Instrumentation Amplifier

WGA-910A

NEW

Monitors waveforms, checks numerical values and operates easily with the touchscreen.

- Waveform comparators
- Various hold functions
- Absolute pressure measurement by numeric value registering calibration
- SD card available
- High-speed sampling: 4000 times/s

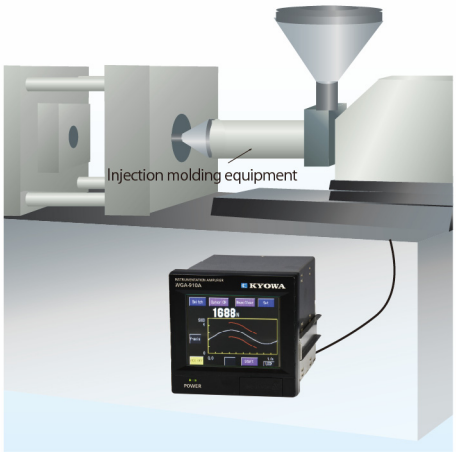
Lineup

Models	Optional Functions
WGA-910A-0	Standard without option
WGA-910A-1	BCD output
WGA-910A-2	D/A output
WGA-910A-3	RS-485
WGA-910A-4	CC-Link
WGA-910A-12	BCD and D/A output

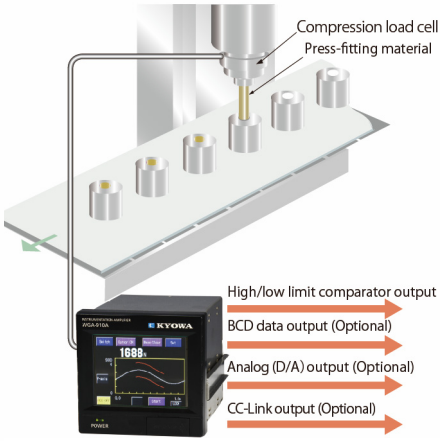
Standard Accessories
CD
(Instruction manual, PC software for SD card)

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

Applications



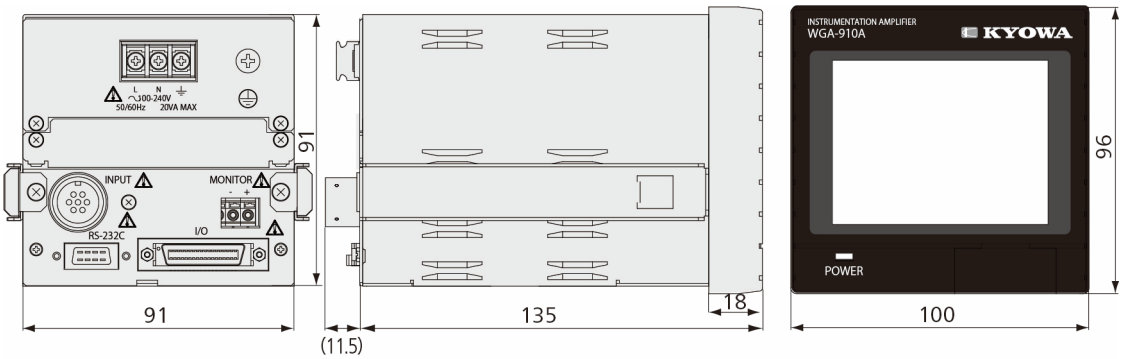
Abnormal measurement with the injection molding equipment



Measuring loads of continuous press fitting

The WGA-910A displays results as waveforms.
The WGA-910A also displays color-coded comparison determination results.

Dimensions



WGA-910A-0

Specifications *For optional functions and accessories, see our website.

Channels	1
Applicable Transducers	Strain-gage transducers (TEDS compatible sensors connectable)
Applicable Bridge Resistance	87.5 Ω to 1 kΩ (Up to four 350 Ω transducers connected in parallel.)
TEDS Compatible	Interface: Compatible with IEEE1451.4 Mixed Mode Transducer Interface Class 2. Applicable transducers: Should have the information according to IEEE template No. 33 and cable length should be 30 m or less.
Bridge Excitation	10, 2 VDC, selectable
Measuring Range	-3.2 to 3.2 mV/V (Including zero adjustment range)
Zero Adjustment Range	Within measurement range (Not retained when power supply interrupted.)
Nonlinearity	Within ±(0.02% FS +1 digit)
Stability	Zero point: Within ±0.25 μV_{RTI} per °C Sensitivity: Within ±0.005 %/°C
Peak/Bottom Detection	Detecting scheme: Digital hold Frequency response: DC to 1 kHz (+1 dB, -2 dB)
Sampling Speed	4000 times/s
A/D Resolution	24 bits
Analog Monitor	Voltage output: ±(5 V ±200 mV) (Load resistance 5 kΩ or more)
Indicators	3.5-inch TFT color LCD, display area: 70.6 × 59.2 mm 320 × 240 pixels, touchscreen
Indication	Setting range: -99999 to 99999 (Decimal point to be put anywhere.) Update speed Numeric value display: Approx. 4 times/s Waveform display: Approx. 2 times/s
Calibration	Manual calibration: Sensitivity registering calibration, actual load calibration, units TEDS auto calibration TEDS part calibration: TEDS calibration item TEDS operation configuration: TEDS reading operation, Zero during TEDS, TEDS information display, numeric value registering calibration
Smoothing Functions	Analog filter (LPF): 1, 30, 300 Hz, FLAT (1 kHz or more) Attenuation: -12 dB/oct. Minimum scale: 1, 2, 5, 10, 20, 50, 100 Moving average: None, 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048 times
Zero Compensation Function	Zero tracking (Auto digital Zero within the setting range) Judging time: 0.00 to 9.99 s Compensation range: 0 to 99999 Zero near zero (Auto zero display) Setting range : 0 to 9
Additional Value	Setting range: ±99999
Sensor Output Value	-3.2000 to 3.2000 mV/V (5 digits) Accuracy: Within ±0.1% FS
Measurement Condition Numbers	32 (16 for control input) of measurement condition file can be saved. Capable of switching by the key operation, control input, and communication command.
Comparator Setting	Points: 5 Type: Extra high (HH), high (HI), OK, low (LO), extra low (LL) If there are two hold values, they are assigned as follows. Hold value 1: High 1 (HI1), low 1 (LO1) Hold value 2: High 2 (HI2), low 2 (LO2) Setting range: ±99999 Hysteresis width: 0 to 9999 Using comparator can be set. Comparison speed: 4000 times/s (Normal comparison mode)
Waveform Comparison Setting	Points: 3 Type: Wave HI, Wave OK, Wave LO Set reference waveform, waveform comparison HI, waveform comparison LO, move waveform, comparison area, register waveform Waveform comparison logic: Positive/Negative
Motion Detect	Motion detect function: Enable/Disable Motion detect width: 0 to 99999 Motion detect time: 0.01 to 9.99 Motion detect logic: Positive/Negative

Measuring Modes	Operation mode: Normal, peak hold, block-specified peak hold, time-specified peak hold, bottom hold, block-specified bottom hold, time-specified bottom hold, arbitrary point hold, block peak-bottom hold, time peak-bottom hold, block average hold, time average hold, block inflection hold, time inflection hold, block maximal/minimal hold, time maximal/minimal hold, block peak/average hold, time peak/average hold, block bottom/average hold, time bottom/average hold, block peak/arbitrary hold, time peak/arbitrary hold, block bottom/arbitrary hold, time bottom/arbitrary hold, previous value comparison peak hold, block previous value comparison peak hold, time previous value comparison peak hold, previous value comparison bottom hold, block previous value comparison bottom hold, time previous value comparison bottom hold Detect time: 0.01 to 9.99 s Delay time: 0.00 to 9.99 s The following settings can be changed according to the operation mode. ・Detection trigger level ・Detection trigger way ・Inflection point discrimination time ・Inflection point discrimination value ・Extreme value discrimination setting ・Initial value for compare with measuring value Comparison mode: Normal comparison, hold comparison Display mode: Normal display, hold display
Waveform Display	X axis setting End point: 0.5, 1.0, 2.0, 5.0, 10.0, 20.0, 50.0, 100.0 s Y axis setting Start point: -99999 to 99999 End point: 250, 500, 1000, 2000, 5000, 10000, 20000, 50000, 100000, 200000 Start mode of waveform, passed level, passed level way, holding time of waveform The WGA displays the waveform of the input variation regardless of the "Operation Mode" setting.
System	Key lock, setting value initialize, backlight illumination time, language, clock, comparison display color, display stability
Self-check	Memory, channel
Operation Check	Display, touchscreen, control input/output, communication, BCD output, D/A output, SD card
Control Input	Points: 9 Types: Zero command, hold command, reset command, waveform command, TEDS command, measurement condition select 0 to 3 Signal formats: Non-voltage contact signal or open collector signal (Capacity: 12 VDC, 5 mA or more)
Control Output	Points: 16 Types: HH, HI, OK, LO, LL, healthy, abnormal channel, abnormal memory, SD, communication error, SD error, wave HI, wave OK, wave LO, motion detect, inflection point/extreme value Output type: Open collector Load capacity: 30 VDC, 20 mA (Load resistance)
Communication	Signal system: RS-232C, full duplex system Transmission system: Asynchronous Bit configuration Data bits: 7 Stop bit: 1 Parity bit: Odd number Flow control: None Setting contents Baud rate: 2400, 4800, 9600, 19200 bps Transmission mode: Repeat output, output at hold, Tx and Rx
SD Card	Saving setting value: Saves the all setting values (excluding the calibration value) to the SD card. Reading setting value: Reads the all setting values (excluding the calibration value) from the SD card and rewrites those of the WGA to the read one. Recording measuring value: Pushing recording key, the WGA records the waveform data to the SD card. View waveform file name: Browsing the waveform data, deleting the wave data, and deleting the directory are available. Format: Erase all data that are saved in the SD card is available. (Quick format is available.) Update: Capable of updating the program version that is saved in the SD card. SD card type: SD, SDHC (Up to 32 GB)
Power Supply	100 to 240 VAC Power consumption: 20 VA or less
Dimensions	100 W × 96 H × 135 D mm (Excluding protrusions)
Weight	Approx. 950 g (Excluding options)
Operating Temperature	-10 to 40 °C
Operating Humidity	20 to 85 % or less (Non-condensing)
Compliance	Directive 2014/30/EU (EMC) (Class A) Directive 2014/35/EU (LVD) (Installation category II, pollution degree 2, measurement category O) Directive 2011/65/EU (RoHS)

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Manufacture's Representative

⚠ Safety Precautions

Be sure to observe the safety precautions given in the instruction manual, in order to ensure correct and safe operation.

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• Specifications are subject to change without notice for improvement.

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