

DPM-951A/952A

Strain Amplifier



DPM-951A

DPM-952A

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 ± 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
- Broad frequency response DC to 10 kHz

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

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

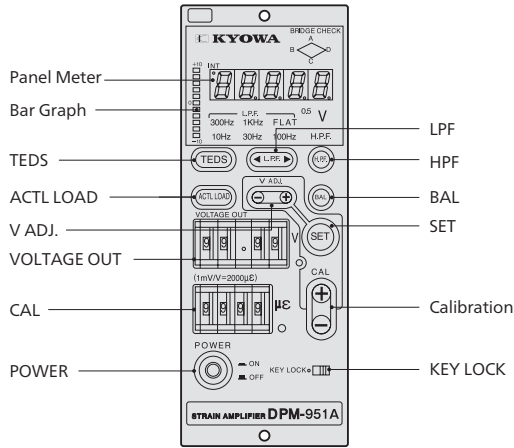
Specifications

Measuring Targets	Strain gages, strain gage transducers
Number of Input Channels	1
Applicable Bridge Resistance	60 to 1000 Ω
Gage Factor	2.00 fixed
Bridge Excitation	2 Vrms, 5 Vrms, switchable
Carrier Frequencies	5 kHz (DPM-951A) 12 kHz (DPM-952A)
Balance Adjustment Range	Resistance: Within $\pm 2\%$ (± 10 k $\mu\text{m/m}$) Capacitance: Within 2000 pF
Balance Adjustment Method	Resistance: True electron auto-balance method Accuracy: Within ± 0.5 $\mu\text{m/m}$ Storage: Written into nonvolatile memory Capacitance: CST (Auto-tracking) method
Nonlinearity	Within $\pm 0.1\%$ FS
Output Impedance	Approx. 2 Ω
Calibration Strain (CAL)	$\pm (1$ to 9999 $\mu\text{m/m})$ Setting CAL switch (4-digital switch) Accuracy: Within $\pm (0.5\% + 0.5 \mu\text{m/m})$
Sensitivity Adjustment	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 0.01V step Accuracy: Within $\pm 0.5\%$ Range: X200 to X20000
Fine Sensitivity Adjustment	Range: 1 to 1/2.5
LPF	Transfer characteristic: 2nd order Butterworth Cutoff frequencies: 6 steps of 10, 30, 100, 300, 1 k Hz and FLAT Cutoff Amplitude ratio: -3 ± 1 dB Attenuation: -12 ± 1 dB/oct. (Except LPF of DPM-951A is set to 1 kHz)
HPF	Cutoff frequencies: 2 steps of 0.2 Hz and off
Output	OUTPUT A: ± 10 V (Load resistance 5 k Ω or more) OUTPUT B: ± 10 V (Load resistance 5 k Ω or more)
Stability	Temperature Zero point: ± 0.1 μm per $^{\circ}\text{C}$ Sensitivity: $\pm 0.05\%$ / $^{\circ}\text{C}$ Time Zero point: $\pm 0.5 \mu\text{m/m}/24\text{h}$ Sensitivity: $\pm 0.3\%$ /24h Power supply Zero point: $\pm 0.05\%$ FS/power fluctuation $\pm 10\%$ Sensitivity: $\pm 0.05\%$ /power fluctuation $\pm 10\%$
Withstand Voltage	1 k VAC for 1 minute between measuring bridge and chassis 1 k VAC for 1 minute between AC power supply and chassis
Output Voltage Indication	4 1/2-digit (7-segment LED) indicator 11-segment LED bar meter
Over Input Indication	Output voltage indication flickers (4 1/2-digit digital indication only)
Checking Function	Bridge check
Key Lock Function	Locks all keys other than POWER switch (Setting on digital CAL and VOLTAGE OUT switches can be changed)
Remote Function	Enables remote execution of balance adjustment (BAL), Calibration output (CAL) and key lock
TEDS	Reads TEDS information and sets VOLTAGE OUT as rated output
Actual Load Calibration	Sets VOLTAGE as actual load input
Operating Temperature Range	-10 to 50°C ,
Operating Humidity Range	20 to 85%RH (Non-condensing)
Power Supply	115 VAC (108 to 132 V) 200 VAC (180 to 220 V) 230 VAC (207 to 253 V) 10.5 to 15 VDC (Approx. 0.6A, at 12 VDC)
Weight	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 0.5A, 1A) 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, and amplifier stand FA

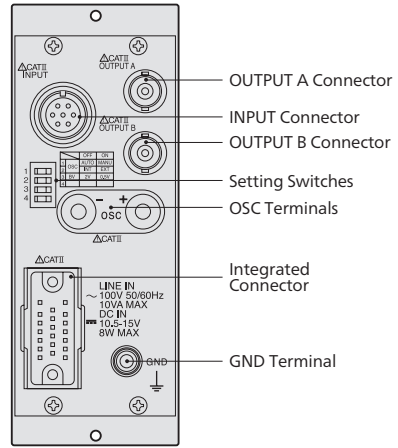




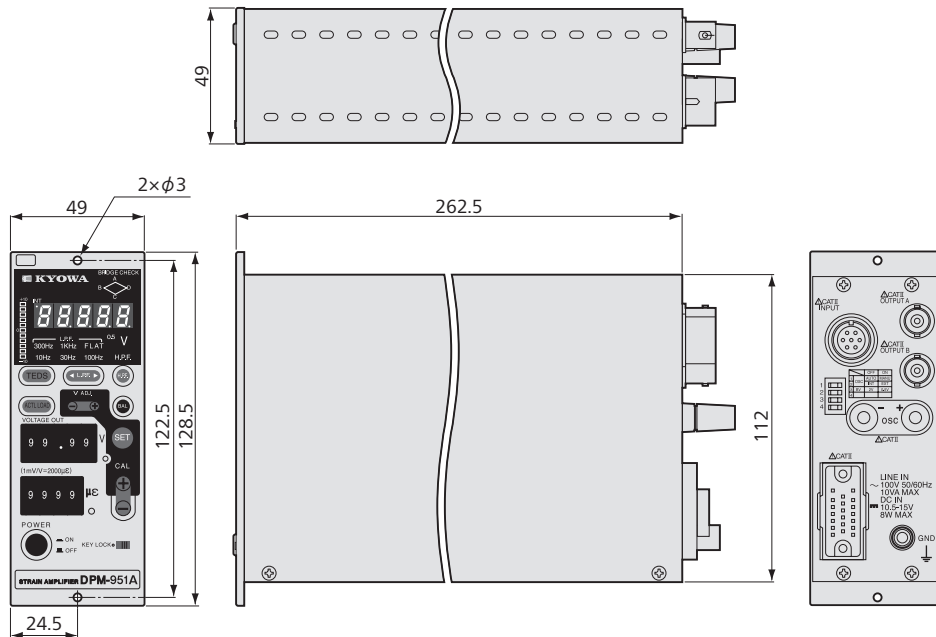
■ Front Panel



■ 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-3000B → 3-69
- A/D Converter+PC