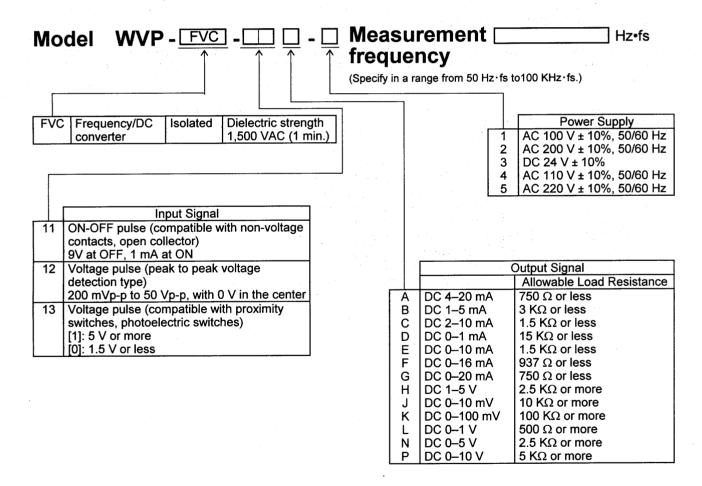**50 (W) x 96 (H) x 125.5 (D) mm   Approx. 400 g**

This plug-in converter takes in a pulse signal, and outputs an analog signal that is proportional to its frequency. It converts measurement signals detected in the form of pulses (e.g., those for flow rate, revolution, and speed) into optimum DC signals for recorders, indicators, and computers. Its input and output are isolated from each other by a photocoupler, and one model incorporates a power supply for sensors. This converter can employed in a wide range of applications in measurement control systems.

Features

– [Input frequency] vs. [Analog output value] can be specified to any value.
– Outputs low-ripple signals with excellent linearity and repeatability.
– Capable of supplying power to sensors (when connected to an AC power supply).
– Plug-in design enables mounting on DIN rails or direct installation.

Model   WVP - [FVC] - ☐☐☐ - ☐   Measurement [ ] Hz•fs frequency

(Specify in a range from 50 Hz•fs to 100 KHz•fs.)

FVC	Frequency/DC converter	Isolated	Dielectric strength 1,500 VAC (1 min.)

	Power Supply
1	AC 100 V ± 10%, 50/60 Hz
2	AC 200 V ± 10%, 50/60 Hz
3	DC 24 V ± 10%
4	AC 110 V ± 10%, 50/60 Hz
5	AC 220 V ± 10%, 50/60 Hz

	Input Signal
11	ON-OFF pulse (compatible with non-voltage contacts, open collector) 9V at OFF, 1 mA at ON
12	Voltage pulse (peak to peak voltage detection type) 200 mVp-p to 50 Vp-p, with 0 V in the center
13	Voltage pulse (compatible with proximity switches, photoelectric switches) [1]: 5 V or more [0]: 1.5 V or less

		Output Signal	
			Allowable Load Resistance
A	DC 4–20 mA		750 Ω or less
B	DC 1–5 mA		3 KΩ or less
C	DC 2–10 mA		1.5 KΩ or less
D	DC 0–1 mA		15 KΩ or less
E	DC 0–10 mA		1.5 KΩ or less
F	DC 0–16 mA		937 Ω or less
G	DC 0–20 mA		750 Ω or less
H	DC 1–5 V		2.5 KΩ or more
J	DC 0–10 mV		10 KΩ or more
K	DC 0–100 mV		100 KΩ or more
L	DC 0–1 V		500 Ω or more
N	DC 0–5 V		2.5 KΩ or more
P	DC 0–10 V		5 KΩ or more

Specification

Input signal:	Pulse frequency
Output signal:	DC voltage, DC current
Measurement frequency:	50 Hz·fs to 100 KHz·fs (duty 25–75%)
Accuracy:	±0.1%·fs (at 23°C)
Output ripple:	±0.2% (p-p)·fs
Allowable load resistance:	For voltage output, use the converter with a load current of 2 mA or less (1 µA or less for an output below 1 V·fs). For current output, use the converter with a voltage drop of 15 V or less between output terminals.
Operating temperature and humidity:	-5 to +55°C, 90% RH or less (without condensation)
Influence of ambient temperature:	±0.15%·fs/10°C
Insulation resistance:	100 MΩ or more with a 500 VDC megger between input and output terminals, and between input/output terminal and power supply terminal
Dielectric strength:	1,500 VAC for 1 minute between the input, output and power supply terminals
Power consumption:	Approx. 4 VA (AC), approx. 120 mA (DC)
Sensor power supply:	12 VDC ±1 V, 25 mA, stabilized power supply

Response time and shutdown:

Measurement Frequency	* Response Time	Shutdown Frequency
50–100 Hz·fs	Approx. 2 sec	Approx. 2.5 Hz
101–200 Hz·fs	Approx. 1 sec	Approx. 5 Hz
201–500 Hz·fs	Approx. 0.5 sec	Approx. 10 Hz
501–100 KHz·fs	Approx. 0.2 sec	Approx. 25 Hz

* Time for the output to reach 90% when the input varies from 0 to 100%
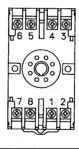
Zero & span adjustment: ±20%·fs each (multi-turn trimmer)

What is the shutdown frequency?

When the input frequency is excessively low as compared to the full scale, it is hard to completely remove ripples from the output. Therefore, this converter forcibly cuts off the output when the input falls below a certain frequency, which is known as the 'shutdown frequency'.

Explanation of Terminals

No.	Symbol		Description
1	OUTPUT	+	Output signal
2		-	
3	INPUT	+	Input signal
4		-	
5	SENSOR	-	Sensor power supply
6		+	
7	POWER	U (+)	Power supply
8		V (-)	