Modular

SiC Power Platform

AC & DC Test Systems

Modular AC and DC SiC Power Modules

Silicon Carbide Power Platform

Unico's new SiC power platform can help take your EV propulsion development to new levels. The modular concept uses the same SiC power modules for both AC and DC testing and control applications.

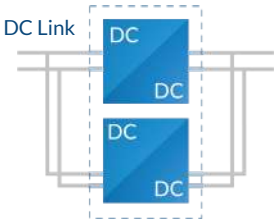
For AC applications, use these high performance SiC modules as high performance dyno drives, universal inverters, e-motor emulators, or for other high performance applications. As a high performance DC source, the modules can operate as scalable battery test systems or battery emulators up to 1200VDC.

Sample Standard DC Configurations

Single SiC Module

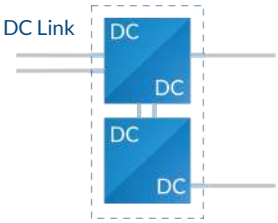
DC Output
50-1200VDC
Continuous:
480kW
+/- 400A
Peak (30s):
540kW
+/- 450A

Two SiC Module



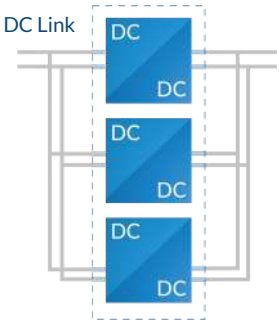
DC Output
50-1200VDC
Continuous:
960kW
+/- 800A
Peak (30s):
1080kW
+/- 900A

Two SiC Module



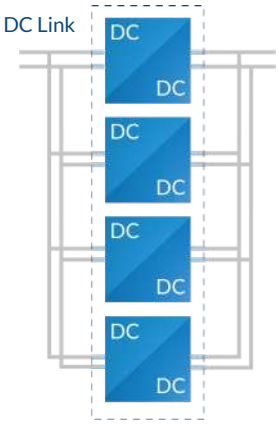
DC Output
+/-1200VDC
Continuous:
480kW
+/- 400A
Peak (30s):
540kW
+/- 450A

Three SiC Module



DC Output
50-1200VDC
Continuous:
1440kW
+/- 1200A
Peak (30s):
1620kW
+/- 1350A

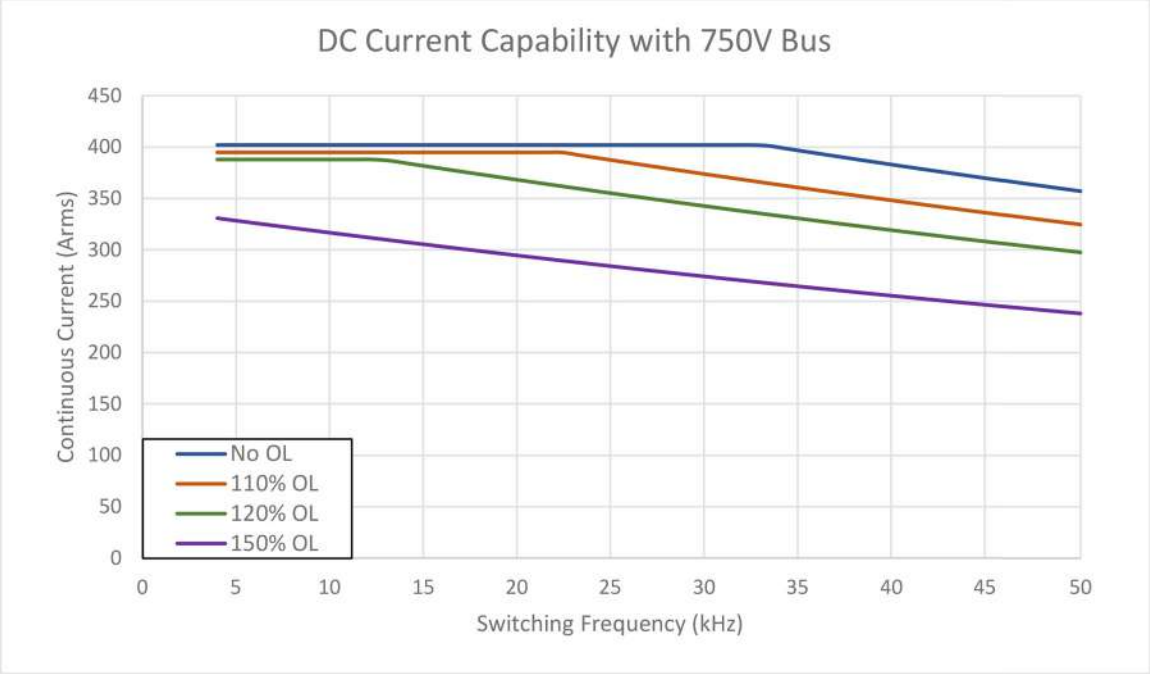
Four SiC Module

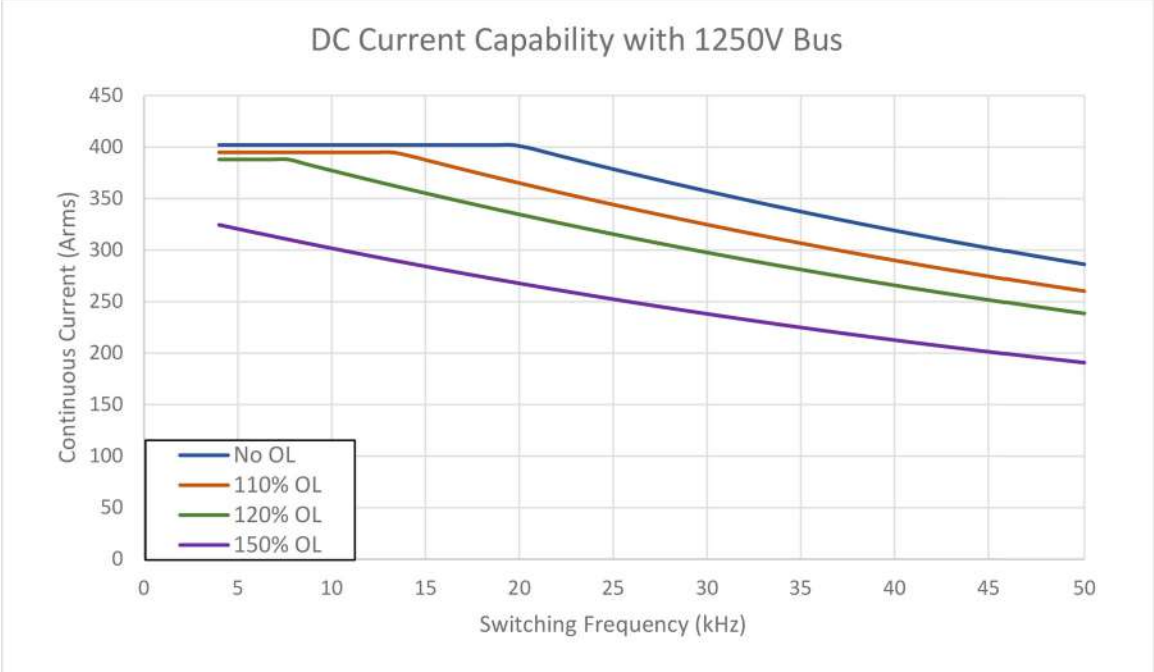


DC Output
50-1200VDC
Continuous:
1920kW
+/-1600A
Peak (30s):
2160kW
+/- 1800A

DC-Configuration De-Rating Curves

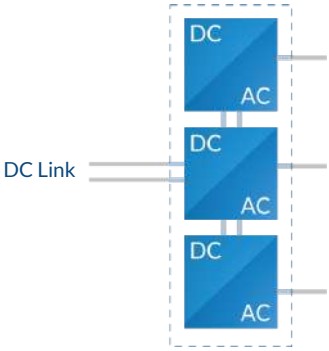
The following De-Rating Curves are based on a 20°C Cooling supply.





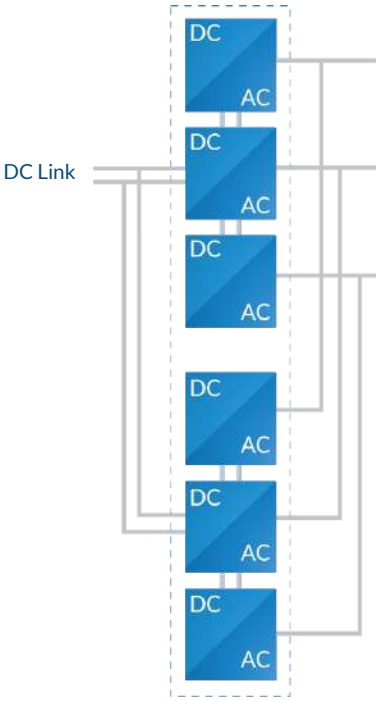
Sample Standard AC Configurations

3-Phase AC
Three SiC Module



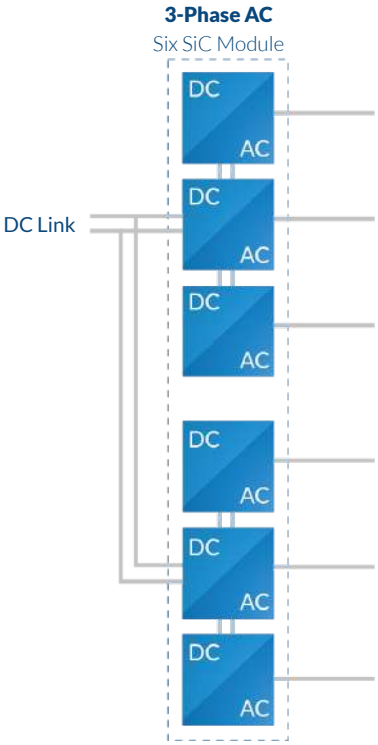
AC Output
Continuous:
@690VAC: 600HP/446kW
@750VAC: 650Hp/485kW
480A
Peak (30s):
@690VAC: 660HP/490kW
@750VAC: 700Hp/520kW
525A

3-Phase AC
Six SiC Module



AC Output
Continuous:
@690VAC:1200HP/892kW
@750VAC: 1300Hp/970kW
960A
Peak (30s):
@690VAC: 1320HP/980kW
@750VAC: 1400Hp/1040kW
1050A

3-Phase AC
Six SiC Module

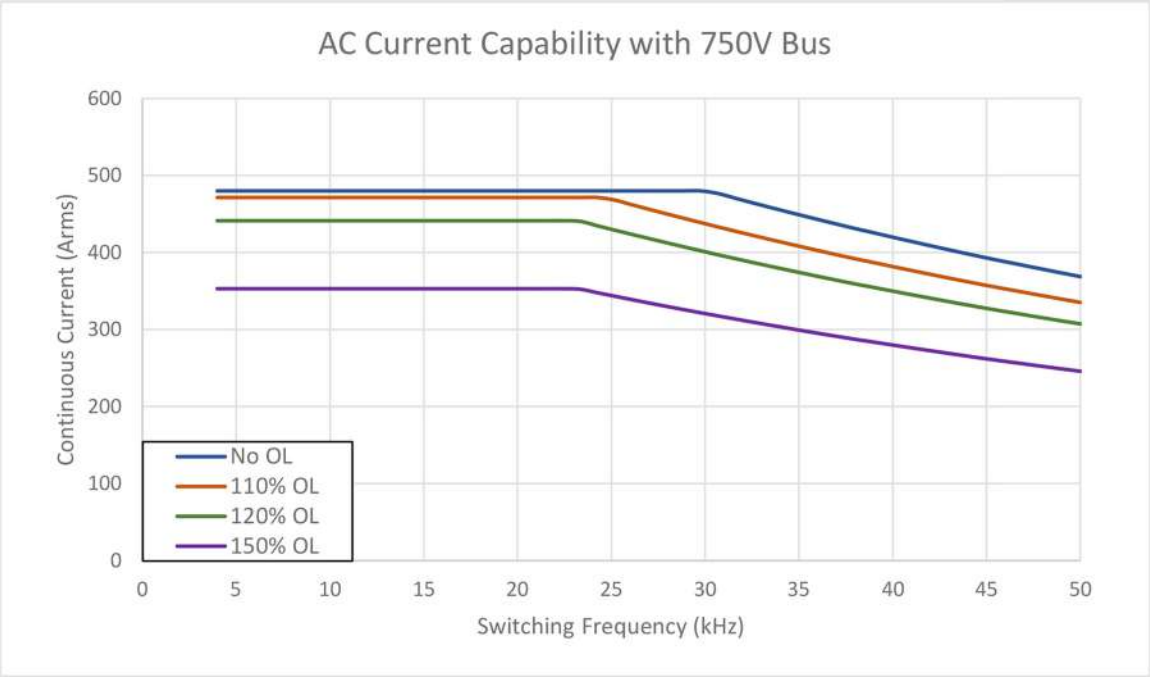


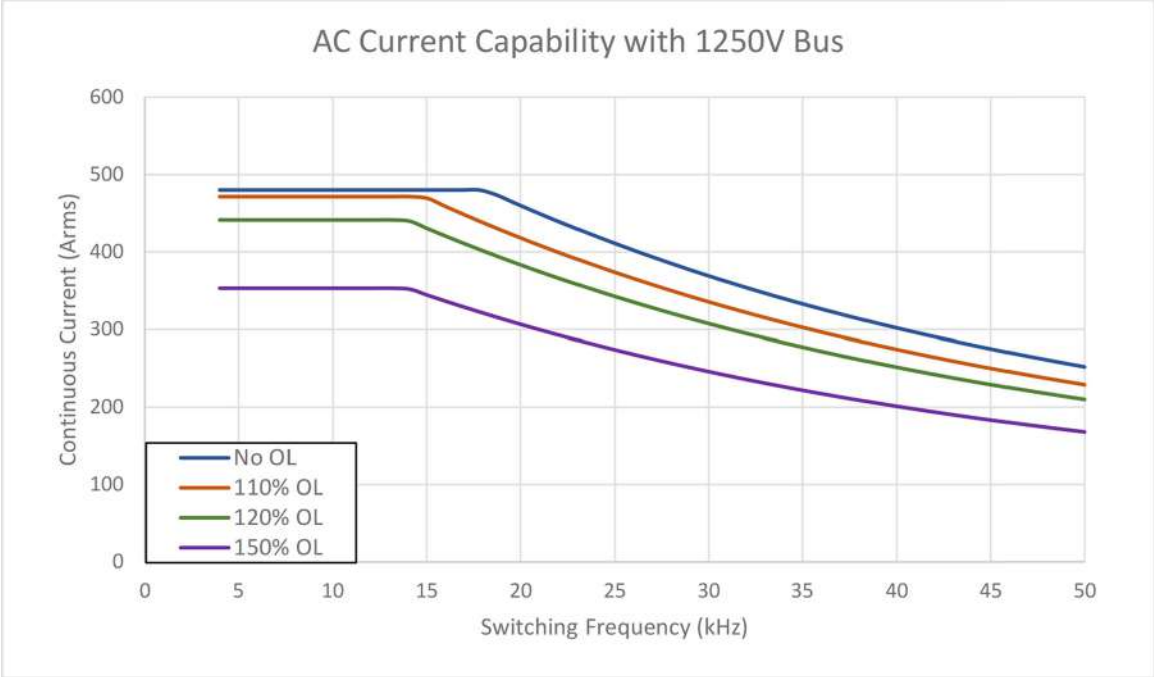
AC Output (x6)
Continuous:
@690VAC: 600HP/446kW
@750VAC: 650Hp/485kW
480A
Peak (30s):
@690VAC: 660HP/490kW
@750VAC: 700Hp/520kW
525A

Additional power can be achieved with 9, 12, or more SiC AC Modules (multiples of 3)

AC-Configuration De-Rating Curves

The following De-Rating Curves are based on a 20°C Cooling supply.





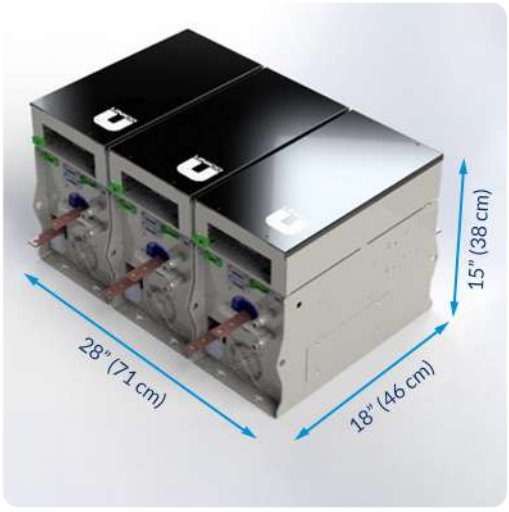
Applications

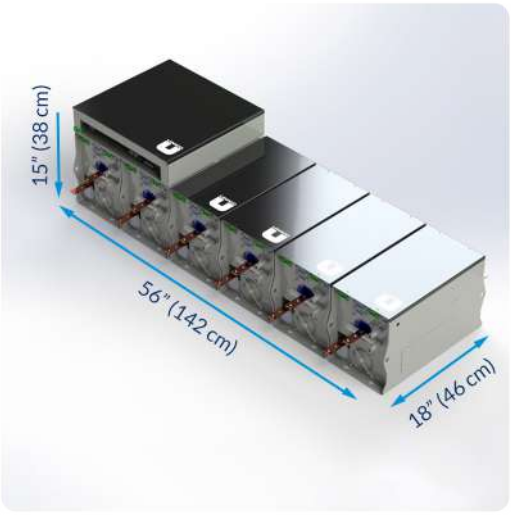
- Battery Testing and Emulation
- Fuel Cell or Super Capacitor Testing and Emulation
- DC Charger Testing and Emulation
- Other DC testing or Emulation applications
- High Speed Dynamometer Control
- Universal Inverter for E-Motor Control
- E-Motor Emulation
- Grid Emulation
- Other high-performance AC control applications

Features

- High-efficiency, fully regenerative current source and sink capability
- Shared DC bus for combined AC/DC applications
- Optimized output filter based on the application
- Numerous power sizes can be achieved by paralleling systems for even more power
- Supports most industry standard communication protocols, making it versatile to work with any available automation system platform
- Multiple programmable and preset safety features
- Higher voltage, current, power possible by connecting units in series and/or parallel
- Half bridge and full bridge configurations available depending on low voltage or 0-volt operation and performance requirements

General Dimensions





Preliminary Performance Specifications Available upon Request

UNITED STATES

CORPORATE HEADQUARTERS
3725 Nicholson Rd. P. O. Box 0505
Franksville, WI 53126-0505
(262) 886-5678

UNITED KINGDOM

Unico (UK) Ltd.
Garamonde Drive Wymbush,
Milton Keynes MK8 8LF
+44.1908.260000

GERMANY

Unico Deutschland GmbH
Dortmunder Straße 7
D-57234 Wilnsdorf
+49.2739.303.0

CANADA

1515 Matheson Blvd, East
Unit # B5
Mississauga, Ontario
L4W 2P5
Canada
(905) 602-4677

COLOMBIA

Centro Empresarial Metropolitano
KM. 3.4, Calle 80-Via Siberia-Cota.
Modulo 1, Bodega 6
+(57-1)-7469550/7469569
+57 -3173650663

AUSTRALIA

(Manufacturing, Engineering,
Sales And Service)
Unit 3, 553 Boundary Road
Darra, Queensland 4076
+61.7.3713.7830
+61(0)439.700.548

FRANCE

2 Avenue De La République
Saint Piat, 28130
+33 6 16 83 86 66

UNICO™

unicollc

www.unicous.com

Scan to Visit Our Website