

# DPM-951A/952A

## Strain Amplifier



### Strong against Inverter Noise, Easy Operation

- Easy operation greatly reduce the working hours
- Digital switch makes setting easily and the setting value is easy to be seen even during power is off.
- High voltage output of  $\pm 10$  V and high SN ratio are ensured
- Vertical bar meter is easy to see
- The HPF cancels the effect of slow changes, such as temperature drift of gages or sensors
- Sensitivity (Measuring range) is set in combination of strain level and output voltage settings.
- Sensitivity of TEDS compatible transducers is automatically registered
- Input and output is isolated
- Sensitivity is automatically set with the actual load calibration function.
- Built-in checking function on bridge circuit

Models	Carrier Wave Frequencies	Frequency Response	SN Ratio
DPM-951A	5 kHz	DC to 2 kHz (Deviation $\pm 10\%$ )	58dB <sub>p-p</sub> or more
DPM-952A	12 kHz	DC to 5 kHz (Deviation $\pm 10\%$ )	53dB <sub>p-p</sub> or more

(At bridge excitation=2 Vrms, bridge resistance 120  $\Omega$ , LPF=FLAT, 1000  $\mu\text{m/m}$  input, 10.00 V output set)

### Specifications

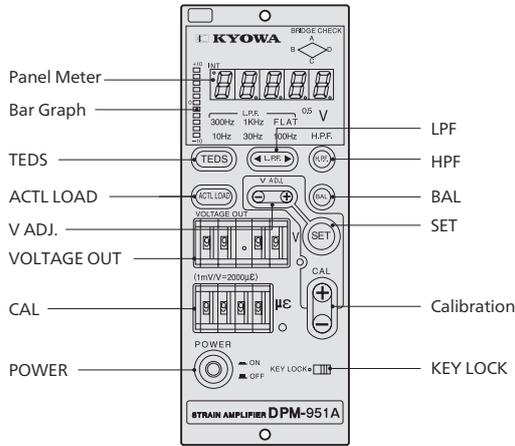
<b>Measuring Targets</b>	Strain gages, strain-gage transducers
<b>Channels</b>	1
<b>Applicable Bridge Resistance</b>	60 to 1000 $\Omega$
<b>Gage Factor</b>	2.00 fixed
<b>Bridge Excitation</b>	2 Vrms, 5 Vrms, switchable
<b>Carrier Frequencies</b>	5 kHz (DPM-951A) 12 kHz (DPM-952A)
<b>Balance Adjustment</b>	Resistance: Within $\pm 2\%$ ( $\pm 10$ k $\mu\text{m/m}$ ) Capacitance: Within 2000 pF
<b>Balance Adjustment Method</b>	Resistance: True electron auto-balance method Accuracy: Within $\pm 0.5$ $\mu\text{m/m}$ Storage: Written into nonvolatile memory Capacitance: CST (Auto-tracking) method
<b>Nonlinearity</b>	Within $\pm 0.1\%$ FS
<b>Output Impedance</b>	Approx. 2 $\Omega$
<b>Calibration Strain (CAL)</b>	$\pm(1$ to 9999 $\mu\text{m/m})$ Setting CAL switch (4-digital switch) Accuracy: Within $\pm(0.5\% + 0.5$ $\mu\text{m/m})$
<b>Sensitivity Adjustment</b>	Sensitivity is set in combination with CAL and VOLTAGE OUT switches (4-digit digital switches) CAL switch range: 100 to 9999 $\mu\text{m/m}$ by 1 $\mu\text{m/m}$ step VOLTAGE OUT switch range: 1.00 to 10.00 by 0.01 V step Accuracy: Within $\pm 0.5\%$ Range: X200 to X20000
<b>Fine Sensitivity Adjustment</b>	Range: 1 to 1/2.5
<b>LPF</b>	Transfer characteristic: 2nd order Butterworth Cutoff frequencies: 6 steps of 10, 30, 100, 300, 1 k Hz and FLAT Cutoff Amplitude ratio: $-3 \pm 1$ dB Attenuation: $(-12 \pm 1)$ dB/oct. (Except LPF of DPM-951A is set to 1 kHz)
<b>HPF</b>	Cutoff frequencies: 2 steps of 0.2 Hz and off
<b>Output</b>	OUTPUT A: $\pm 10$ V (Load resistance 5 k $\Omega$ or more) OUTPUT B: $\pm 10$ V (Load resistance 5 k $\Omega$ or more)
<b>Stability</b>	Temperature Zero point: $\pm 0.1$ $\mu\text{m}$ per $^{\circ}\text{C}$ Sensitivity: $\pm 0.05\%$ / $^{\circ}\text{C}$ Time Zero point: 0.5 $\mu\text{m/m}$ per 24 h Sensitivity: $\pm 0.3\%$ per 24 h Power supply Zero point: $\pm 0.05\%$ FS/power fluctuation $\pm 10\%$ Sensitivity: $\pm 0.05\%$ /power fluctuation $\pm 10\%$
<b>Withstand Voltage</b>	1 k VAC for 1 min between measuring bridge and case 1 k VAC for 1 min between AC power supply and case
<b>Output Voltage Indication</b>	4 1/2-digit (7-segment LED) indicator 11-segment LED bar meter
<b>Over Input Indication</b>	Output voltage indication flickers (4 1/2-digit digital indication only)
<b>Checking Function</b>	Bridge check
<b>Key Lock Function</b>	Locks all keys other than POWER switch (Allows settings on digital CAL and VOLTAGE OUT switches to be changed)
<b>Remote Function</b>	Enables remote execution of balance adjustment (BAL), Calibration output (CAL) and key lock
<b>TEDS</b>	Reads TEDS information and sets VOLTAGE OUT as rated output
<b>Actual Load Calibration</b>	Sets VOLTAGE OUT as actual load input
<b>Operating Temperature</b>	-10 to 50 $^{\circ}\text{C}$ ,
<b>Operating Humidity</b>	20 to 85%RH (Non-condensing)
<b>Power Supply</b>	100 VAC 115, 200, 230 VAC, or 10.5 to 15 VDC (Approx. 0.6 A at 12 VDC) also available.
<b>Weight</b>	Approx. 1.2 kg

**Standard Accessories** Output cable U-08 (1.5 m), U-59 (1.5 m), 1 each AC power cable P-25 (With 2-pin conversion plug CM-39), Fuse (Midget type 0.5 A, 1 A)  
Instruction manual, simple manual sticker

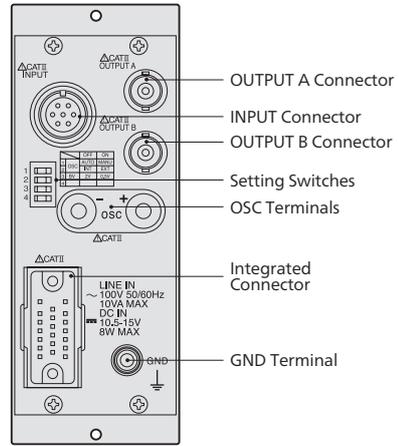
**Optional Accessories** Extension cables N-81 (5 m) to N-85 (50 m)  
Bridge boxes DB, DBB, and DBS  
Housing case YC-A  
Noise filter F-7B, F-BNC, and amplifier stand FA



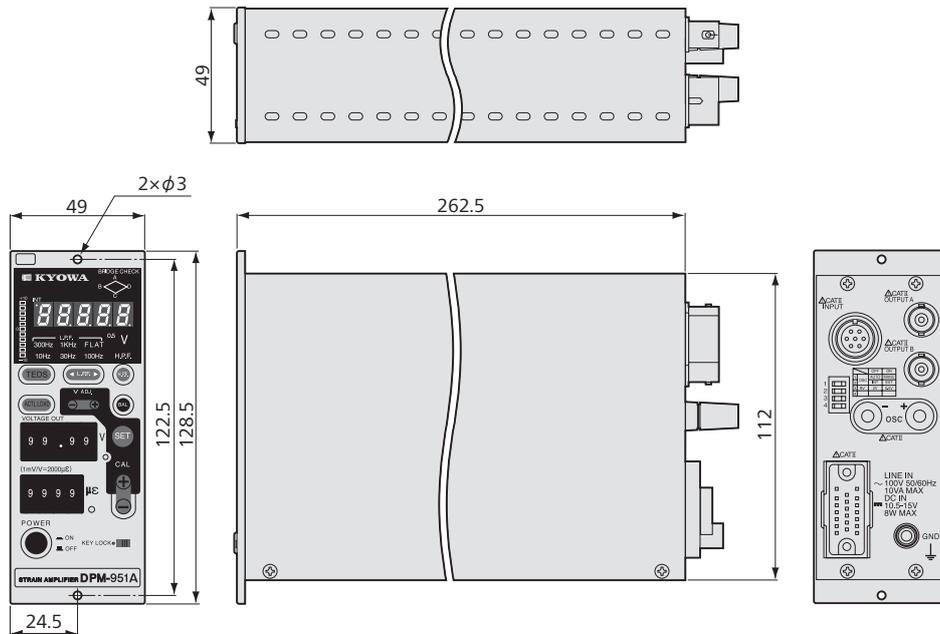
■ Front Panel



■ Rear Panel



■ Dimensions



DPM-951A/952A Recommended products for combination

- Compact Recording System EDX-10 series → 3-49
- Universal Recorder EDX-200A → 3-55
- Universal Recorder EDX-100A → 3-63
- Memory Recorder/Analyzer EDX-5000A → 3-68
- A/D Converter+PC