General Specifications

Model WQ2P
Analog to Pulse Converter
(Free Range Type)

JUXTA

GS 77J09Q12-01E

■ General

The WQ2P is a compact, front terminal connection type analog-to-pulse converter that converts DC current or DC voltage signals into pulse-train signals.

- I/O range, output pulse width, and low cut point setting, zero/span adjustment and I/O monitoring can be made on-site, using the optional Parameter Setting Tool (VJ77) or Handy Terminal (JHT200).
- 2000V AC voltage withstand specifications are available upon requests.

■ Model and Suffix Codes

WQ2P-□□-□*A

Model

Input Signal
- A : 0 to 50 mA DC, span is 1 mA or more
- B : 0 to 10 mA DC, span is 0.1 mA or more
- Z : (Cutom order) Current signal
- 1 : -10 to +10 V DC, span is 0.1 V or more
- 2 : -1 to +1 V DC, span is 10 mV or more
- 0 : (Custom order) Voltage signal

Output signal
- 1 : Open collector
- 3 : Contactless AC/DC switch

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. WQ2P-11-2*A
- Input range :e.g. 1 to 5 V DC
- Output range :e.g. 0 to 500 Hz
- Low-cut point :e.g. 5 Hz
- Pulse width :e.g. 0.5 ms ON pulse

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

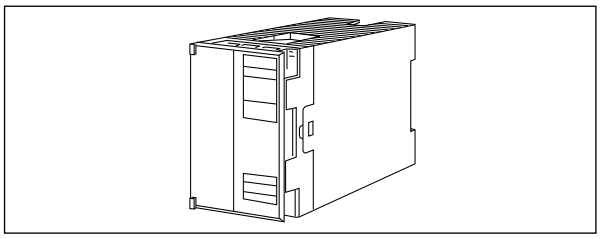
Input signal: DC current or DC voltage

Code	Setting range (DC)
A	0 to 50 mA, span is 1 mA or more
B	0 to 10 mA, span is 0.1 mA or more
1	-10 to +10 V, span is 0.1 V or more
2	-1 to +1 V, span is 10mV or more

Input resistance:
Current input: 100 Ω
Voltage input: 1 MΩ durning power on. 100 kΩ during power off
Maximum allowable input:
Current input: 70 mA DC or less
Voltage input: Within ±15 V DC
Output signal: Open collector or contactless AC/DC switch
Output fequency: F_0 to F_{100} Hz
($0 \leq F_0 \leq F_{100}/2$) ($0.001\ \text{Hz} \leq F_{100} \leq 1000\ \text{Hz}$)
F_0=0% output frequency
F_{100}=100% output frequency
Low cut point: 0.0001 to F_{100} Hz (variable range)
The output of low cut point or less outputs 0Hz.
Output pulse width: Either 50±10% duty, fixed on-state pulse width, or fixed off-state pulse width is selectable.
Pulse width setting range (fixed pulse width):
0.1 to 500 ms
However, the frequency which can be output by pulse width fixed is as follows:

$$\frac{1}{\text{Fixed pulse width set value (sec)} \times 2}\ [\text{Hz}]$$

If the frequency exceeds this level, it will be cutoff automatically.
Maximum permissible load:
Open collector: 30 V DC/200 mA
Contactless AC/DC Switch: 240 V AC/200 mA
Zero adjustment: ±1%
Span adjustment: ±1%



■ Standard Performance

Accuracy rating: ±0.1% of span
The accuracy is limited according to input range setting.

Code	Setting range (DC)	Input accuracy (%)
A	Span is less than 10 mA	0.1 × 10 / Span (mA)
	Zero elevation is more than 50%	0.2%
	Span is less than 10 mA and zero elevation is more than 50%	0.2 × 10 / Span (mA)
B	Span is less than 1 mA	0.1 × 1 / Span (mA)
	Zero elevation is more than 50%	0.2%
	Span is less than 1 mA and zero elevation is more than 50%	0.2 × 1 / Span (mA)
1	Span is less than 1 V	0.1 × 1 / Span (V)
	Zero elevation is more than 50%	0.2%
	Span is less than 1 V and zero elevation is more than 50%	0.2 × 1 / Span (V)
2	Span is less than 100 mV	0.1 × 100 / Span (mV)
	Zero elevation is more than 50%	0.2%
	Span is less than 100 mV and zero elevation is more than 50%	0.2 × 100 / Span (mV)

YOKOGAWA

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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 input and (output and power supply). 500 V AC/min. between output 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, 60 mA
Power consumption: 100 V AC, 6 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

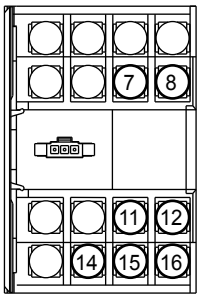
■ Standard Accessories

Tag number label: 1
Range label: 1
Mounting block: 2
Mounting screw: M4 screw x 4

■ Custom Order Specifications

	Current signal	Voltage signal
Input range (DC)	0 to 100 mA	-30 to +30 V
Span (DC)	1 to 100 mA	3 to 60 V
Zero elevation	0 to 50%	-50 to +50%

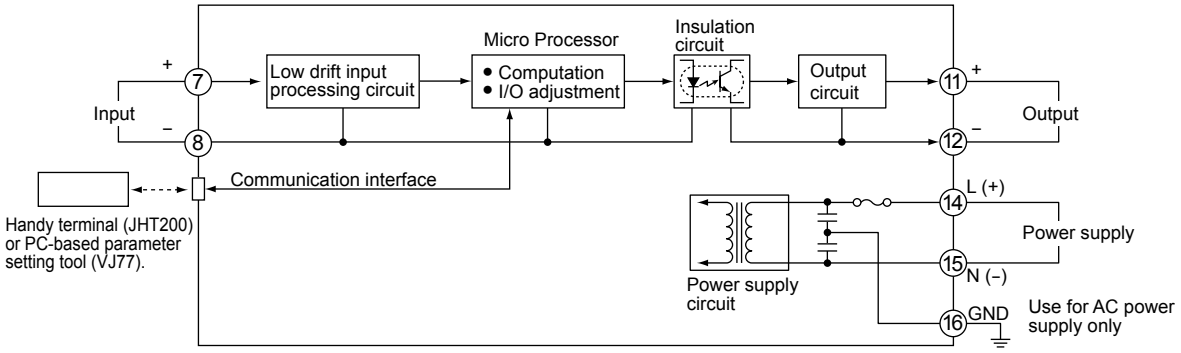
■ Terminal Assignments



7	Input	(+)
8	Input	(−)
11	Output 1	(+)
12	Output 1	(−)
14	Supply	(L+)
15	Supply	(N−)
16	Ground	(GND)*

*:Use for AC power supply only

■ Block Diagram



■ External Dimensions