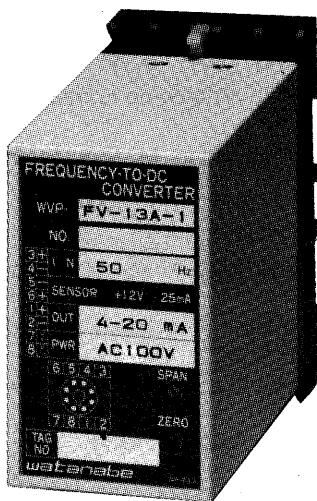


FREQUENCY-TO-DC CONVERTER DIELECTRIC STRENGTH 2,000 VAC

WVP-FV



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 be 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 - **FV** - - -

Measurement frequency Hz·fs

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

FV	Frequency/ DC converter	Isolated	Dielectric strength 2,000 VAC (for 1 min.)
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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) 9 V 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
90	Line driver (equivalent to AM26LS31) input The receiver is AM26LS32.
99	Other than the above (Please consult with us.)

Prices vary with line driver input specifications. Please inquire for prices.

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
S	Other than the above (Please consult with us.): Voltage output 10 V or less Current output 20 mA or less	

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 the input and output terminals, and between the input/output terminal and power supply terminal		
Dielectric strength:	2,000 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

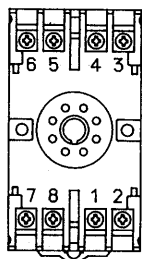
* Time for the output to reach 90% when the input varies from 0 to 100%
±20%·fs each (multi-turn trimmer)

Zero & span adjustment:

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	+
2		-
3	INPUT	+
4		-
5	SENSOR	-
6		+
7	POWER	U (+)
8		V (-)