



9000 Series Amplifiers



Features:

- Single channel Amplifier per module
- Maximum loading of 16-channel
- Remote sense excitation voltage
- DC to 220 kHz. (-3 dB) BW
- Programmable Gain from 1 to 3200
- Optional programmable Gain from 1 to 50000
- Multi-segment Low-pass active 4-pole Butterworth standard
- Remote control; Auto balance
- Optional programmable bridge completion and shunt-calibration resistor module
- Optional foot post or screw type connection box convenient for wire connecting

Applications:

- Dynamic Material Test
- Strain/Stress Analysis
- Dynamic Material Elasticity Testing
- SHPB Signal Conditioning
- Load Cell Signal Conditioning
- Foil Strain Gage Signal Conditioning
- Semiconductor Strain Gage Signal Conditioning

Description:

9012 is a high gain differential signal amplifier with high bandwidth, auto balance, programmable excitation and low-pass active functions.

The measuring values are shown on 9001 or 9002 amplifier controller.

Measuring micro-signal; Resistance type temperature sensor; Strain gage and transducer made by strain gage. Examples are the application on the load cell, accelerator, micro-displacement, torque and pressure transducers.

Functions of auto balance and auto gain give the measurement more efficiency.

Other optional measurement functions: Programmable bridge completion and shunt-calibration resistor module supported with quarter, half and full-bridge, shunt-calibration and 3-wire temperature compensation.

Programmable select four-pole low-pass filter makes the dynamic or static measurement more easily.

Providing with the direct analog output with the BNC connector from 9001 or 9002 controller.



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Signal Conditioning Amplifier

Specification:

- 9012 Amplifier
 - Temperature effect on zero : $\pm 1.0 \mu V/^{\circ}C$ RTI Max
 - Temperature effect on span : $\pm 0.05\%/^{\circ}C$ max
 - Common-mode rejection : Larger than 80dB at 50 ~ 60Hz
 - Input impedance : Larger than 30 M Ω
 - Differential input : $\pm 20V$
 - Accuracy : $\pm 0.1\%$ for G.F. ≥ 1
 - Programmable gain : 1 to 50000
- Excitation Voltage
 - Range: 1 to 10 $\pm 0.1\%$ VDC
 - Noise: ≤ 1 mVpp
 - Remote sense: Excitation error less than 0.025%/ Ω of lead resistance
 - Temperature stability: $\pm 0.01\%/^{\circ}C$
- Remote Control and Auto Balance
 - Range: $\pm 16000 \mu\epsilon$ ($\pm 8mV/V$)
 - Resolution: 1 $\mu\epsilon$
 - Accuracy: $\pm 6 \mu\epsilon$
 - Time: 8 seconds Max
- Frequency Response
 - DC to 220 kHz (-3 dB)
 - Programmable select four-pole low-pass filter
 - B. W.: 1 / 10 / 100 / 1k / 10k / 220k (Hz/AC), -3 dB (± 2 dB)
- Output
 - Providing with BNC Connector.
 - Linear output: $\pm 5.0V$ Standard, Order 9211
 - Output load: 10 Ω Max
- Input
 - 9 Pin D Type Connector
- Power Requirement
 - Input: 110 or 220 VAC $\pm 10\%$ by switch, 50 or 60 Hz, 3A
- Dimension & Weight
 - 13" \times 1" \times 5.3" (330 mm \times 25 mm \times 133.6 mm)
 - 1.3 Lb (600 g)
 - Dimension & Weight of the whole chassis
- Operational Environment
 - Operation temperature: $-10^{\circ}C \sim 60^{\circ}C$
 - Storage: $-20^{\circ}C \sim 70^{\circ}C$
 - Humidity: Below 95% RH, non-condensing
- Option
 - 9011-CA
 - Bridge completion and shunt-calibration resistor module.
 - Configuration 2 to 6 wires plus guard shield to accept quarter, half, full bridge strain gages or transducer.
 - Internal half bridge 120 Ω , 350 Ω , 1000 Ω Completion gages
 - Shunt calibration
 - Three internal shunt calibration resistors $\pm 0.01\%$
 - ◆ 120 Ω Gages: 5000 $\mu\epsilon$
 - ◆ 350 Ω Gages: 5000 $\mu\epsilon$
 - ◆ 1000 Ω Gages: 1000 $\mu\epsilon$
 - 900C-MC4XX: xx Foot post connection box
 - Providing with 6-Wire Connection
 - 900C-MT4XX : xx Foot screw type connection box
 - Providing with 6-Wire Connection