## "Copperhead"

- 9000A, 12000A and 15000A configurations
- Continuous operation at max power
- Excellent transient response capabilities (similar to single power supply)
- Fast output current slew rate (rise & fall time)
- Compact, robust, transportable cabinet design (easy to move between laboratories)



The High Current Research Test System, dubbed "Copperhead," is designed to meet the demanding requirements of both Research and Development and Product Qualification Environments.

This system is capable of delivering a full 15,000 Adc with a 25msec rise time from no current to full current. It is intended to meet current-mode application requirements such as superconducting wire research, and contact current and circuit breaker qualification.

From the input AC distribution to the 810 lbs. (368 Kg.) of copper output bus bars, the Copperhead employs all of the system integration necessary to meet the application requirements. The control wiring implementation has been designed to provide the customer with a summed current readback so that current monitoring is easy.

With the understanding that the bottom trace above represents a full 15,000A of current, the system response time is well controlled and with little overshoot. The top trace depicts an ~ 40msec input control pulse and the bottom trace depicts the output response to this control pulse. Due to the power supply control loops and required stability of the output, the output pulse is delayed ~ 30msec and with a ~25msec rise time. There is also a delay once the falling edge is detected on the control pulse and is approximately the same with approximately the same fall time. Therefore, a 40msec pulse with a 3hz repetition rate is the fastest control signal possible to obtain a full 15,000A output with an output pulse ~120msec in duration and ~70msec at full current.



Unique, high-current DC output bus-bar. Design makes it easy to connect high-current UUTs.

45–75 kW

## 0–5 V

## 9000-15000 A

AMETEK Programmable Power 9250 Brown Deer Road San Diego, CA 92121-2267 USA



## **High Current Research Test System**

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Current     0 to 15,000 A (Alo available in 9,000 A and 12,000A versions)       Regulation     Current-Mode Only—This system is not intended to run in Voltage-mode Line: For input voltage variation, with constant nominal line voltage. Current: OS % of maximum rated output Voltage: 0.1% of maximum rated output Voltage: 0.1% of maximum rated output Voltage: 0.1% of staation weth AC (input voltage range).       Tanslent response     A 30% current program step will recover to within +2% of rated current within 10 msec.       Stability     4 0.05% of staintom rated output Voltage: 0.1% of rated output current       Operating Temperature     Constant of status and statu	Voltage	0 to 5 VDC	
Regulation     Current-Mode Only—This system is not intended to run ivoltage-mode       Subscinct     Current-Mode Only—This system is not intended to run ivoltage-mode       Transent response     A 30% current program sete will recover to within +2% of rated current within 10 msec.       Stability     > 4.05% of set point over 8 hours alto 30 minute warm-up with fixed line, load, and temperature.       Stability     > 0.05% of set point over 8 hours alto 30 minute warm-up with fixed line, load, and temperature.       Operating Temperature     > 0.50%. Co. Actangin       Cooling     > 6.05% of rated output current       Programming     A alog Programming- 10W equals 0 to full scale output       Regulatory     TUV NRTL to U1950, TUV to IEC 950, CE Mark (Nover Supples)       Regulatory     Subadia output per och charks system has three exhaust fans       Programming     Alog Programming- 10W equals 0 to full scale output       Alog Programming- 10W equals 0 to full scale output     Subadia output       Programming     Subadia Programming- 10W equals 0 to full scale output       Alog Programming- 10W equals 0 to full scale output     Subadia Subadi	Current	0 to 15,000 A (Also available in 9,000A and 12,000A versions)	
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	Connection	D-Sub 25 female connector	



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