HV-LN Series Low Noise Power Amplifier

Features:

- Controlled voltage mode
- Controlled current mode
- Bandwidth: DC to 300 kHz
- Over temperature protection
- Over load protection
- Output Voltage 30 Vpp (± 15 V) ~ 420 Vpp (± 210 V)
- Output Current 2 A ~ 20 A

Applications:

- Magnetic Resonance Imaging
- Power Industry Testing
- Vibration Test Devices
- Manufacturing
- Positioning
- Piezoelectric transducer driver
- Ion beam deflection
- Vacuum tube driver
- Bipolar high voltage power supply

Description:

The Model LN power amplifiers offer extended output power, voltage capabilities, low distortion, versatility and the latest BJT power in the operational amplifier technology. All these performance features are not available in other power amplifiers.

These power amplifiers supply the controlled voltage (LNP) or controlled current (LNC) output. In controlled voltage (CV) mode, the output is an amplified voltage representing the input voltage signal. In controlled current (CC) mode, the output is an amplified current representing the input voltage signal. If the load's impedance changes, the amplifier shall try to remain at the desired voltage (in CV) or current (in CC).

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Specification:

- These amplifiers provide with precise amplification of signals with frequencies from DC to over 60 kHz. Depending on the application, much higher frequency can be attained.

- Maximum output voltage of 310 Vpp (± 155 V) @ full load.

- Maximum slew rate of 36 V/ μ s for the LNP (20 V/ μ s for LNC).

- Residual noise for the LNP is only 0.88 mV rms (0.55 mV for LNC) from DC to 60 kHz.

- Input impedance for the LNP is 20 k Ω (25 k Ω for LNC).

- Outline
  W: 212, D: 320, H: 88~222 mm or
  W: 483, D: 320 \ 420 \ 560, H: 88 ~ 222 mm
  depending on different Models.

- Display
  - Full dot-matrix structure with 4 Row X 20 Chars dots FSTN positive, gray translucence LCD with backlight.
  - Display update is twice/second
  - Output V, Output Current,
  - Output Status: On \ Off; Standby \ Stop \ Fault
  - System Protection Status: Over temperature, Over voltage, Over Load

- AC power Input 110/220 VAC
  - High Voltage Fuse
  - Low Voltage Fuse
  - Low Frequency protection Switch (If selected, standby shall be initiated when appearing DC-10 Hz at 10 V or more at the output)
  - Delay Switch (If selected, a four second delay shall be invoked whenever turning on power switch)
  - Interlock (signals and controls for multiple amplifier systems)

- Output (Binding posts)

- Voltage input gain:
  Rotary switch x1, x2, x5, x10, x20, x50, x100, x200, x500

- Voltage input offset:
  Rotary switch –10, -5, -2, -1, 0, +1, +2, +5, +10 V with 0 ~ 100% fine adjusting potentiometer

- Model and Option
  - CV Low noise power amplifier Order Code:
    LNP-xxx-yy-zzz-vvv
  - CC Low noise power amplifier Order Code:
    LNC-xxx-yy-zzz-vvv

xxx: Output voltage
"030" 30 Vpp, (± 15 V)
"060" 60 Vpp, (± 30 V)
"120" 120 Vpp, (± 60 V)
"180" 180 Vpp, (± 90 V)
"240" 240 Vpp, (± 120 V)
"300" 300 Vpp, (± 150 V)
"360" 360 Vpp, (± 180 V)
"420" 420 Vpp, (± 210 V)

yy: Output current
"02" for 2 A
"04" for 4 A
"06" for 6 A
"08" for 8 A
"10" for 10 A
"12" for 12 A
"14" for 14 A
"16" for 16 A
"18" for 18 A
"20" for 20 A