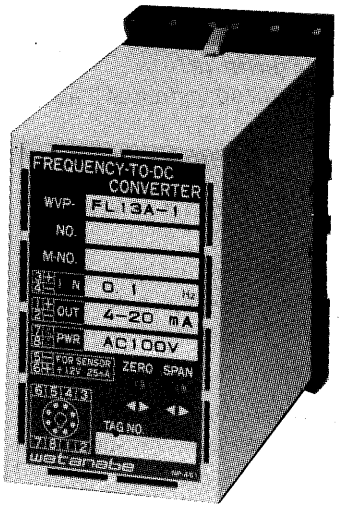
FREQUENCY-TO-DC CONVERTER
DIELECTRIC STRENGTH 1,500 VAC WVP-FLC



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

This plug-in converter outputs a DC signal that is proportional to the frequency of the input pulse signal. It detects the period of the input pulse, computes the frequency using a built-in microprocessor unit (MPU), and converts the result into a DC signal. Therefore, the converter is able to respond quickly even to pulses of very low frequencies, and can also deliver accurate signals free from ripples. Moreover, its input circuit, microprocessor unit, and output circuit are isolated from one another by photocouplers, thereby ensuring immunity to external noise and high reliability.

Features

- Any frequency range can be specified; provides diverse output ranges.
- Converts ultra-low frequency pulse train signals into ripple-free DC signals.
- Capable of supplying power to sensors.
- Plug-in design enables mounting on DIN rails or direct installation.

Model WVP - FLC - □□ □ - □ Measurement frequency □ Hz•fs

(Specify in a range from 0.1 Hz•fs to 50 Hz•fs.)

FLC	Frequency-to-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) 12 V at OFF, 1 mA at ON
13	Voltage pulse (compatible with proximity switches, photoelectric switches) [1]: 5 V or more, 30 V or less [0]: 1.5 V or less
22	Current pulse 4/10 mA (input resistance 330 Ω)

	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

watanabe WATANABE ELECTRIC INDUSTRY Co., Ltd.
6-16-19 Jinguumae Shibuya-Ku, Tokyo, Japan 150-0001 Tel 03-3400-6141 Fax 03-3409-3156

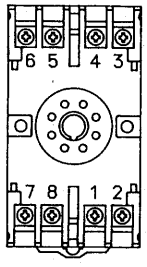
Specification

Input signal:	Pulse frequency
Output signal:	DC voltage, DC current
Measurement frequency:	0.1 Hz·fs to 50 Hz·fs (pulse width more than 10 msec)
Accuracy:	±0.2%·fs (at 23°C)
Response time:	Input pulse interval + 1 sec or less (0–90%) Input pulse interval x 2 + 1 sec or less, at power-on
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:	1,500 VAC for 1 minute between the input, output and power supply terminal
Power consumption:	Approx. 5 VA (AC), approx. 160 mA (DC)
Sensor power supply:	12 VDC ± 1 V, 25 mA, ripple 0.5 Vrms
Output shutdown:	This function forcibly shuts down the output when the input signal is less than 1% of the rating. The minimum input signal level can be set at other rating percentages.
Zero & span adjustment:	±5%·fs each (one-turn trimmer)

Major Applications

- Conversion of flow rate measurement pulses of liquids and gases into analog signals.
- Analog indication and recording of revolution or speed detection pulses.
- Conversion of various pulse signal generator outputs into analog signals.

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 (-)	

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