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Find the *NH Research 14-0847A-00* at our website: *Click HERE*

Test Systems & Instruments for Manufacturers of Electronic Power Conversion Products

Product Guide Home

DC Electronic Loads

VXIbus DC Electronic Loads



- **50 Watts/1&10 Amps/75 Volts**
- **Glitch-free transitions from constant-resistance to constant-current operations**
- **Selectable current slew rates**
- **Parallel operation for more power**

VXIbus electronic loads are designed for low-power output loading of DC power supplies or other devices needing loads with either static or dynamic modes of operation. Each load is a self-contained instrument on a single-slot, C-size VXIbus module making them ideal for applications where size is important. The 81201 and 81210 can be integrated into any VXIbus-based test system, but they are particularly well-suited to the POWERTEST® family of automatic power supply test systems from NH Research.

Higher Power Applications

Although rated at 50 Watts continuous power, the 81201 and 81210 can be used at considerably higher ratings. Since most testing is carried out at substantially lower duty cycles, analog control circuitry is used to continuously monitor internal conditions and permit the load to increase its power handling capability with decreasing duty cycles. Because the monitoring is carried out in real-time, the protection circuitry is tripped only if the load is in danger of being damaged. This allows testing for short periods or at small duty cycles at power levels in excess of the steady state specifications. If continuous higher power is required, two or more loads may be operated in parallel.

Programmable Transient Response

The 81201 and 81210 offer programmable transient response. Programmable rise times permit the dynamic characteristics of the load to more closely approximate the operational conditions in which the unit under test (UUT) will be expected to function. In applications requiring testing under complex loading profiles, an analog input is provided which allows external control of the load current over the loads' full operating ranges. Using an arbitrary waveform generator, almost any required loading profile can be realized.

Glitch Free Transitions

Frequently, switching power supplies must be turned on into a constant resistance load before testing with a constant-current load can begin. The 81201 and 81210 provide a glitch-free transition from one mode to another; the supply-under-test does not see the load current fall to zero during the mode transition. In the short-circuit mode of operation, an SCR in parallel with the shorting relay is used to give a fast, low-resistance short. It is possible to shift from any mode to any other mode of operation under program control.

Advanced Protection and Calibration

The loads are fully protected against various fault conditions including overvoltage, reverse voltage, overcurrent, overpower and overtemperature. All calibration and configuration data is stored in an EEPROM, resulting in fast, internal "no pots" calibration of setting and metering values with available calibration software. The result is a rugged, highly reliable load that requires minimal maintenance.

Key Specifications

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Parameters	Characteristics
Power	50W continuous
Voltage	0-75VDC
Modes	Constant current, constant resistance, short circuit, power limit
Current	
81201	0-1A, 250uA resolution
81210	0-10A, 2.5 mA resolution

E-mail NHR to download detailed specifications

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