

DA-710A

DC Amplifier

● General-Purpose, 2 Channels

2ch

NEW



The DA-710A is a highly accurate 2-channel isolated DC amplifier which satisfies requirements for high input impedance, high gain accuracy and low cost. 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 input voltage is ± 300 VDC, while setting the attenuation switch to 1/100 makes the maximum allowable input voltage ± 110 VDC. Furthermore, high-frequency components can be eliminated by the low-pass filter for measurement at a high SN ratio. Thus, the DA-710A can be used for various purposes including general minute voltage measurement, temperature measurement in combination with a thermocouple, and as a pre-amplifier for recorders and data processors.

Features

- 2 channels/unit
- Input-output isolation ensures excellent stability and makes it hard to receive noise effects.
- Low-pass filter enables measurement at high SN ratio.
- Highly accurate
- Allowable common mode input voltage ± 300 V and maximum measurement input voltage ± 110 V.
- Voltage calibration function
- Low cost

Specifications

- Number of Channels:** 2
Input Mode: Differential; isolated between input and output and between channel and channel
Isolation Method: Optical
Input Impedance:
10 M Ω + 10 M Ω or more (ATT x1 and OFF)
1 M Ω + 1 M Ω or more (ATT x 1/100)
Gain: 13 steps of 10, 20, 50, 100, 200, 500 (x1 and x100) and OFF; continuously variable between x1 and x2.5 or more
Gain accuracy: $\pm 0.1\%$ FS (ATT x1), $\pm 0.3\%$ FS (ATT x 1/100)
Stability Zero balance: Within ± 5 μ V rti/ $^{\circ}$ C (with input shorted and gain 500)
Gain: Within $\pm 0.02\%$ / $^{\circ}$ C
Nonlinearity: Within $\pm 0.05\%$ FS
Frequency Response: DC to 10 kHz (+1/-3 dB)
Output A & B: ± 10 V (load resistance 10 k Ω or more)
Input Impedance: 1 Ω or less
Common Mode Rejection Ratio: 120 dB or more (DC to 60 Hz) (with balanced input of 1 k Ω , gain 500 and ATT x1)
Allowable Common Mode Voltage: ± 300 VDC or AC peak, insulation resistance 1000 M Ω or more
Allowable Maximum Input Voltage:
 ± 2 VDC or AC peak (ATT x 1)
 ± 110 VDC or AC peak (ATT x1/100)
Zero Balance Adjustment Range (Output):
 ± 5 V (OUT A and B linked); ± 1 V (OUT B independent)
Noise: 10 μ V p-p RTI + 6 mV p-p RTO (with input shorted, gain 500 and ATT x1)
Calibration Voltage (Output): 4 V within $\pm 0.2\%$
Settling Time: 100 μ s or less, output within $\pm 0.1\%$
Overload Recovery Time: 100 μ s or less, output within $\pm 0.1\%$
Crosstalk between Channels:
10 μ V p-p RTI + 6 mV p-p RTO or less
Common Mode Crosstalk Rejection Ratio:
10 μ V p-p RTI + 6 mV p-p RTO or less
Low-pass Filter: Second order Butterworth
6 steps of 10, 30, 100, 300, 1k [Hz] and F
Within -3 dB ± 1 dB at cutoff point
Cutoff characteristic: -12 dB/oct.
Operating Temperature/Humidity Range:
-10 to 50 $^{\circ}$ C, 20 to 80% RH (noncondensing)
Storage Temperature/Humidity Range:
-20 to 70 $^{\circ}$ C, 5 to 95% RH (noncondensing)
Withstand Voltage:
1 kVAC for one minute
between each input connector pin of channel 1 or 2 and output, case or AC power supply
between AC power supply and output or input
between input of channel 1 and input of channel 2
Power Supply: AC line, 4.5 VA
Dimensions & Weight: 49(W) x 128.5(H) x 262.5(D) mm (excluding protrusions), approx. 1.0 kg
- Standard Accessories**
AC power cable P-16 (with conversion adapter CM-23), Input cable U-108, Output cable U-63, Miniature screwdriver, Instruction Manual (CD-ROM)
- Optional Accessories**
Amplifier stand FA-1B (Refer to page 3-18.)
Housing cases YB-A (Refer to page 3-17.)

3

AMPLIFIERS • LOGIC DEVICES • ANALYZERS

