General Specifications

Model WQ0P
Analog to Pulse Converter

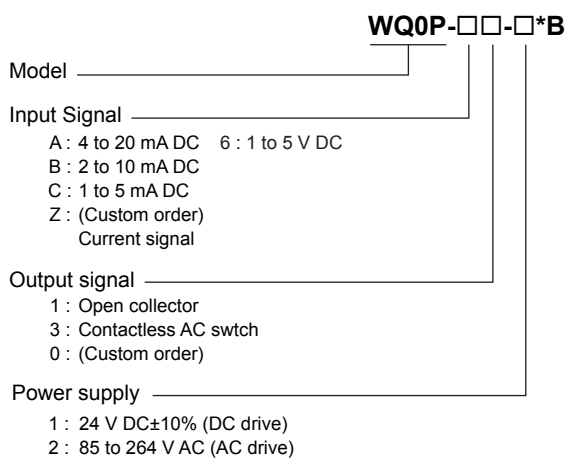**JUXTA**

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

WQ0P-□□-□*B

Model

Input Signal
A : 4 to 20 mA DC   6 : 1 to 5 V DC
B : 2 to 10 mA DC
C : 1 to 5 mA DC
Z : (Custom order)
    Current signal

Output signal
1 : Open collector
3 : Contactless AC swtch
0 : (Custom order)

Power supply
1 : 24 V DC±10% (DC drive)
2 : 85 to 264 V AC (AC drive)

■ 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 durning 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 fequency: 0 to F_{100} Hz
       (0.001 Hz $\leq F_{100} \leq$ 4000 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.
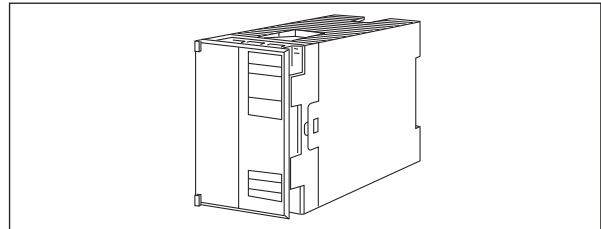
Maximum permissible load:
  Open collector: 30 V DC/200 mA
  Contactless AC Switch: 100 V AC/200 mA
Zero adjustment: -1 to 1%
Span adjustment: 95 to 105%

■ Standard Performance

Accuracy rating: ±0.1% of span
Response speed: 150 ms (span is100 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

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■ 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.
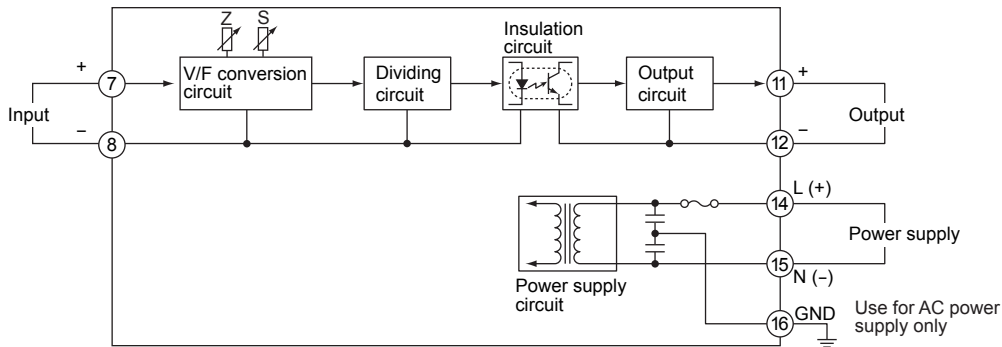
■ Terminal Assignments
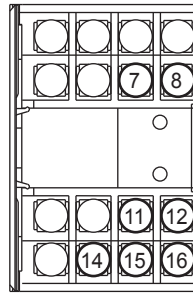
7	Input	(+)
8	Input	(−)
11	Output	(+)
12	Output	(−)
14	Supply	(L+)
15	Supply	(N−)
16	Ground	(GND)*

*: Use for AC power supply only.

Note: When power of WQ0P is turned on/off, one pulse may be counted by the pulse input device which connects to the WQ0P.

■ Block Diagram

■ External Dimensions

Unit: mm

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