

General Specifications

Model DP1
Pulse Repeater

JUXTA

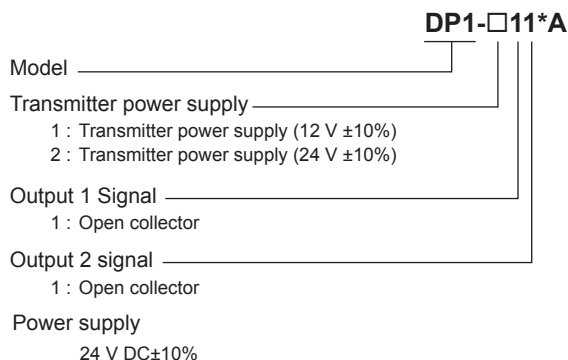
GS 77J05P01-01E

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



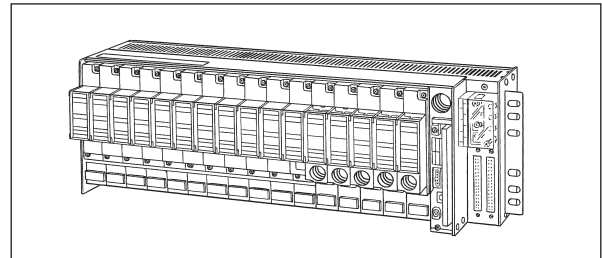
Ordering Information

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 k Ω or more (for contact or voltage pulse)
- Internal load resistance (for current pulse):
200 Ω , 510 Ω , 1 k Ω (selectable with switch inside)
- Rated power: 0.5W (12V DC power supply)
2W (24V DC power supply)
- Minimum input pulse width: ON; 60 μ s, OFF; 60 μ s
- 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 k Ω 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 VL (low level): -1 to +8 V DC
Voltage VH (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 M Ω 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

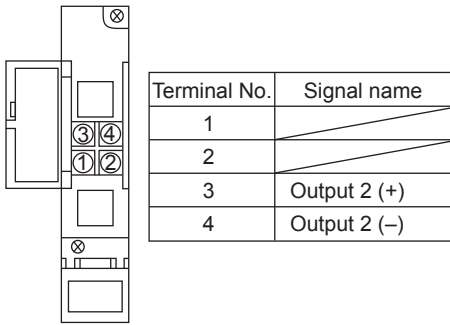
Mounting and Dimensions

- 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

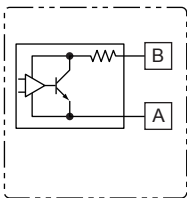
Terminal Assignments



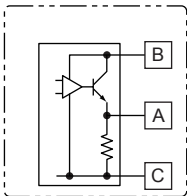
Note: This instrument may output a pulse when the power is turned on/off. Depending on the connected devices, this pulse output is counted as "one pulse."

Block Diagram

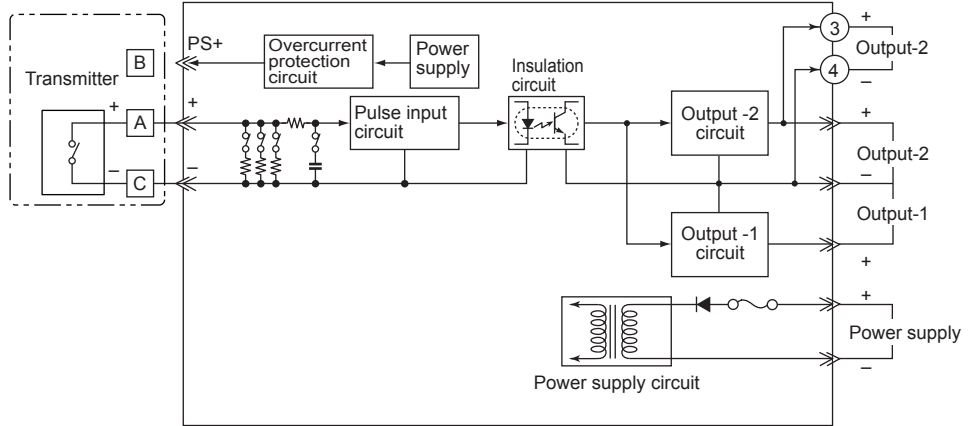
When receiving current pulses using internal resistor power supply



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

