

WGI-400A

Instrumentation Amplifier

- Compact & general-purpose
- Wide input range



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

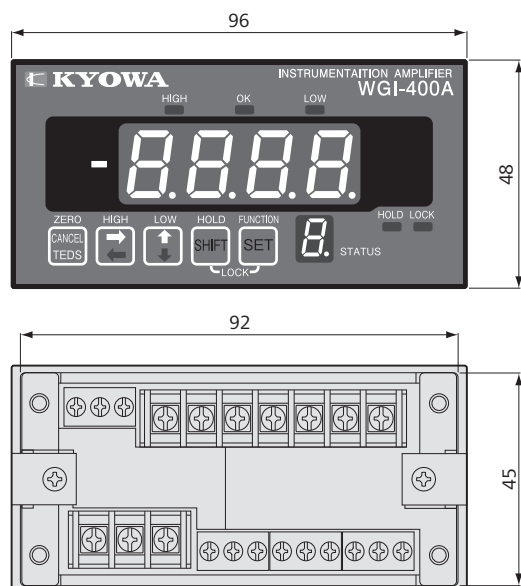


Compact, 48×96 mm (Front surface) Wide measuring range ± 3.2 mV/V

- 3 sensitivity registration modes (Actual load calibration, sensitivity-registered calibration, numerical value-registered calibration)
- Selectable 4 high/low limit patterns in memory
- Level test with desired set-value
- Wide power supply voltage range:
AC power supply (100 to 240 V)
DC power supply (10 to 30 V) (Selectable)
- Option: RS-232C, RS-485, BCD output

The WGI-400A is a compact general-purpose moderately priced instrumentation amplifier providing basic functions required for measurement in combination with strain-gage transducers. The wide input range ensures usage without worrying about initial value of transducer. Furthermore, it provides new functions such as switchable relative value memory patterns and preset value-based level test.

■ Dimensions



Models

Models	Options	Models	Options
WGI-400A-00E	AC operation with no optional function	WGI-400A-10E	DC operation with no optional function
WGI-400A-01E	AC operation with BCD output	WGI-400A-11E	DC operation with BCD output
WGI-400A-02E	AC operation with RS-232C	WGI-400A-12E	DC operation with RS-232C
WGI-400A-03E	AC operation with RS-485	WGI-400A-13E	DC operation with RS-485

Specifications

● Measuring Section	
Channels	1
Applicable Transducers	Strain-gage transducers
Compatible Bridge Resistance	87.5 to 1000 Ω (350 Ω , 4 in parallel connection)
Bridge Excitation	2 VDC (30 mA), 4 VDC (50 mA), switchable
Measuring Range	± 3.2 mV/V (Including zero adjustment range)
Sampling Rate	50 times/s
Resolution	64000 counts/input range in both polarities
Calibration Modes	Actual load calibration, sensitivity-registered calibration, numerical value registration calibration
● Display Section	
Display	± 9999
	Character height: 14 mm, red LED
	Speed: 50 times/s
Decimal Point	Put to anywhere possible
Zero Adjustment Functions	Any value in the input range is set to digital zero; execution by key operation or control input signal
Smoothing Functions	Minimum scale: 1, 2, 5, 10, 20, 50, and 100 counts Moving average: 0, 2, 4, 8, 16, 32, 64, and 128 times
Auto Zero Compensation	Zero tracking (Auto digital zero in the preset range) Approximated zero compensation (Indication is made zero automatically)
Adding Functions	Setting range: ± 9999
Original Value Display Functions	± 3.200 mV/V
Level Test	Display of arbitrary values possible
Temperature Stability	Zero point: Within ± 0.5 $\mu\text{V}_{\text{RM}}/^{\circ}\text{C}$ Sensitivity: Within $\pm 0.01\%$ / $^{\circ}\text{C}$
Nonlinearity	Within $\pm (0.1\% \text{ FS} \pm 1 \text{ digit})$
● Control Input	
Points	4 (ZERO command, level test command, pattern command 1, pattern command 2)
Signal Capacity	12 VDC, 5 mA or more
Input Mode	Open collector (NPN) or non-voltage contact signal
● Control Output	
Points	3 (HI, OK and LO)
Output Mode	Open collector (NPN)
Load Capacity	30 VDC, 20 mA (Resistive load)
Pattern Functions	Registers 4 groups of high/low limit values and enables switching through control signals.
High/Low Limit Comparator	Points: 2 (HIGH, LOW)
Setting Range	± 9999
Comparison Speed	50 times/s
Comparison Function	Points: 1 (OK)
● Analog Output	
Outputs either voltage or current.	
Voltage output	± 10 V (Load resistance: 2k Ω or more), arbitrary scaling possible
Current output	4 to 20 mA (Load resistance: 500 Ω or less), arbitrary scaling possible
Response Speed	Approx. 0.25 s (10% to 90%)
Nonlinearity	Within $\pm 0.1\%$ FS
Frequency Response	1 Hz (-3 dB ± 1 dB)
● Others	
TEDS Function	Automatic sensitivity registration (Key operation, power ON, RS control)
Power Supply	AC operation: 100 to 240 VAC Power consumption: Approx. 6 VA or less DC operation: 10 to 30 VDC $\pm 10\%$ Power consumption: Approx. 8 W or less
Operating Temperature	-10 to 50°C
Operating Humidity	20 to 85%
Dimensions	96 W $\times$ 48 H $\times$ 144 D mm
Panel-cut Dimensions	92.2 W $\times$ 45.2 H mm Panel thickness: 0.8 to 5.0 mm
Weight	Approx. 300 g (AC operation, standard type)

Standard Accessories Instruction manual, unit seal

Optional Accessories AC power cables P-23 (For 100 VAC)
P-28 (For 200 VAC)
BCD output cable N-43
BCD output printer cable N-44



Instrumentation Amplifiers

Outline

Amplifier

Checker

Other