General Specifications

Models WB3A, WB3V
AC Current Converter (RMS)

JUXTA

GS 77J09B03-01E

■ General

The WB3A/WB3V is a compact, front terminal connection type AC current converter that converts AC current signals into isolated DC current or DC voltage signals.

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

■ Model and Suffix Codes

WB3□-1 □-□*B/□□

Model

Output signal specification
A : DC current signal
V : DC voltage signal

Input Signal
1 : AC current signal

Output signal

[WB3A]	[WB3V]
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 : (Custom order) Current signal (24 mA or less)	0 : (Custom order) Voltage signal (±10 V or less)

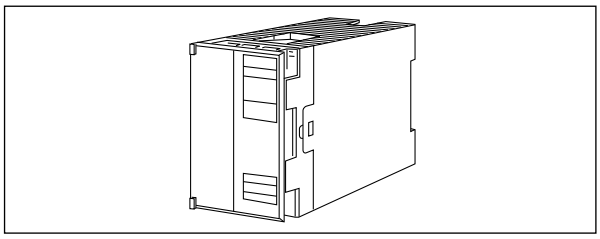
Power supply
1 : 24 V DC±10% (DC-driven)
2 : 85 to 264 V AC (AC-driven)

Optional specification
D0 : Dual output (1 to 5 V DC)

■ Ordering Information

Specify the following when ordering.

- Model and suffix codes :e.g. WB3V-1A-2*B
- Input range :e.g. 0 to 100 mA AC



■ Input/Output Specifications

Input signal: 0 to I_{100} mA AC
4 ≤ I_{100} ≤ 1000 mA AC
(I_{100}=100% input current)
Input resistance: 4 ≤ I_{100} < 10 mA AC; 25 Ω or less
10 ≤ I_{100} < 100 mA AC; 10 Ω or less
100 ≤ I_{100} < 1000 mA AC; 1 Ω or less
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.

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GS 77J09B03-01E

2nd Edition Aug. 1, 2007(YK)

■ 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 63 Hz 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 (WB3A-1), 60 mA (WB3V-1)
Power consumption:100 V AC 7 VA (WB3A-2), 6 VA (WB3V-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 × 48 × 127 mm (H x W x D)
Weight: DC; Approx.150 g, AC; Approx. 300 g

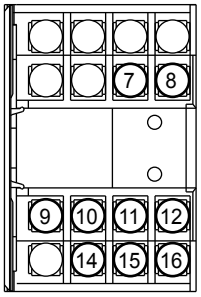
■ Standard Accessories

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

■ Custom Order Specifications

	Current signal	Voltage signal
Input range (AC)	0 to 1000 mA AC	----------
Span (AC)	4 to 1000 mA AC	----------
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

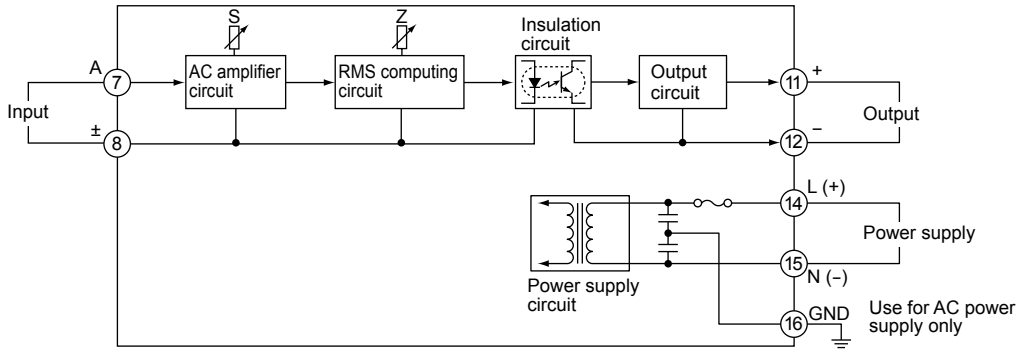


7	Input	(A)
8	Input	(±)
9	Output 2	(+)
10	Output 2	(–)
11	Output 1	(+)
12	Output 1	(–)
14	Supply	(L+)
15	Supply	(N–)
16	Ground	(GND)*

*: Use for AC power supply only

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

■ Block Diagram



■ External Dimensions