

WGC-140A

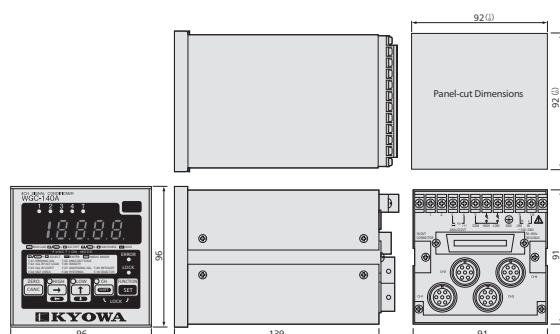
● Compact multichannel unit

4-channel Instrumentation Amplifier

High-speed processing at 2 ms
Compact 4 -channel instrumentation conditioner

- Up to 4 units of 350 Ω strain-gage type transducers connected independently to respective amplifier circuits.
- Circuits are designed to make it difficult for a channel with transducer trouble to affect other channels.
- Switchable indicated value, channel to channel or the total
- Analog voltage output of all channels and the total
- High/low limit comparator for the total value
- High-speed output suitable for control, I/O delay approx. 10 ms
- Sensor check and self-test functions
- Indication range -19999 to 19999 with decimal point anywhere

■ Dimensions



Specifications

Channels	Max. 4
Applicable Transducers	Strain-gage transducers
Compatible Bridge Resistance	350 to 1000 Ω
Measuring Range	± 3 mV/V (Including tare)
Input LPF	150 Hz
Bridge Excitation	5 VDC
Digital Zero	Set at any point in the measuring range
Calibration	By inputting the value (By every channel) By applying an actual load (By every channel)
Indicator	± 19999 (Decimal point to be put anywhere, the same position is applied to all channels.) Character height: 14 mm, red LED Indicated value: Measured value of a channel selected from 1 to 4 Total of measurements of channels 1 to 4
Calculation Speed	2 ms (500 times/s)
Nonlinearity	Within $\pm 0.05\%$ FS
Stability	Zero point: Within $\pm 0.5 \mu\text{V}/\text{m}/^\circ\text{C}$ Sensitivity: Within $\pm 0.01\%/^\circ\text{C}$
High/Low Limit Comparator	Setting points: 2 (High/low limits of total value) Setting range: ± 19999 Max. hysteresis width: 0 to 19999 settable Output modes: Open collector (NPN) Load capacity: 30 VDC, 20 mA (Resistive load) Response speed: 10 ms or less
Smoothing Functions	Minimum scale: Selectable from 1, 2, 5, 10, 20, 50, 100, 200, 500 or 1000 counts Moving averaging functions: Selectable from 2, 4, 8, 16, 32, 64, 128 or 256 times
Adding Functions	Setting range: ± 19999
Original Value Measurement	± 3 mV/V or more
Control Input	Input signals: 6 (4 calculation channel select commands, 1 each ZERO and CHECK commands) Input modes: Non-voltage contact signal or open collector (NPN) (It should enable application of 12 VDC and current flow of 5 mA.)
Control Output	Output signals: 7 (1 HEALTHY signal, 4 ABNORMAL signals and high/low limit signals) Output modes: Open collector (NPN) Load capacity: 30 VDC, 20 mA (Resistive load)
Analog Output	Output signals: 5 (Signals of 4 channels and the total) Output voltage: ± 10 V Withstand voltage: 250 VAC for one minute Resolution: 13 bits Nonlinearity: Within $\pm 0.1\%$ FS Conversion rate: 500 times/s Setting values: Indicated value with 0 V output (± 19999) Indicated value with 10 V output (± 19999)
Check Functions	Self-test: Tests the program checksum and memory. Transducer test: Checks each channel for the bridge current, over-input and disconnection of transducer cable.
I/O Terminal Board	Transducer input: NDIS4102 (7 pins) connector plugs Power connector, etc.: M3 screw terminal board (Applicable crimp-style terminal V1.25-3 or the equivalent) Data output terminal: Connector 57-40360 (DDK) or the equivalent
Operating Temperature	-10 to 55 $^\circ\text{C}$
Operating Humidity	20 to 85% (Non-condensing)
Power Supply	100 to 240 VAC, approx. 30 VA or less
Dimensions	96 W $\times$ 96 H $\times$ 139 D mm (Excluding protrusions)
Weight	Approx. 1.2 kg
Panel-cut Dimensions	92 $\times$ 92 mm

Standard Accessories Instruction manual, unit seal

Optional Accessories AC power cables P-23 (For 100 VAC)
P-28 (For 200 VAC)