

WGA-120A

● Compact
● Moderate Price

Carrier Type Instrumentation Amplifier

3
-106



WGA-120A Series' bridge excitation adopted carrier wave, thus strong against inverter noise.

- Rich in lineup for variety applications
- Voltage/current output switchable

WGA-120A is a compact, lightweight and affordably priced carrier instrumentation amplifier that is suitable for measurement of load, pressure, torque or displacement in combination with a strain-gage transducer. While available in a manual or auto balance version, it enables easy switchover of bridge excitation, sensitivity adjustment range, calibration value or frequency response by changing jumper connections.

Models:

Models	Power Codes	Power Supply	Power Consumption	Balance Adjustment
WGA-120A-00	DC	10.5 to 15 VDC	3.5 W or less	Manual
WGA-120A-01	100 VAC	90 to 110 VAC	6.5 VA or less	
WGA-120A-02	200 VAC	180 to 220 VAC	6.5 VA or less	
WGA-120A-03	240 VAC	216 to 264 VAC	6.5 VA or less	Automatic (Also possible with external contact)
WGA-120A-10	DC	10.5 to 15 VDC	3.5 W or less	
WGA-120A-11	100 VAC	90 to 110 VAC	6.5 VA or less	
WGA-120A-12	200 VAC	180 to 220 VAC	6.5 VA or less	
WGA-120A-13	240 VAC	216 to 264 VAC	6.5 VA or less	

Specifications

Channels	1
Applicable Transducers	Strain-gage transducers
Applicable Bridge Resistance	87.5 to 1000 Ω (Up to four 350 Ω transducers connected in parallel. Bridge excitation is limited to 2 or 1 Vrms for transducers with bridge resistance less than 175 Ω)
Bridge Excitation	5 Vrms, 2 Vrms, or 1 Vrms, Square wave (Switchable by changing internal jumper connection)
Full Scale Output	Voltage: ±10 V (Load resistance: 2 k Ω or more) Current: 4 to 20 mA (Load resistance: 500 Ω or less, voltage output: 0 to 10 V) (Switchable by changing internal jumper connection)
Zero Adjustment Range	Within ±1.5 mV/V, manual balance or auto balance by selecting model.
Sensitivity Adjustment Range	×2000, ×4000, ×10000 (Switchable by changing internal jumper connection) Adjustable between ×0.4 and ×1.0 by the trimmer.
Calibration	Calibration by the parallel resistance method 0.25 mV/V or 0.05 mV/V at 350 Ω bridge resistance (Switchable by changing internal jumper connection)
Frequency Response	10, 30, 100, or 500 Hz (Switchable by changing internal jumper connection)
Nonlinearity	Within ±0.1%FS
SN Ratio	53dBp-p or more [Conditions] Sensitive: ×10000, ×0.5 (Adjustment by the trimmer) Frequency response: 500 Hz Bridge resistance: 120 Ω Bridge excitation: 2 Vrms
Zero Stability	Temperature Zero: Within ±0.2 μV _{RM} /°C Sensitivity: Within ±0.05%/°C Time Zero: Within ±0.5 μV _{RM} /8 H Sensitivity: Within ±0.2%/8 H [Conditions] Sensitive: ×10000, ×0.1 (Adjustment by the trimmer) Bridge resistance: 120 Ω Bridge excitation: 2 Vrms
EMC Directive	EN61326-1 (Class A)
Low Voltage Directive	EN61010-1, EN61010-2-030 (Installation Category II, Pollution Degree 2, Measurement Category 0)
RoHS Directive	EN50581
Operating Temperature	-10 to 50°C
Operating Humidity	20 to 85%RH (Non-condensing)
Power Supply	See table above.
Dimensions	44 W x 90 H x 80 D mm (Excluding protrusions)
Panel-cut Dimensions	45.0 x 93.4 mm
Weight	DC power supply model: Approx. 350 g AC power supply model: Approx. 450 g

Standard Accessories Instruction manual

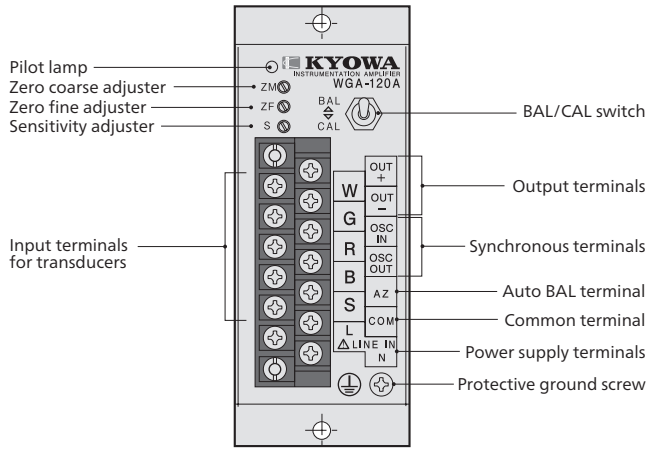
Optional Accessories AC power cables P-23 (For 100 VAC), P-28 (For 200/240 VAC)
DIN rail mounting fixture EDP-70

Input range for output of ±10 V

Sensitivity Range	Bridge Excitation (Vrms)	Input Range (mV/V)	
		Sensitivity Adjustment	
×2000	1	±5	to ±12.5
	2	±2.5	to ±6.25
	5	±1	to ±2.5
×4000	1	±2.5	to ±6.25
	2	±1.25	to ±3.125
	5	±0.5	to ±1.25
×10000	1	±1	to ±2.5
	2	±0.5	to ±1.25
	5	±0.2	to ±0.5

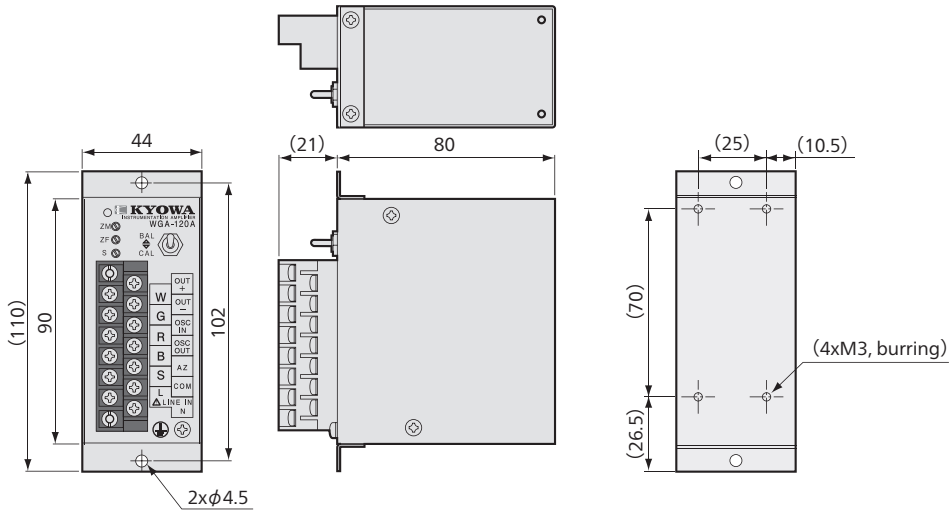


■ Front Panel



DIN rails mounting fixture
EDP-70

■ Dimensions



Terminal screw: M3

(4xM3, burring)

