



Intepro 9000 Series

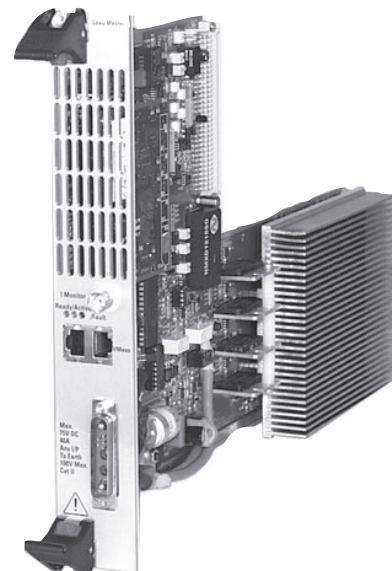
5Amp/75Volt/50-Watt Load

- CAN bus and CANopen protocol compatible
- Arbitrary Waveform Generator allows multiple settings and waveforms to be programmed
- Remote sense for accurate voltage measurement of the UUT

The 50W DC Load module is designed for use in an Intepro 9000 test system. The unit is 261mm (6U) high, approximately 390mm deep, and fits into a 19-inch rack.

Features of the 50W DC Load include:

- Surface-mount and through-hole technology
- High slew rate performance
- 1kV Isolation
- Analog to digital converter for measurement of voltage and current to 15-bit resolution



50 Watt DC Load

On the system unit, a controller module, 20mm (4HP) wide, is used to communicate with the host PC over an IEEE link. In addition, the controller module relays commands and information over the internal CAN bus. Each Load in a rack system can be addressed individually as each back plane PCB slot has a unique address.

Each load possesses local intelligence in the form of a microcontroller. This enables more efficient operation of constant voltage mode.

Each slot in a rack has a unique address read by the Load on power up. Each rack in a system has a unique rack address set by the user with DIL switches. These two addresses combine to give the load a unique CAN ID in the system.

Intepro engineers designed the 50W DC Load to enable high slew rate performance and efficient operation of constant voltage. This DC load also boasts high resolution and greater current accuracy due to a lower current range.

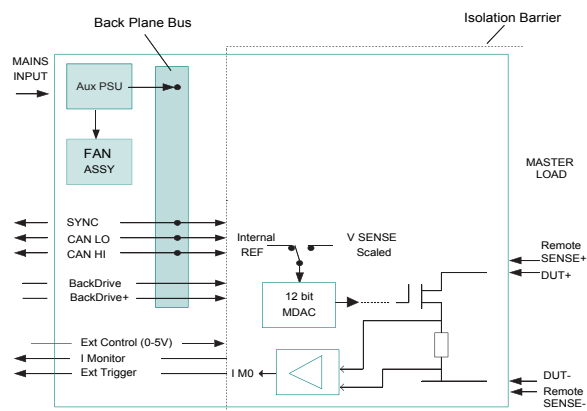


Figure 1: System Load Block Diagram

System Setup

The 50W Load can calculate and limit its power dissipation and has the ability to switch the rack fans to a higher speed when necessary to increase cooling.

Technical Specifications

Power Range	5W	50W	Operating Voltage below 1V	0.3V@2.5A / 0.15V@1.25A
Current Range	0-0.5A	0-5A	Min Voltage on Full Load	0.6V@5A
Voltage Range	1-75V	1-75V	Module Power Consumption	12V@0.4A

	Constant I Mode		Constant V Mode				Constant P Mode	
Range	0-0.5A	0-5A	1-2V	1-7.5V	1-20V	1-75V	1mW-5W	10mW-50W
Resolution	0.125mA	1.25mA	0.5mV	2mV	5mV	20mV	0.25mW	2.5mW
Accuracy	± 0.15%FS	± 0.05%SET±4mA	±15mV	±20mV	±40mV	±120mV	2% FS	2%FS
Temperature Coefficient	Maximum 100 PPM/°C		Maximum 100 PPM/°C				200 PPM/°C	

Constant R Mode	Range	Resolution	Accuracy	Temp Coefficient
0-2V Input Range	9.35S-2.5S / 0R107-OR 4	2.36mS	±1% SET ±15mA	200 PPM/°C
0-7.5V Input Range	2.5S-0.94S / OR4-1R067	0.63mS	±1% SET ±15mA	200 PPM/°C
0-20V Input Range	0.94S-0.25S / 1R067- 4R	0.236mS	±1% SET ±15mA	200 PPM/°C
0-75V Input Range	0.25S - 63µS / 4R-16K	63µS	±1% SET ±18mA	200 PPM/°C

Measurement	Range	Resolution	Accuracy	Output
Voltage readback	0-2V	15bit (62.5µV)	±0.05% ACT ±5mV	N/A
	0-7.5V	15bit (0.23mV)	±0.05% ACT ±0.1%FS	N/A
	0-20V	15bit (0.625mV)	±0.05% ACT ±0.1%FS	N/A
	0-75V	15bit (2.3mV)	±0.05% ACT ±0.1%FS	N/A
Current readback	0-0.5A (Low)	0.015mA (Low)	±0.05% ACT ±0.75mA (Low)	N/A
	0-5A (High)	0.15mA (High)	±0.05% ACT ±0.25mA (High)	N/A
Power readback	0-5W 0-50W	0.0625mW 0.125mW	±0.05% FS	N/A
Current Monitor Output Isolated	0-0.5A 0-5A	N/A	±1% FS	0-5V

Slew Rate	2mA/µs~0.5Aµs for 0 to 5A operation
External Control	0-5V gives 0 to full-scale current (5A)
Operating Temperature	5-40°C (Note: For ambient temperatures over 35°C, power dissipation derates by 4W/°C)
Dimensions	261mm (Height) 40mm (Width) 390mm (Depth)

Family Specifications

Safety	OTP: (Over Temperature Protection):	Non latching disable
	OVP: (Over Voltage Protection):	Greater than 80V crowbar
	Isolation Voltage to GND:	Safety (1000V DC Peak)
	Reverse Connection Protection Action:	Fuse protects against overcurrent - no action at nominal current

Order Information:

Part No.	Description
714-0011	5A/75V/50-Watt Load

SET: Refers to the set value **ACT:** Refers to the actual value being measured **FS:** Refers to the full scale value for that particular range



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