General Specifications

GS 77J01S02-01E

VJS2
Potentiometer Converter
(Isolated Single-output and Isolated Dual-output Types)

JUXTA

■ General

The VJS2 is a compact, plug-in potentiometer converter that is used in combination with an instrument to transmit information for displacement of valve, etc. by resistance change of potentiometer parameters. It converts resistance changes into isolated DC voltage or DC current signals.

- a wide choice of input and output signal ranges;
- four isolated ports (input, output-1, output-2, power supply and grounding) on a dual-output model;
- 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;
- close side-by-side mounting;
- a burnout function;
- compatibility with potentiometers having an overall resistance between 100 Ω and 10 kΩ, without needing to specify the range; and.
- zero and span adjustment, each of which is capable of making 50% adjustments.

■ Model and Suffix Codes

VJS2-0□□-□□□□/□

Model

Output configuration
1: Single
2: Dual

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

Input signal
1: Potentiometer resistance
(Overall resistance: 100 Ω to 10 kΩ)
Z: Optional signals of resistance other than the code-1 resistance above

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.

Output-2 signal
A: 4 to 20 mA DC 6: 1 to 5 V DC
N: None

Burnout function
U: Up
D: Down
N: Off

Options
/SN: Without socket
Blank: With socket

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● Items to be specified when ordering

- Model and Suffix Code: e.g. VJS2-026-1A6D

GS 77J01S02-01E

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Input/Output Specifications

Type of input: Change-in-resistance signal from a three-wire potentiometer
Measuring range: Overall resistance from 100 Ω to 10 kΩ
Zero elevation: Up to 50% of the overall resistance
Input span: At least 50% of the overall resistance
Measuring voltage: Approx. 0.5 V DC
Maximum allowable input-conductor-resistance: 50% of the overall resistance of the input span for each conductor, where all of the conductors share the same resistance.
Output signal: DC voltage or DC current
Allowable load resistance:

- Output 1

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

- Output 2

Output Range	Output Range
4 to 20 mA DC: 350 Ω maximum	1 to 5 V DC: 2 kΩ minimum

Zero and span adjustment: Zero adjustment is effective for the 0 to 50% range of the overall resistance and span adjustment for the 50 to 100% range of the overall resistance.

Standard Performance

Accuracy rating: ±0.1% 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: 150 ms for a 63% response (10 to 90% change of range of the final value)
Burnout function: One of three options is selected - Up, Down or Off; the maximum burnout time is specified as 60 seconds.
Insulation resistance: 100 MΩ minimum at 500 V DC between input, output-1, output-2, power supply and grounding terminals mutually
Withstanding voltage: 2000 V AC for one minute between input, (output-1, output-2), power supply and grounding terminals mutually;
1000 V AC for one minute between output-1 and output-2 terminals
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: 160 mA at 24 V DC
Power consumption: 5.4 VA at 100 V AC; 7.4 VA at 200 V AC

Conformance to EMC Standards

Applicable EMC standard: EN61326
CE-certified models mean those which are CE certified on condition that they be operated over a supply voltage range of 15-30 V DC ⎓ (±20%) only.

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
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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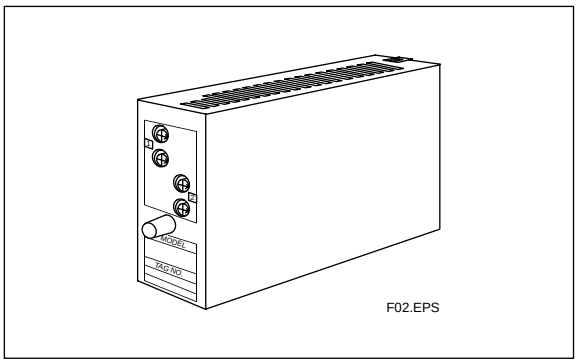

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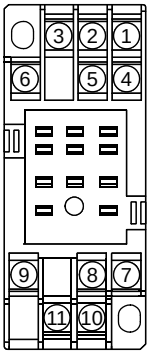
Terminal Assignments



1	INPUT	100%
2	OUTPUT 2	(+)
3	INPUT	CENTER
4	INPUT	0%
5	OUTPUT 2	(-)
6	N.C.	
7	OUTPUT 1	(+)
8	GND	
9	OUTPUT 1	(-)
10	SUPPLY	(L+)
11	SUPPLY	(N-)

Note: For single-output models, OUTPUT2 is N.C.

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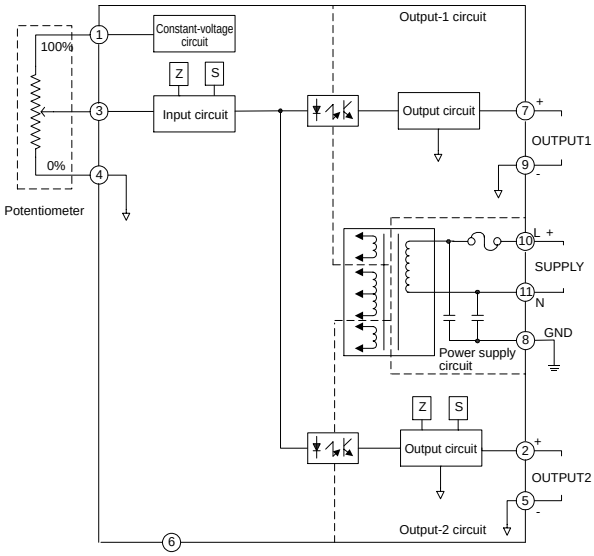
Block Diagram



Note: Single-output models do not contain the output-2 circuit.

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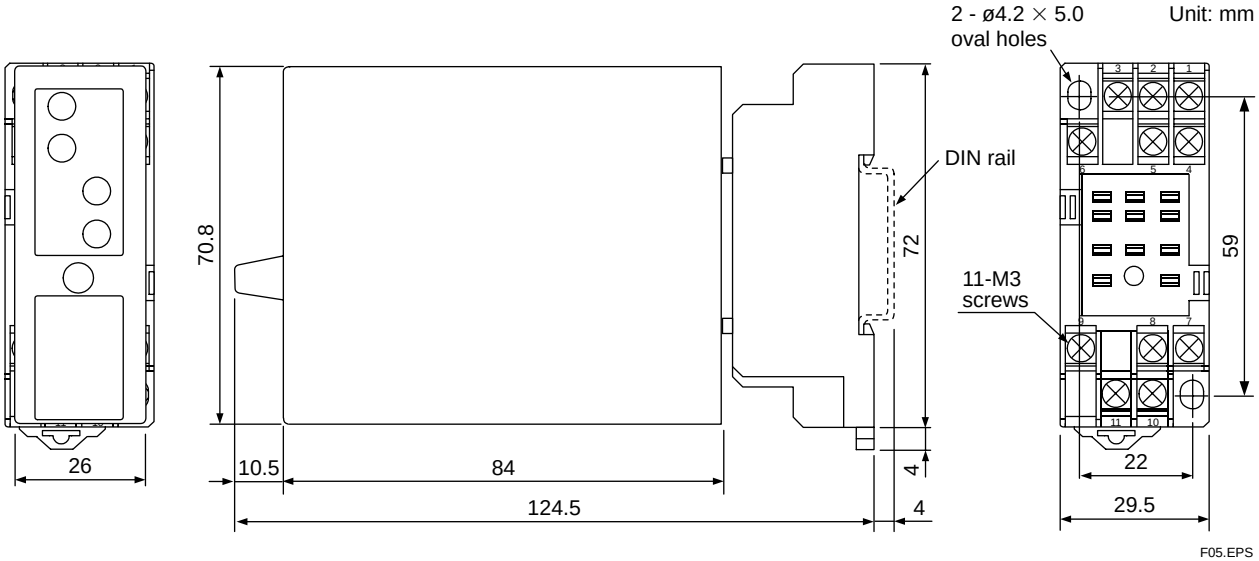
External Dimensions



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