

General Specifications

Model FQ0P
Analog to Pulse Converter

JUXTA

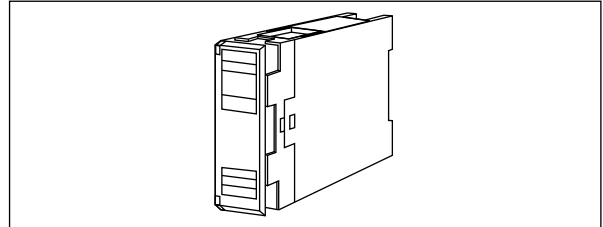
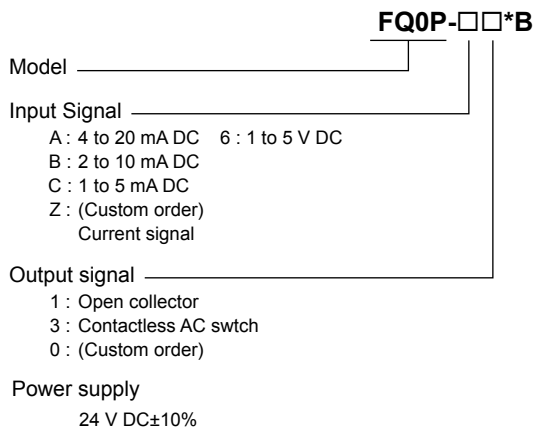
GS 77J08Q10-01E

■ General

The FQ0P is a compact, front terminal connection type analog-to-pulse converter that converts DC current or DC voltage signals into pulse-train signals.

- Output signals are open collector or contactless AC switch.

■ Model and Suffix Codes



Maximum permissible load:
Open collector: 30 V DC/200 mA
Contactless AC Switch: 100 V AC/200 mA
Zero adjustment: -1 to +1%
Span adjustment: 95 to 105%

■ Standard Performance

Accuracy rating: ±0.1% of span
Response speed: 150 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 output and (input and power supply).
500 V AC/min. between input and power supply.

■ Ordering Information

Specify the following when ordering.

- Model and suffix codes :e.g. FQ0P-61*B
- Output range :e.g. 0 to 100 Hz

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%"

■ Input/Output Specifications

Input signal: DC current or DC voltage signal
Input resistance:

| DC current input | Input resistance | DC voltage input | Input resistance |
|------------------|------------------|------------------|---|
| 4 to 20 mA | 250 Ω | 1 to 5 V | 1 MΩ during power on 100 kΩ during power off |
| 2 to 10 mA | 500 Ω | | |
| 1 to 5 mA | 1 kΩ | | |

Output signal: Open collector or contactless AC switch

Output frequency: 0 to F_{100} Hz
($0.001 \text{ Hz} \leq F_{100} \leq 4000 \text{ Hz}$)
 F_{100} =100% output frequency

Output pulse width: Duty 50±10%
Fixed pulse width is available on custom order. For the specifications, see the table on next page.

■ 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% (percentage ripple is 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: 24 V DC 65 mA

■ Mounting and Dimensions

Material: ABS resin (Case body)
Mounting method: Rack, Wall or DIN rail mounting
Connection method: M4 screw terminals
External dimensions: 72 (H) × 24 (W) × 127 (D) mm
Weight: Approx. 130g

■ Standard Accessories

Tag number label: 1
Mounting block: 2
Mounting screw: M4 screw x 2

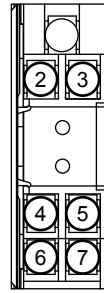
■ Custom Order Specifications

| | |
|-----------------------|------------------|
| Input range | 1 to 50 mA DC |
| Span | 4 to 40 mA DC |
| Zero elevation | 25% only |
| Output range | 0 to 4000 Hz |
| Span | 0.001 to 4000 Hz |
| Zero elevation | 0% only |

| Output pulse width | 100% output frequency condition |
|--------------------|---------------------------------|
| 100 μs | 0.001 Hz to 4 kHz |
| 500 μs | 0.001 Hz to 1 kHz |
| 1 ms | 0.001 Hz to 500 Hz |
| 5 ms | 0.001 Hz to 100 Hz |
| 10 ms | 0.001 Hz to 50 Hz |
| 50 ms | 0.001 Hz to 10 Hz |
| 100 ms | 0.001 Hz to 5 Hz |
| 500 ms | 0.001 Hz to 1 Hz |

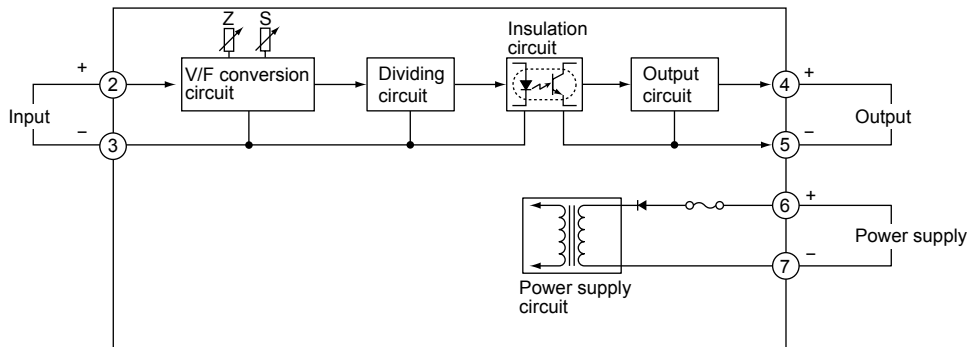
* 0.001 Hz=0.06 pulse/min.=3.6 pulse/hrs.
1 Hz=60 pulse/min.=3600 pulse/hrs.

■ Terminal Assignments



| | | |
|---|--------|-----|
| 2 | Input | (+) |
| 3 | Input | (-) |
| 4 | Output | (+) |
| 5 | Output | (-) |
| 6 | Supply | (+) |
| 7 | Supply | (-) |

■ Block Diagram



■ External Dimensions

