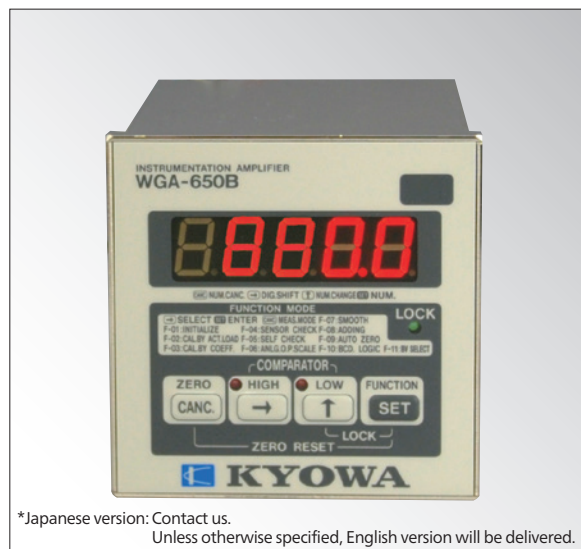


# WGA-650B

● For building into equipment

## Instrumentation Amplifier



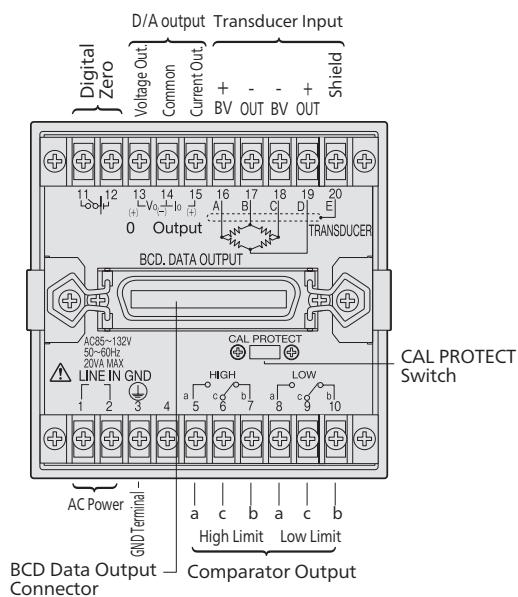
\*Japanese version: Contact us.  
Unless otherwise specified, English version will be delivered.

### Compact Moderate price

- Wide no-load zero adjustment range ( $\pm 2$  mV/V)
- High/low limit comparators (Relay contact output)
- Indicated value is output in a voltage range of 0 to 10 V or in a current range of 4 to 20 mA.
- Indication range -1999 to 19999
- DIN size (96 x 96 mm) ensures easy installation.
- Up to 4 transducers with 350  $\Omega$  bridge resistance connected in parallel.

The WGA-650B series are compact, moderately priced instrumentation amplifiers enabling direct reading of physical quantities such as loads etc. in combination with a strain-gage transducer. All operations are performed with front-panel keys including high/low limit comparator keys. While all models in this series provide D/A converted signal output, models with additional digital output (BCD) are available.

#### ■ Rear View



WGA-650B-1

Types	Models	Power Supply
Standard	WGA-650B-0 M448	100 to 127 VAC
	WGA-650B-0 M449	220 to 240 VAC
With BCD output	WGA-650B-1 M448	100 to 127 VAC
	WGA-650B-1 M449	220 to 240 VAC

### Specifications

Channels	1
Applicable Transducers	Strain-gage transducers (Bridge resistance of 350 $\Omega$ ) (Up to 4 transducers connectable in parallel)
Measuring Range	0 to 2.5 mV/V (5000 $\times 10^{-6}$ strain)
Bridge Excitation	10 VDC/2 VDC, switchable
No-load Zero Adjustment	$\pm 2$ mV/V Analog adjustment and digital adjustment in combination
Calibration	By inputting a numeric value By applying an actual load
Display	-1999 to 19999 (Decimal point to be put anywhere.) Character height 15.24 mm, red LED
Sampling Speed	4 times/s
Nonlinearity	Within $\pm(0.03\% \text{ FS} + 1 \text{ digit})$
Stability	Zero point: $\pm 0.5 \mu\text{V}_{\text{R1}} / ^\circ\text{C}$ Sensitivity: $\pm 0.0025\% / ^\circ\text{C}$
High/Low Limit Comparator	Setting points: 2 (High limit, low limit) Setting range: -1999 to 19999 Contact output: Relay contact output (1 transfer circuit for each point) Contact capacity: 250 VAC, 0.5 A (Resistive load)
Analog Filters	Cutoff frequencies: 1 Hz
Smoothing	Moving averaging times: 2, 4, 8, and 16 Min. scale: 1, 2, 5, 10, 20, 50, and 100
Zero Compensation	Digital zero compensation: Possible with external voltage signals (10 to 30 VDC) Automatic zero compensation: Indication is made zero when the reading is in the setting range for 2 s or more.
Adding Functions	Setting range: -1999 to 19999
Analog (D/A) output	Voltage: 0 to 10 V (Load resistance 2 k $\Omega$ or more) Desired scaling possible Current: 4 to 20 mA (Load resistance 500 $\Omega$ or less) Corresponds to voltage output of 0 to 10 V. Withstand voltage between the output and case: 500 VAC for one minute
BCD Output (WGA-650B-1)	Output mode: Isolated open collector output; BCD output logic selectable Driving capacity: 30 VDC, 20 mA Output signals: 5-digit BCD value, minus sign, OVER, print command (EOC) Connector: 57-40360 (DDK) or the equivalent
Check Functions	Transducer check, self-check
Input Terminal Board	M3 screw board (applicable crimp-style terminals 1.25-3A and 1.25-3B or the equivalent)
Operating Temperature	-10 to 50 $^\circ\text{C}$
Operating Humidity	20 to 85% (Non-condensing)
Power Supply	100 to 127 VAC or 220 to 240 AC, 20 VA or less
Dimensions	96 W x 96 H x 139 D mm (Excluding protrusions)
Weight	Approx. 1.3 kg
Panel-cut Dimensions	92 x 92 mm
Standard Accessories	AC power cable P-23 (For 100 VAC) Instruction manual Unit seal

#### Optional Accessories

- AC power cable P-28 (For 200 VAC)
- Input cables  
U-33 (50 cm), U-34 (1 m), U-35 (2 m), U-36 (5 m)
- BCD output connector BCD-CONN (57-30360 (DDK) or the equivalent)