

# General Specifications

Models WG3A, WG3V  
AC Voltage Converter (RMS)

**JUXTA**

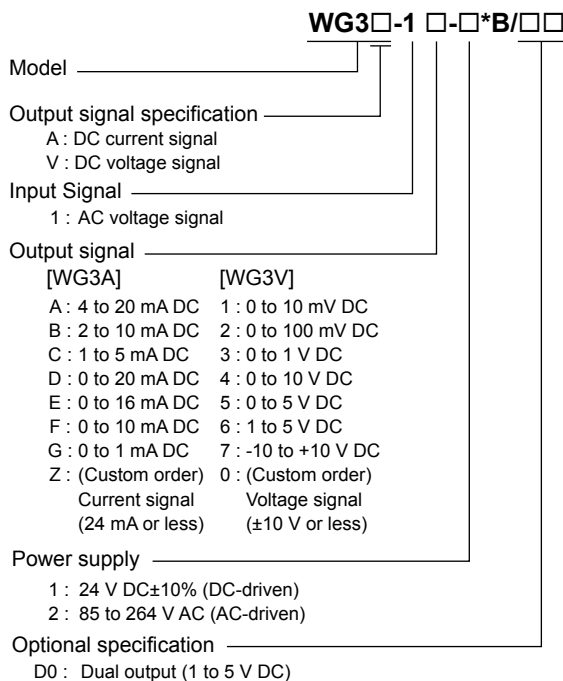
GS 77J09G03-01E

## General

The WG3A/WG3V is a compact, front terminal connection type AC voltage converter that converts AC voltage signals into isolated DC current or DC voltage signals.

- AC/DC conversion is made by root mean square value.
- Dual input and 2000 V AC withstand voltage specifications are available upon requests.

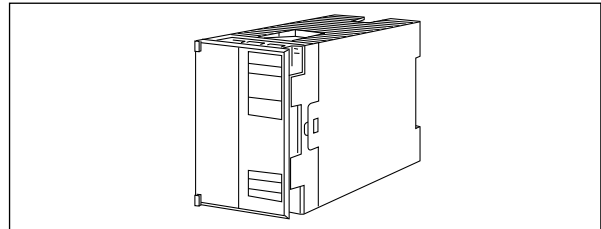
## Model and Suffix Codes



## Ordering Information

Specify the following when ordering.

- Model and suffix codes :e.g. WG3V-16\*2B
- Input range :e.g. 0 to 100 V AC



## Input/Output Specifications

Input signal: 0 to  $V_{100}$  V AC  
 $0.1 \leq V_{100} \leq 150$  V AC ( $V_{100}$ =100% Input voltage)  
 Input resistance: approx. 1 MΩ  
 Input frequency range: 40 Hz to 1 kHz  
 Maximum allowable input: 120% (continuous);  
 200% (one minute)  
 Output signal: DC current or DC voltage signal  
 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  
 Accuracy is not guaranteed for output level less than 0.5% of the span of a 0 to X mA output range type.  
 Dual output (optional): Relative error between output 1 and 2 is within ±0.2%. These outputs are not insulated.  
 Response speed: 300 ms, 63% response (10 to 90%)  
 Insulation resistance: 100 MΩ or more at 500 V DC between input and output, input and power supply, input and ground, output and power supply, output and ground, and power supply and ground.  
 Withstand voltage:  
 DC drive    1500 V AC/min. between input and (output and power supply).  
                   500 V AC/min. between output and power supply.  
 AC drive    1500 V AC/min. between input and output, input and power supply, input and ground, output and power supply, output and ground, and power supply and ground.

**■ Environmental Conditions**

Operating temperature range: 0 to 50°C  
 Operating humidity range: 5 to 90% RH (no condensation)  
 Power supply voltage: 85 to 264 V AC, 47 to 63Hz or 24 V DC±10%  
 Effect of power supply voltage fluctuations: ±0.1% of span or less for 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 (WG3A-1), 60 mA (WG3V-1)  
 Power consumption: 100 V AC 7 VA (WG3A-2), 6 VA (WG3V-2)

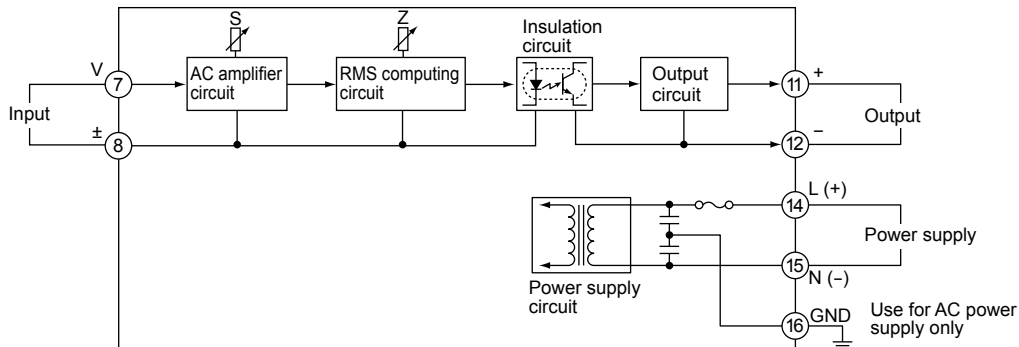
**■ Mounting and Dimensions**

Material: ABS resin (Case body)  
 Mounting method: Rack, Wall or DIN rail mounting  
 Connection method: M4 screw terminals  
 External dimensions: 72 (H) × 48 (W) × 127 (D) mm  
 Weight: DC; Approx.150g, AC; Approx.300g

**■ Standard Accessories**

Tag number label: 1  
 Mounting block: 2  
 Mounting screw: M4 screw x 4

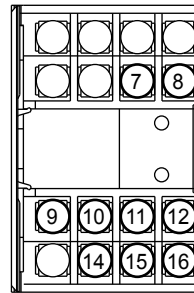
**■ Block Diagram**



**■ Custom Order Specifications**

	Current signal	Voltage signal
Input range (AC)	-----	0 to 150 V
Span (AC)	-----	0.1 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**



7	Input	(V)
8	Input	(±)
9	Output 2	(+)
10	Output 2	(-)
11	Output 1	(+)
12	Output 1	(-)
14	Supply	(L+)
15	Supply	(N-)
16	Ground	(GND)*

\*: Use for AC power supply only

Terminals (9)–(10) are used for Output 2 in case dual output is specified.

**■ External Dimensions**

