

# WGI-400A

## Instrumentation Amplifier

● Compact, General-Purpose ● Wide Input Range

-9999 to  
+9999  
Indication

±3.2  
mV/V  
Input Range



High/Low  
Limits  
4 Sets

NEW

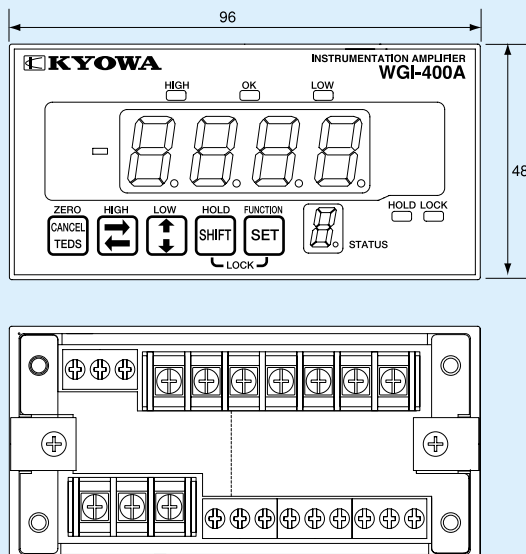


The WGI-400A is a compact general-purpose low-cost instrumentation amplifier providing basic functions required for measurement in combination with strain gage transducers. The wide input range ensures safe use without worrying about initial value of transducer. Furthermore, it provides new functions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

### Features

- Compact, 48 mm by 96 mm (front surface)
- Wide measuring range  $\pm 3.2$  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 value input
- Wide operating voltage range: 90 to 240 VAC or 10 to 30 VDC (AC or DC selected when ordering)
- 3 optional functions: RS-232C, RS-485, BCD output

### Dimensions



### Specifications

#### Measuring Section

Number of Channels: 1

Applicable Transducers: Strain gage transducers

Applicable Bridge Resistance: 87.5 to 1000  $\Omega$

Bridge Excitation Voltage: 2 VDC, 30 mA or 4 VDC, 50 mA, selectable

Measuring Range:  $\pm 3.2$  mV/V

Sampling Rate: Approx. 50 times/sec.

Resolution: 64000 counts/input range in both polarities

Calibration Modes: Actual load calibration, sensitivity-registered calibration, numerical value-registered calibration

Analog Filter: 10 Hz

#### Indication Section

Indication Range: -9999 to +9999

Nonlinearity: Within  $\pm 0.1\%$  FS

Zero Stability: Within  $\pm 0.5 \mu\text{V}_{\text{RTI}}/\text{°C}$

Sensitivity Stability: Within  $\pm 0.01\%$  FS/ $\text{°C}$

Decimal Point: Can be put anywhere.

Zero Function: Any value in the input range can be set to digital zero; execution by key operation or external contact signal

Minimum Scale: Selectable from 1, 2, 5, 10, 20, 50 or 100

Moving Averaging Function: Selectable from OFF, 2, 4, 8, 16 or 32

Zero Tracking: By setting the time, width and operating range

Zero Approximation: A desired value can be preset to let the indicator read 0 for any signal in a range of 0 to the preset value.

Adding Function: Indicated value at the time of executing zero compensation can be set to a desired value.

Level Test: Possible with a desired value input

#### Control Input

Number of Pins: 4 (ZERO command, level test command and 2 pattern select commands)

#### Control Output

Number of Pins: 3 (HI, OK and LO)

Output System: Open collector

Rated Output: 30 VDC, 20 mA (resistive load)

Comparison/Judgment: Based on high/low limits

Judgment Result: 1 (OK)

Relative Value Memory Patterns: 4 patterns, switchable

#### Analog Output

Output Signal:  $\pm 10$  V or 4 to 20 mA, switchable

Nonlinearity: Within  $\pm 0.1\%$  FS

Scaling: Can freely be set.

Response Speed: Approx. 0.25 sec.

#### Others

Power Supply: AC line, 50/60 Hz, or 10 to 30 VDC (to be specified when ordering)

Power Consumption: Approx. 15 VA (AC operation)

Operating Temperature Range:  $-10$  to  $50\text{°C}$

Dimensions: 96(W) x 48(H) x 144(D) mm (with no option)

Panel Cut Dimensions: 92 +0.4/-9 x 45 +0.4/-0 mm

Panel thickness: 0.8 to 5.0 mm

Weight: Approx. 500 g

#### Standard Accessories

Unit seal

Instruction Manual

#### Models

WGI-400A-01: AC operation, with BCD output

WGI-400A-02: AC operation, with RS-232C

WGI-400A-03: AC operation, with RS-485

WGI-400A-10: DC operation, with no optional function

WGI-400A-11: DC operation, with BCD output

WGI-400A-12: DC operation, with RS-232C

WGI-400A-13: DC operation, with RS-485