

General Specifications

Model WQ0P Analog to Pulse Converter

JUXTA

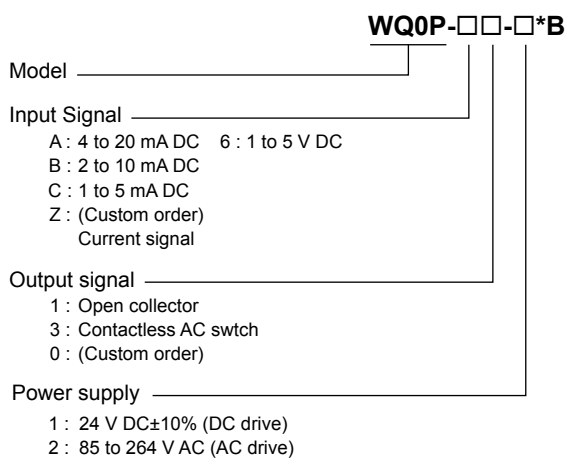
GS 77J09Q10-01E

■ General

The WQ0P 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.
- 2000 V AC withstand voltage specifications are available upon requests.

■ Model and Suffix Codes



■ Ordering Information

Specify the following when ordering.

- Model and suffix codes :e.g. WQ0P-61-2*B
- Output range :e.g. 0 to 100 Hz

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

- For integration counter use
- For 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

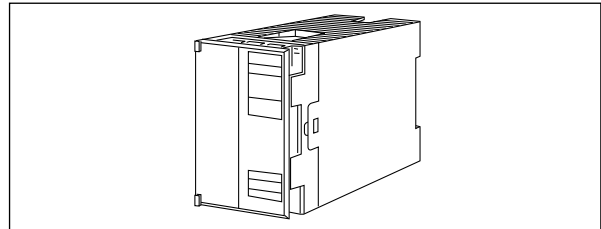
Input resistance:

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.



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 (span is 100 Hz or more)

1.5 sec. (span is less than 100 Hz)

63% response (10 to 90%) for both

Insulation resistance: 100 MΩ or more at 500 V

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

Withstand voltage:

DC drive 1500 V AC/min. between output and (input and power supply). 500 V AC/min. between input and power supply.

AC drive 1500 V AC/min. between input and output, input and power supply, input and ground, output and power supply, output and ground, and power supply and ground.

■ Environmental Conditions

Operating temperature range: 0 to 50°C

Operating humidity range: 5 to 90% RH (no condensation)

Power supply voltage: 85 to 264 V AC, 47 to 63Hz or 24 V DC±10%

Effect of power supply voltage fluctuations: ±0.1% of span or less for 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

Power consumption: 100 V AC 5.5 VA

■ 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) × 48 (W) × 127 (D) mm

Weight: DC; Approx. 150g, AC; Approx. 300g

■ Standard Accessories

Tag number label: 1

Mounting block: 2, Mounting screw: M4 screw x 4

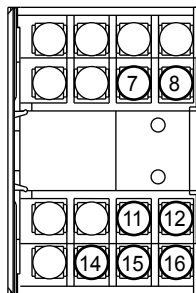
■ Custom Order Specifications

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



7	Input (+)
8	Input (-)
11	Output (+)
12	Output (-)
14	Supply (L+)
15	Supply (N-)
16	Ground (GND)*

*: Use for AC power supply only.