KYOWA

60 Anniversary

Strain Amplifiers

5-digit Indicator • High SN Ratio

NEW
New Product

DPM-911A/912A

- Working hours can be greatly shortened by easy setting.
- Sensitivity (measuring range) is set in combination of strain level and output voltage settings.
- High voltage output of ±10 V and high SN ratio are ensured.
- Vertical bar graph is easy to see.
- Sensitivity of TEDS-installed transducer is automatically registered.
- Overinput is alarmed by flickering 5-digit output voltage indicator.
- Unbalanced capacitive components are automatically canceled by the CST method.

www.kyowa-ei.com

Specifications

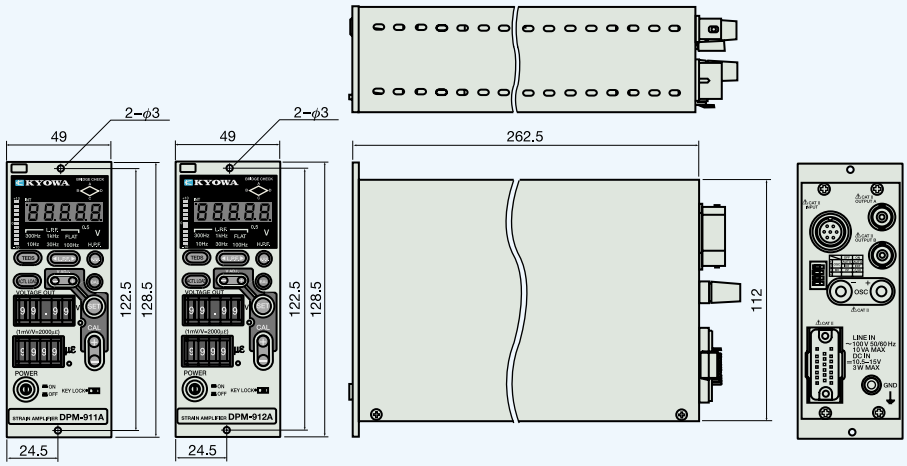
Model	Frequency Response Range	SN Ratio
DPM-911A	DC to 2.5 kHz	60 dB p-p or more
DPM-912A	DC to 5 kHz	57 dB p-p or more

Above specifications are for 1000 μm/m input with bridge excitation and output voltage set to 2 Vrms and 10.00 V, respectively.

Applicable Sensors: Strain gages and strain-gage transducers
Number of Measuring Channels: 1 (multi-channel configuration possible by combining multiple units)
Applicable Bridge Resistance: 60 to 1000 Ω
Gage Factor: 2.00 fixed
Bridge Excitation
DPM-911A: 5 kHz sine wave, 2/0.5 V rms switchable
DPM-912A: 12 kHz sine wave, 2/0.5 V rms switchable
Balance Adjustment Range
Resistance: Within ±2% (±10000 μm/m)
Capacitance: Within 2000 pF
Balance Adjustment Method
Resistance: True electron auto balance
Accuracy: Within ±0.5 με (with 10 V output for 500 με input, and 2 V rms bridge excitation)
Adjustment result is saved in nonvolatile memory.
Capacitance: CST (capacitance self-tracking) method
Nonlinearity: Within ±0.1% FS
Output Impedance: Approx. 2 Ω
Reference Equivalent Strain (CAL): ±(1 to 9999 μm/m), setting by 4-digit CAL switch. Accuracy: Within ±(0.5% + 0.5 μm/m)
Sensitivity Adjustment: Amplifier sensitivity is set in combination with CAL and VOLTAGE OUT switches (4 digits each)
CAL switch: 100 to 9999 με by 1 με steps
VOLTAGE OUT switch: 1.00 to 10.00 V by 0.01 V steps
Adjustable range: 10.00 V output for 500 με input (x20000) to 10.00 V output for 50000 με input (x200)
e.g. x20000 with CAL set at 500 and VOLTAGE OUT at 10.00
x200 with CAL set at 5000 and VOLTAGE OUT at 1.00
Accuracy: Within 0.5%
Fine Sensitivity Control: 1 to 1/2.5
Frequency Response Range
DPM-911A: DC to 2.5 kHz, deviation ±10%
DPM-912A: DC to 5 kHz, deviation ±10%

Low-pass Filter: Second order Butterworth
Cutoff frequency: 6 steps of 10, 30, 100, 300, 1k [Hz] and FLAT
Cutoff accuracy: −3 ± 1 dB
Attenuation: −12 ± 1 dB/oct. (except when the low-pass filter of DPM-911A is set to 1 kHz)
High-pass Filter: Cutoff frequency: 2 steps of 0.2 Hz and OFF
Output
OUTPUT A: ±10 V (load resistance 5 kΩ or more)
OUTPUT B: ±10 V (load resistance 5 kΩ or more)
Zero Stability: ±0.1 με/°C, ±0.5 με/24 h, ±0.05% FS/±10% power fluctuation (with 10.00 V output for 500 με input)
Sensitivity Stability: ±0.05%/°C, ±0.3%/24 h, 0.05%/±10% power fluctuation (with 10.00 V output for 500 με input)
Withstand Voltage:
800 VAC for 1 minute between measuring bridge and chassis
1000 VAC for 1 minute between AC power supply and chassis
Output Voltage Indication: 5-digit (7-segment LED) indicator and 11-segment LED bar-graph meter
Overinput Indication: 5-digit voltage indication flickers.
Checking Function: Bridge check
Key Lock Function: Locks all keys other than POWER switch and digital CAL and VOLTAGE OUT switches.
Remote Function: Enables remote execution of balance adjustment (BAL), reference equivalent strain output (CAL) and key lock.
Synchronization: Automatic judgment of INT or EXT and manual setting
TEDS Reading Function: Reads TEDS information and multiplies the transducer's rated output to the preset level of the VOLTAGE OUT switch (in the sensitivity adjustable range).
Actual Load Calibration (External Calibration): Multiplies the output voltage for an actual load input to the preset level of the VOLTAGE OUT switch (in the sensitivity adjustable range).
Vibration Resistance: 5 to 200 Hz, 29.4 m/s^2 (3 G), 12 cycles each in X, Y and Z directions (10 minutes/cycle)
Shock Resistance: 15 G, 11 ms or less, 3 times each in X, Y and Z directions
Operating Temp./Humidity Range: −10° to 50°C, 20 to 85% RH
Storage Temperature Range: −30 to 70°C
Power Supply: 90 to 110 VAC (approx. 10 VA/100 VAC), 10.5 to 15 VDC (approx. 0.6 A/12 VDC)
Dimensions: 49(W) x 128.5(H) x 262.5(D) mm (excluding protrusions)
Panel cut dimensions: 50(W) x 113(H) mm
Weight: Approx. 1.2 kg

Dimensions



ISO 9001
ISO 14001
JQA-0821
JQA-EM4824

Specifications are subject to change without notice for improvement.

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

Reliability through integration

KYOWA ELECTRONIC INSTRUMENTS CO., LTD.
Overseas Department:
2-4-3, Hitotsubashi, Chiyoda-ku, Tokyo 101-0003, Japan
Phone: +81-3-5226-3553 Facsimile: +81-3-5226-3566
http://www.kyowa-ei.com
e-mail: overseas@kyowa-ei.co.jp

Manufacturer's Representative

Cat. No. K-60-A1-E
Printed in Japan 07/09