

# WGA-100B

## Instrumentation Amplifier

- Compact, moderate price
- Simultaneous output of voltage and current signals



**Compact, lightweight, moderately priced, high performance Simultaneous output of voltage and current signals**

- Bridge excitation, sensitivity, calibration value and frequency response are switchable.
- Auto balance function provided (WGA-100B-10/11/12)

The WGA-100B is a compact, lightweight and moderately priced instrumentation amplifier suitable for measurement of load, pressure, torque and displacement in combination with strain-gage transducers. Available in 2 types: manual balance and auto balance, the WGA-100B is easily changed in the bridge excitation, sensitivity, calibration value and frequency response by changing jumper connection. Simultaneous output of voltage and current signals is possible, no need for switchover.

### Models

Models	Power Supply	Balance Adjustment
WGA-100B-00	10 to 30 VDC, 3.5 W or less	Manual
WGA-100B-01	100 VAC, 5 VA or less	
WGA-100B-02	200 VAC, 8 VA or less	
WGA-100B-10	10 to 30 VDC, 3.5 W or less	Automatic (Also possible with external contact)
WGA-100B-11	100 VAC, 5 VA or less	
WGA-100B-12	200 VAC, 8 VA or less	

### Specifications

Channels	1
Applicable Transducers	Strain-gage transducers
Applicable Bridge Resistance	87.5 Ω to 350 Ω (Up to 4 transducers with bridge resistance 350 Ω connected in parallel. Bridge excitation is limited to 5 V for transducers with bridge resistance 175 Ω or less.)
Bridge Excitation	10 or 5 VDC (Switchable by changing internal jumper connection)
Rated Output	Dual output Voltage: ±10 V (Load resistance 2 kΩ or more) Current: 4 to 20 mA (Load resistance 500 Ω or less) (Corresponding to voltage output of 0 to 10 V)
Zero Adjustment Range	±1.5 mV/V, by trimmer or auto balance
Sensitivity Adjustment Range	x1000 or x4000 (Switchable by changing internal jumper connection) Adjustable between x1/1 and x1/4 by the trimmer
Calibration	0.25, 0.5 or 1.0 mV/V (Switchable by changing internal jumper connection)
Frequency Response	10, 30, 100 or 500 Hz (Switchable by changing internal jumper connection) Attenuation: -12 dB/oct.
Nonlinearity	±0.02% FS
Stability	Zero point: ±0.7 μV <sub>RMS</sub> / °C Sensitivity: ±0.01% / °C
Compliance	Directive 2014/30/EU (EMC) Directive 2011/65/EU (RoHS)
Operating Temperature	-10 to 50°C
Operating Humidity	20 to 80% (Non-condensing)
Power Supply	See table above.
Dimensions	44 W x 90 H x 80 D mm (Excluding protrusions)
Weight	Approx. 400 g
Panel-cut Dimensions	45.0 x 93.4 mm

- Standard Accessories** Instruction manual
- Optional Accessories** AC power cables P-23 (For 100 VAC)  
P-28 (For 200 VAC)  
DIN rail mounting fixture H-11223

### ■ Dimensions, panel-cut dimensions

