■ Standard Performance

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: Normal operation is guaranteed for the fluctuation within the operating range of power supply voltage specification.

Effect of ambient temperature change: Normal operation is guaranteed over the rated operating temperature range.

Current consumption: 24 V DC 60 mA

■ Mounting and Dimensions

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

Connection method:

External wiring; connection to M4 screw terminals of the dedicated nest

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

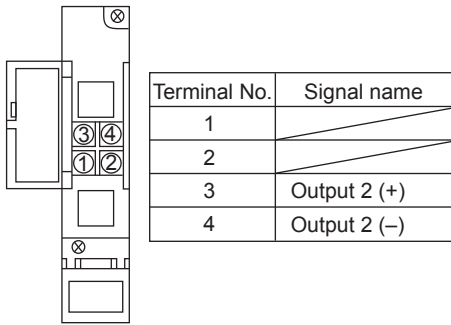
External dimensions: 130.6(H)×23.6(W)×126(D) mm

Weight: Approx. 120 g

■ Standard Accessories

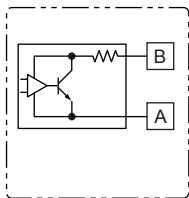
Tag number label: 1

Terminal Assignments

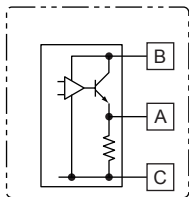


Block Diagram

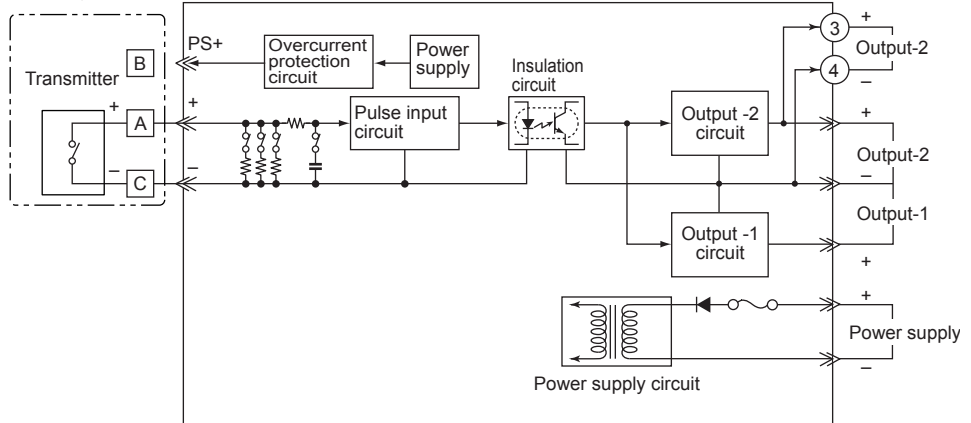
When receiving current pulses using internal resistor power supply



When receiving voltage pulses using internal transmitter power supply



When receiving voltage-free contact signals or voltage pulses (where, terminal A is the positive input (+) and terminal C is the negative input (-) for voltage pulses)



A B C : Nest input-and-output terminal
 ③ ④ : Front terminal

External Dimensions

