

General Specifications

Models FD1A, FD1V Tachogenerator Converter



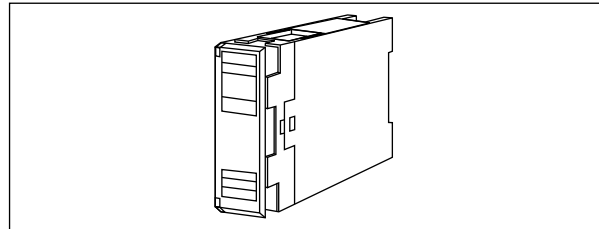
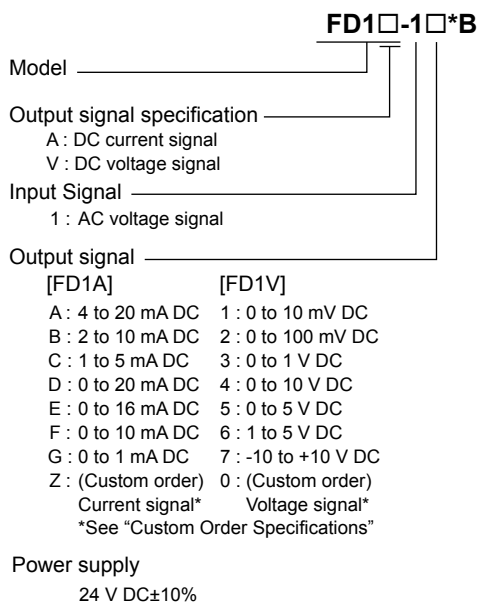
GS 77J08D01-01E

General

The FD1A/FD1V is a compact, front terminal connection type tachogenerator converter that converts AC voltage signals from electrical tachometers (tachogenerators) into isolated DC current or DC voltage signals.

- AC/DC conversion is made by mean value.

Model and Suffix Codes



Allowable load resistance:

DC current output	Allowable load resistance	DC voltage output	Allowable load resistance
4 to 20 mA	750 Ω or less	0 to 10 mV	250 kΩ or more
2 to 10 mA	1500 Ω or less	0 to 100 mV	250 kΩ or more
1 to 5 mA	3000 Ω or less	0 to 1 V	2 kΩ or more
0 to 20 mA	750 Ω or less	0 to 10 V	10 kΩ or more
0 to 16 mA	900 Ω or less	0 to 5 V	2 kΩ or more
0 to 10 mA	1500 Ω or less	1 to 5 V	2 kΩ or more
0 to 1 mA	15 kΩ or less	-10 to +10 V	10 kΩ or more

Zero adjustment: -5 to +5%

Span adjustment: 95 to 105%

Standard Performance

Accuracy rating: ±0.3% of span

There is an accuracy limit when the frequency becomes 30 Hz or less at 100% input.

Moreover, the accuracy is not guaranteed when the input level is 10% or less.

Response speed: 2.4 s, 63% response (10 to 90%)

Insulation resistance: 100 MΩ or more at 500 V DC between input and output, output and power supply, and input and power supply.

Withstand voltage: 1500 V AC/min. between input and (output and power supply).

500 V AC/min. between output and power supply.

Ordering Information

Specify the following when ordering.

- Model and suffix codes: e.g. FD1V-16*B
- Input range: e.g. 0 to 100 V AC

Input/Output Specifications

Input signal: 0 to V_{100} V AC (V_{100} =100% input voltage)
 $16 \leq V_{100} \leq 150$ V AC

Input frequency: $15 \text{ Hz} \leq F_{100} \leq 1 \text{ kHz}$ (F_{100} =100% input frequency)

Maximum allowable input: 120% (continuous)

Output signal: DC current or DC voltage signal

Environmental Conditions

Operating temperature range: 0 to 50°C

Operating humidity range: 5 to 90% RH (no condensation)

Power supply voltage: 24 V DC±10% (percentage ripple is 5%p-p or less)

Effect of power supply voltage fluctuations: ±0.1% of span or less for the 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 90 mA (FD1A), 60 mA (FD1V)

■ 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) × 24 (W) × 127 (D) mm
 Weight: Approx. 130g

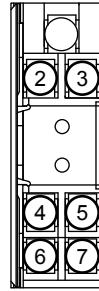
■ Standard Accessories

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

■ Custom Order Specifications

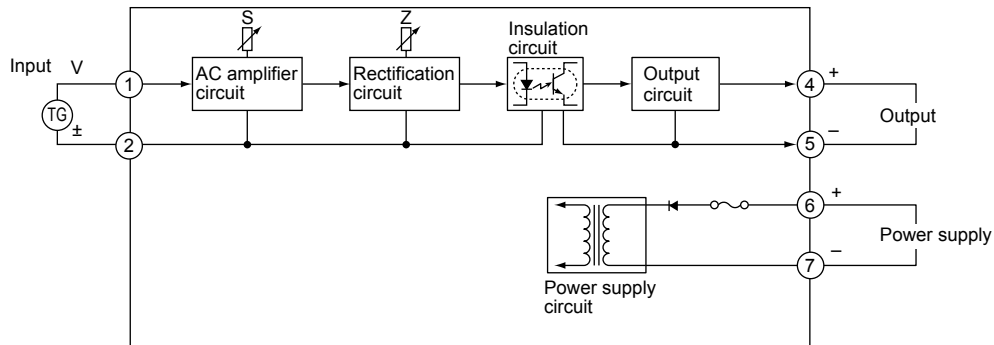
	Current signal	Voltage signal
Input range (AC)	-----	0 to 150 V
Span (AC)	-----	16 to 150 V
Zero elevation	-----	0% only
Output range (DC)	0 to 24 mA	-10 to +10 V
Span (DC)	1 to 24 mA	10 mV to 20 V
Zero elevation	0 to 200%	-100 to +200%

■ Terminal Assignments



2	Input	(+)
3	Input	(-)
4	Output	(+)
5	Output	(-)
6	Supply	(+)
7	Supply	(-)

■ Block Diagram



■ External Dimensions

