DA-710A

DC Amplifier

●Isolated
●High accuracy

Highly accurate 2-channel isolated DC amplifiers

- ●Input-output isolation ensures excellent stability and makes it less affectable by noise.
- ●LPF enables measurement at high SN ratio.
- ●Highly accurate
- ●Allowable common mode voltage ±300 V and allowable max. input voltage ±110 V
- ●Voltage calibration function
- ●Moderate price

The DA-710A is a highly accurate 2-channel isolated DC amplifier which satisfies requirements for high input impedance, high gain accuracy and stability.
Since the channels are isolated from each other, the DA-710A can effectively be used for measurement if the 2 channels are connected to different signal sources. In addition, input-output isolation ensures excellent stability and outstandingly minimizes noise effects. The allowable common mode voltage is ±300 VDC, while setting the attenuation switch to 1/100 makes the allowable max. input voltage ±110 VDC. Furthermore, high-frequency components are eliminated by the LPF for measurement at a high SN ratio.
Thus, the DA-710A is used for various purposes including general micro voltage measurement, temperature measurement in combination with a thermocouple, and as a preamplifier for recorders and data processors.

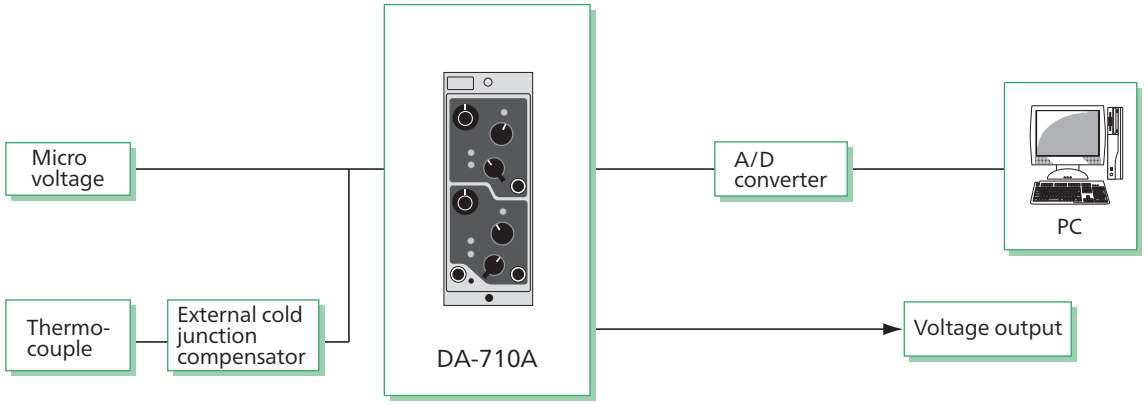
Specifications

Channels	2
Input Modes	Differential, isolated between input and output, and between channel and channel
Isolation Methods	Optical
Input Impedance	10 + 10 MΩ or more (ATT ×1 and OFF)
	1 + 1 MΩ or more (ATT × 1/100)
Gain	13 steps of 10, 20, 50, 100, 200, 500 (×1 and ×1/100) and OFF; continuously variable between ×1 and x2.5 or more
	Gain accuracy: ±0.1% FS (ATT ×1)
	±0.3% FS (ATT × 1/100)
Stability Zero Balance	Within ±5 μV_{RTI} / °C (With input shorted and gain 500)
	Gain: Within ±0.02%/°C
Nonlinearity	Within ±0.05% FS
Frequency Response	DC to 10 kHz (+1, -3 dB)
Output A	±10 V (Load resistance 10 kΩ or more)
Output B	±10 V (Load resistance 10 kΩ or more)
Output Impedance	1 Ω or less
CMRR	120 dB or more (DC to 60 Hz)
	(With balanced input of 1 kΩ, gain 500 and ATT ×1)
Allowable Common Mode Voltage	±300 VDC or AC peak
	Insulation resistance 1000 MΩ or more
Allowable Max. Input Voltage	±2 VDC or AC peak (ATT × 1)
	±110 VDC or AC peak (ATT ×1/100)
Zero Balance Adjustment Range (Output)	
	±5 V (OUT A and B linked)
	±1 V (OUT B independent)
Noise	10 $\mu V_{p\text{-}p}$ (RTI) + 6 $mV_{p\text{-}p}$ (RTO)
	(With input shorted, gain 500 and ATT ×1)
Calibration Voltage (Output)	Within 4 V ±0.2%
Settling Time	100 µs or less, output: Within ±0.1%
Overload Recovery Time	100 µs or less, output: Within ±0.1%
Crosstalk Between Channels	10 $\mu V_{p\text{-}p}$ (RTI) + 6 $mV_{p\text{-}p}$ (RTO) or less
Common Mode Crosstalk Rejection Ratio	10 $\mu V_{p\text{-}p}$(RTI) + 6 $mV_{p\text{-}p}$ (RTO) or less
LPF	Transfer characteristic: 2nd order Butterworth
	Cutoff frequencies: 10, 30, 100, 300, 1 k Hz and FLAT (6 steps)
	Amplitude ratio at cutoff point: -3 ±1 dB
	Attenuation: (-12 ±1) dB/oct.
Operating Temperature	-10 to 50°C
Operating Humidity	20 to 80% (Non-condensing)
Storage Temperature	-20 to 70°C
Storage Humidity	5 to 95% (Non-condensing)
Withstand Voltage	Between [Channel 1 input connector pin] and [Output, case, AC power supply]: 1 kVAC for 1 min
	Between [Channel 2 input connector pin] and [Output, case, AC power supply]: 1 kVAC for 1 min
	Between [AC power supply] and [Output, case]: 1 kVAC for 1 min
	Between [Channel 1 input] and [Channel 2 input]: 1 kVAC for 1 min
Power Supply	100 VAC, 4.5 VA
Dimensions	49 W x 128.5 H x 262.5 D mm
	(Excluding protrusions)
Weight	Approx. 1.0 kg

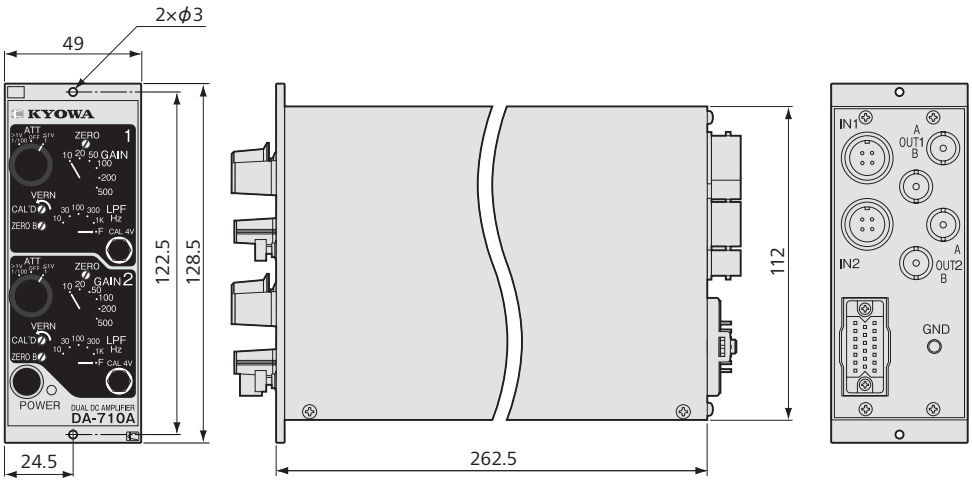
Standard Accessories
Input cable U-108
Output cable U-63
AC power cable P-25 (With 2-pin conversion plug CM-52)
Miniature screwdriver
CD-R (Instruction manual)
Simplified manual

Optional Accessories
Housing case YC-A
Amplifier stand FA-1B

Block diagram



Dimensions



DA-710A 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