General Specifications

VJG1
PT Converter
(RMS)

JUXTA

GS 77J01G01-01E

■ General

The VJG1 is a compact, plug-in PT converter that receives AC voltage signal from a potential transformer (PT) and converts it into isolated DC voltage or DC current signals.

- AC-to-DC conversion based on RMS rectification;
- a wide choice of output signal ranges;
- a withstanding voltage of 2000 V AC;
- a wide supply voltage range - supporting both 100 V and 200 V power lines of AC or DC; and
- close side-by-side mounting.

■ Model and Suffix Codes

VJG1-01☐ - ☐☐ N0/☐

Model

Output configuration
1: Single

Power supply
6: 100-240 V AC/DC ≂ (-15, +10 %) 50/60 Hz
7: 15-30 V DC ⎓ (±20 %)

Input signal
1: 0 to 110 V AC
2: 0 to 150 V AC
Z: Customized voltage/current signals
See Table 1.

Output-1 signal

A: 4 to 20 mA DC	1: 0 to 10 mV DC
B: 2 to 10 mA DC	2: 0 to 100 mV DC
C: 1 to 5 mA DC	3: 0 to 1 V DC
D: 0 to 20 mA DC	4: 0 to 10 V DC
E: 0 to 16 mA DC	5: 0 to 5 V DC
F: 0 to 10 mA DC	6: 1 to 5 V DC
G: 0 to 1 mA DC	7: -10 to +10 V DC

Z: Customized voltage/current signals
See Table 1.

Options
/SN: Without socket
Blank: With socket

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● Items to be specified when ordering

- Model and Suffix Code: e.g. VJG1-016-1AN0

■ Input/Output Specifications

Input signal: AC voltage in the 0 to 110 V AC or 0 to 150 V AC range
Input loss: 0.5 VA maximum
Input frequency range: 40 Hz to 10 kHz
Maximum allowable overrange input: 120% (continuous); 200% (for one minute)
Output signal: DC voltage or DC current
Allowable load resistance:

Output Range	Output Range
4 to 20 mA DC: 750 Ω maximum	0 to 10 mV DC: 250 kΩ minimum
2 to 10 mA DC: 1500 Ω maximum	0 to 100 mV DC: 250 kΩ minimum
1 to 5 mA DC: 3000 Ω maximum	0 to 1 V DC: 2 kΩ minimum
0 to 20 mA DC: 750 Ω maximum	0 to 10 V DC: 10 kΩ minimum
0 to 16 mA DC: 900 Ω maximum	0 to 5 V DC: 2 kΩ minimum
0 to 10 mA DC: 1500 Ω maximum	1 to 5 V DC: 2 kΩ minimum
0 to 1 mA DC: 15 kΩ maximum	-10 to +10 V DC: 10 kΩ minimum

Zero and span adjustment: Within ±5% of span for both zero and span adjustment

■ Standard Performance

Accuracy rating: ±0.5% of span; accuracy is not guaranteed for output level less than 0.5% of the span of a 0 to X mA output range type.
Response: 250 ms for a 63% response (10 to 90% change of range)
Insulation resistance: 100 MΩ minimum at 500 V DC between input, output, power supply and grounding terminals mutually
Withstanding voltage: 2000 V AC for one minute between input, output, power supply and grounding terminals mutually
Operating temperature range: 0 to 50°C
Operating humidity range: 5 to 90% RH (no condensation)
Supply voltage range: 100-240 V AC/DC ≂ (-15, +10%) 50/60 Hz or 15-30 V DC ⎓ (±20%)
Effects of power line regulation: Up to ±0.1% of span for a supply voltage range of 85 to 264 V AC (47 to 63 Hz), 85 to 264 V DC or 12 to 36 V DC
Effects of ambient temperature variations: Up to ±0.2% of span per 10°C
Current consumption: 90 mA at 24 V DC
Power consumption: 4.3 VA at 100 V AC; 6.1 VA at 200 V AC

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■ Mounting and Appearance

Material: ABS resin (casing)
Mounting: Wall mounting, DIN rail mounting, or
mounting on a side-by-side multiple mounting base
Connection: Terminals with M3 size screws
External dimensions: 76 (H) × 29.5 (W) × 124.5 (D) mm
Weight: Main unit = approx. 122 g; socket = approx. 51 g

■ Accessories

Tag number label: One

■ Customized Signal Specifications

Table 1 Manufacturable Ranges

	Current Signal	Voltage Signal
Input range	–	0 to 300 V AC
Span	–	30 to 300 V AC
Zero elevation	–	0% only
Output range	0 to 24 mA DC	-10 to +10 V DC
Span	1 to 24 mA DC	10 mV to 20 V DC
Zero elevation	0 to 200%	-100% to +200%

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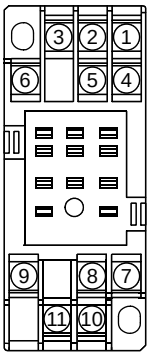
■ Terminal Assignments



1	INPUT	(V)
2	N.C.	
3	INPUT	(±)
4	N.C.	
5	N.C.	
6	N.C.	
7	OUTPUT	(+)
8	GND	
9	OUTPUT	(-)
10	SUPPLY	(L+)
11	SUPPLY	(N-)

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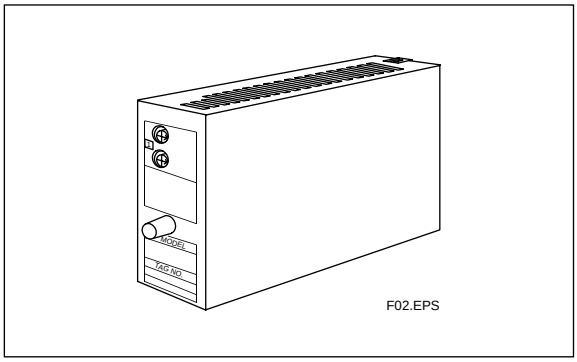
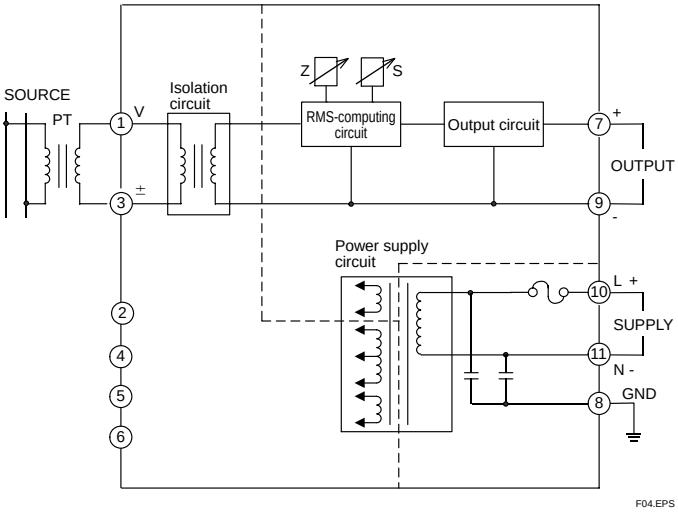


■ Block Diagram



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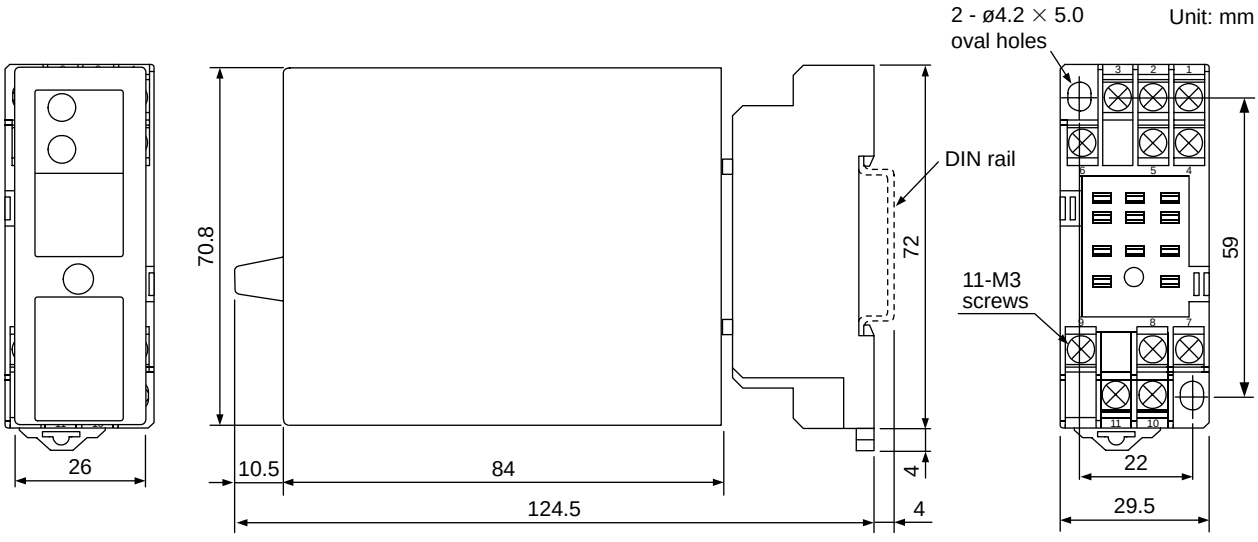
■ External Dimensions



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