

4101 Power Test System Specifications

SYSTEM CONTAINS:

3 - 7780RLY Current Mode Amplifiers

3 - LV3622 Voltage Mode Amplifiers

35U System Cabinet with:

- Power distribution,
- Prewired front panel input and output connections
- Front panel main power disconnect

User Selectable Options include:

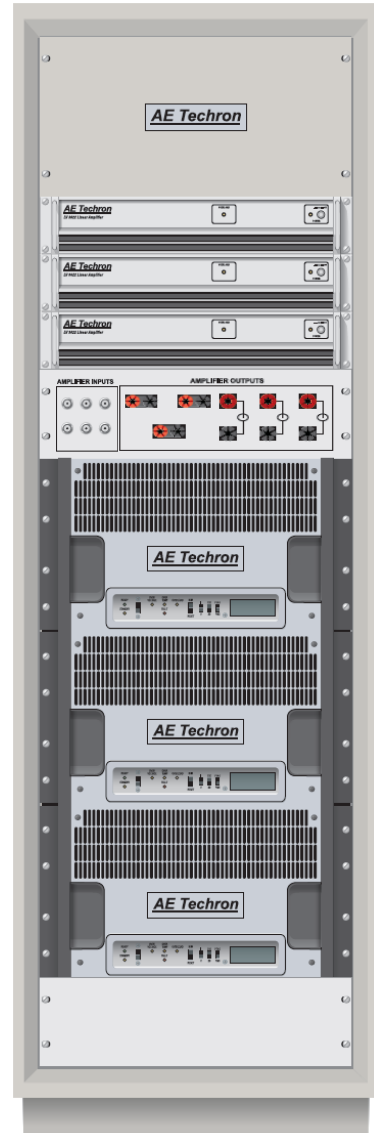
- 4th channel of current or voltage amplifier
- User selectable balanced or unbalanced input connectors

APPLICATION

The 4101 three-phase system, specifically designed for the power utilities industry, is used in power systems modeling, and testing of protective relays and panels, transformers, CT's and VT's.

FEATURES

- Extremely low levels of noise, distortion, gain error, and differential phase error
- Linear operation ensuring repeatability of tests
- Internal circuitry protection from input overload, thermal overload, or improper load impedance (including short and open circuit)
- Patented grounded full-bridge output topology with floating internal power supply operating in the AB+B mode.



AE TECHRON[®]

Precision Industrial Amplifiers

INDIVIDUAL AMPLIFIER SPECIFICATIONS



7780RLY

INDICATORS AND CONTROLS

- Front panel LEDs indicate on, standby, and fault conditions
- Front panel run/reset switch and ready/standby switch
- Overload, over voltage, and over temperature indicators

PERFORMANCE (One hour continuous ratings)

Max. Output Voltage

140 V pk

Max. Output Current

180 A pk

Output Load Constraints

0.25 ohms, 50 microhenries

Output Impedance

>250 ohms at 60 Hz

DC Output Offset Current

<10.0 milliamps pk (input shorted)

CMRR

-70 dB min, 40 to 600Hz

Differential Phase Error

<0.1 degree at 60 Hz

Residual Noise

<2.5 milliamps pk (40Hz to 600Hz)

Gain

40 A/V plus or minus 0.2%

Frequency Response

DC to 10 kHz, into 0.25 ohms

THD + Noise

<0.10% at 600 Hz, full output power



LV3622

INDICATORS AND CONTROLS

- Channel Overload indicators
- Power indicator
- AC Power Switch

PERFORMANCE (One hour continuous ratings)

Max. Output Voltage

300Vpk

Max. Output Current

7.25 Apk/ch

Output Load Constraints

24 ohm min, 0 to 90 degrees

Output Impedance

<10 milliohms in series with less than 2 microhenries

DC Output Offset Voltage

<10.0 millivolts pk (input shorted)

CMRR

-70 dB min, 40 to 600Hz

Differential Phase Error

<0.1 degree at 60 Hz

Residual Noise

<10 millivolts pk (40Hz to 600Hz)

Gain

40 V/V plus or minus 0.2%

Frequency Response

DC to 20 kHz into 25 ohms or greater

THD + Noise

<0.10% at 600 Hz, full output power



PHYSICAL CHARACTERISTICS

Dimensions: Single-bay: 61 in (155 cm) high X 23.1 in (58.7 cm) wide X 36.3 in (92.2 cm) deep (Includes casters and anti-tip extenders)

Weight: Approximately 900 lbs (408 kg) for single-bay cabinet

Operating Environment

Ambient temperature: 50 to 99 degrees F (10 to 37 degrees C)

Humidity: 10% to 70% non-condensing

Altitude: -400 to 8000 ft (-120 to 2440 m)

Magnetic Field: 200 gauss max.

Color: Black standard; custom colors available.

SUPPORT

Every Techron product is supported by our practices and people.

Techron provides:

- > Applications engineering for your technical questions and customized product needs.
- > A one year limited warranty to protect your equipment investment.
- > A fully equipped service center to keep your amplifier operating at original performance requirements.