

# General Specifications

## VJHR Reverse Converter (Isolated Single-output and Isolated Dual-output Models)

JUXTA

GS 77J1H12-01E

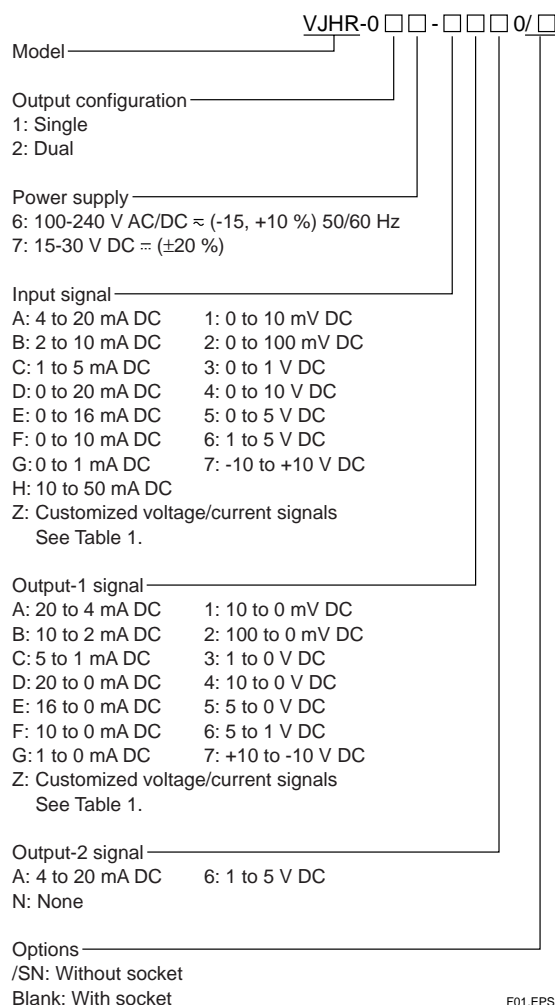
### General

The VJHR is a compact, plug-in, reverse converter that converts DC voltage or DC current signals into isolated and inverted DC voltage or DC current signals.

The VJHR converter features:

- 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; and
- close side-by-side mounting.

### Model and Suffix Codes



### Input/Output Specifications

Type of input: DC voltage or DC current signal

Input resistance:

Current Input	Voltage Input
250 $\Omega$ for 4 to 20 mA DC range	Approx. 1 M $\Omega$ for 0 to 10 mV DC range
500 $\Omega$ for 2 to 10 mA DC range	Approx. 1 M $\Omega$ for 0 to 100 mV DC range
1 k $\Omega$ for 1 to 5 mA DC range	Approx. 1 M $\Omega$ for 0 to 1 V DC range
250 $\Omega$ for 0 to 20 mA DC range	Approx. 1 M $\Omega$ for 0 to 10 V DC range
250 $\Omega$ for 0 to 16 mA DC range	Approx. 1 M $\Omega$ for 0 to 5 V DC range
500 $\Omega$ for 0 to 10 mA DC range	Approx. 1 M $\Omega$ for 1 to 5 V DC range
1 k $\Omega$ for 0 to 1 mA DC range	Approx. 1 M $\Omega$ for -10 to +10 V DC range
100 $\Omega$ for 10 to 50 mA DC range	(or 100 k $\Omega$ when turned off)

Output signal: DC voltage or DC current

Allowable load resistance:

Output 1 Output Range	Output Range
20 to 4 mA DC: 750 $\Omega$ maximum	10 to 0 mV DC: 250 k $\Omega$ minimum
10 to 2 mA DC: 1500 $\Omega$ maximum	100 to 0 mV DC: 250 k $\Omega$ minimum
5 to 1 mA DC: 3000 $\Omega$ maximum	1 to 0 V DC: 2 k $\Omega$ minimum
20 to 0 mA DC: 750 $\Omega$ maximum	10 to 0 V DC: 10 k $\Omega$ minimum
16 to 0 mA DC: 900 $\Omega$ maximum	5 to 0 V DC: 2 k $\Omega$ minimum
10 to 0 mA DC: 1500 $\Omega$ maximum	5 to 1 V DC: 2 k $\Omega$ minimum
1 to 0 mA DC: 15 k $\Omega$ maximum	+10 to -10 V DC: 10 k $\Omega$ minimum
Output 2 Output Range	Output Range
20 to 4 mA DC: 350 $\Omega$ maximum	5 to 1 V DC: 2 k $\Omega$ minimum

Zero and span adjustment: Within  $\pm$ 5% of span for both zero and span adjustment

### Items to be specified when ordering

- Model and Suffix Code: e.g. VJHR-026-AAA0

## ■ Standard Performance

- Accuracy rating:  $\pm 0.1\%$  of span (aside from the  $\pm 0.1$  accuracy of the external resistor on current-input models); accuracy is not guaranteed for output level less than  $0.5\%$  of the span of a X-0 mA output range type.
- Response: 150 ms for a 63% response (10 to 90% change of range)
- Insulation resistance: 100 M $\Omega$  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  $\approx$  (-15, +10%)  
50/60 Hz or 15-30 V DC  $\approx$  ( $\pm 20\%$ )
- Effects of power line regulation: Up to  $\pm 0.1\%$  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  $\pm 0.2\%$  of span per 10°C
- Current consumption: 118 mA at 24 V DC
- Power consumption: 5.3 VA at 100 V AC; 7.4 VA at 200 V AC

## ■ Conformance to EMC Standards

- Applicable EMC standard: EN55011: 1991 Class A Group 1 for EMI (emission) regulations  
EN50082-2: 1995 for EMS (immunity) regulations  
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  $\approx$  ( $\pm 20\%$ ) 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)  $\times$  29.5 (W)  $\times$  124.5 (D) mm
- Weight: Main unit = approx. 116 g; socket = approx. 51 g

## ■ Accessories

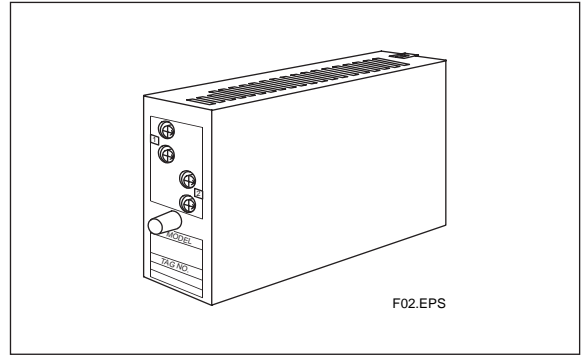
- Tag number label: One
- Resistor module: One (for current-input models)

## ■ Customized Signal Specifications

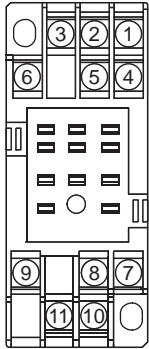
Table 1 Manufacturable Ranges

	Current Signal	Voltage Signal
Input range	0 to +150 mA DC	-300 to +300 V DC
Span	100 $\mu$ A to 150 mA DC	10 mV to 600 V DC
Zero elevation	0% to +73%	-80% to +73%
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

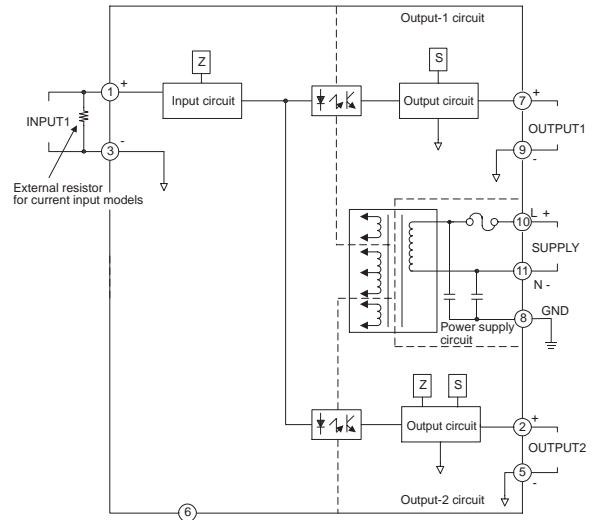


1	INPUT	(+)
2	OUTPUT 2	(+)
3	INPUT	(-)
4	N.C.	
5	OUTPUT 2	(-)
6	N.C.	
7	OUTPUT 1	(+)
8	GND	
9	OUTPUT 1	(-)
10	SUPPLY	(L+)
11	SUPPLY	(N-)

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

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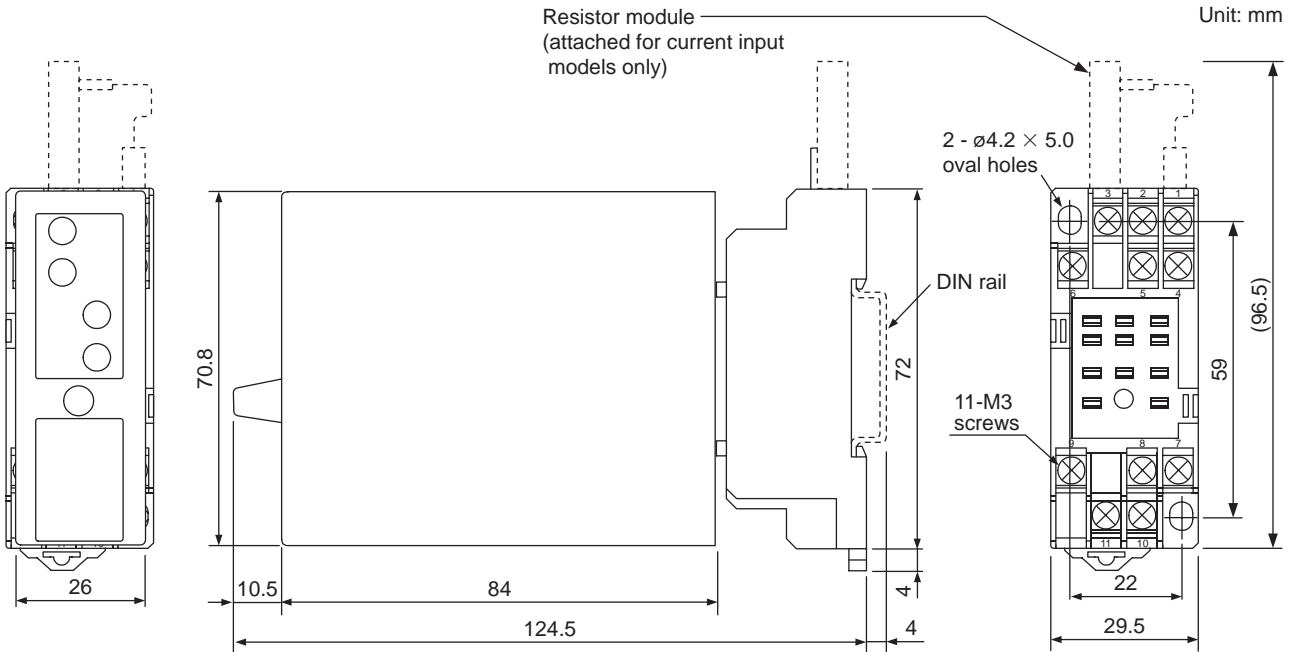
## ■ Block Diagram



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

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## ■ External Dimensions



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- The information covered in this document is subject to change without notice for reasons of improvements in quality and/or performance.