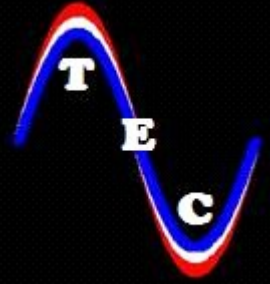


Tier Electronics
Your Future For Electronics
www.TierElectronics.com



All - In - One (AIO) Power Converter

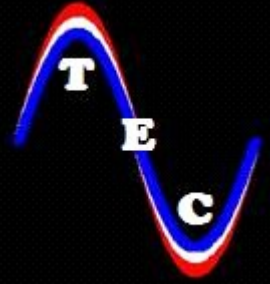
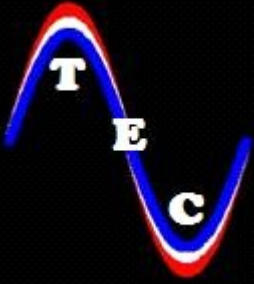
Tier Electronics introduces a power converter that is specifically designed for OEM power conversion systems. Unlike most power converters that are a simple power stage this converter is a complete package. One size and common terminations cover a full product range.

Features:

- Power Range of 20kW to 200kW
- 240VAC, 480VAC, and 690VAC Versions
- Common Size For All Units
- High Frequency Capacitors
- Opto-less Gate Drivers
- High Voltage DC-DC Converter
- All Logic and Support Power Supplies
- DSP Controller (16 Bit and 32 Bit Options)
- Communications
- AC Feedback
- Pre-Charge and Discharge Control
- Rugged Input and Output Terminations
- Programmable
- E² Memory for User Parameters

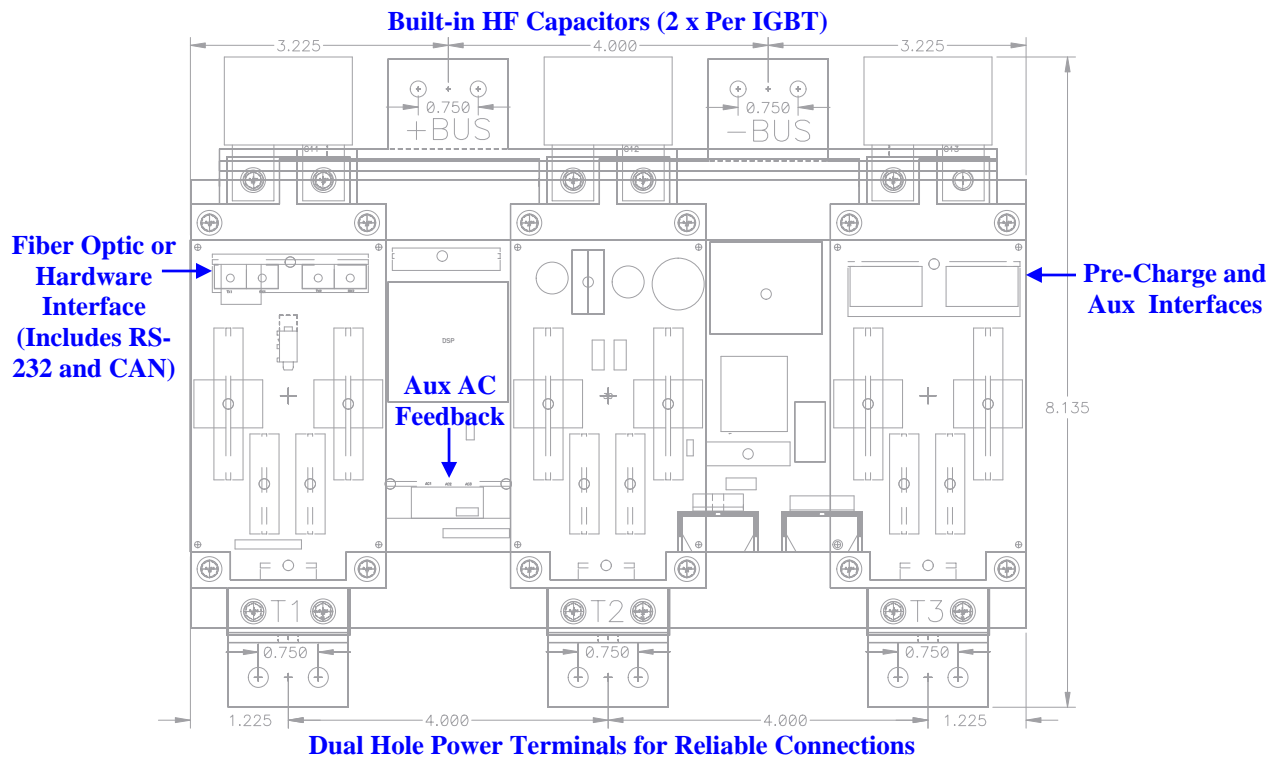
Protection Features:

- Hardware Overcurrent
- Software Overcurrent
- Hardware Overvoltage
- Software Overvoltage
- Internal Logic and Support Power Supply Monitors
- Individual IGBT Overtemperature Monitor
- De-Sat Protection
- IGBT Gate Status Feedback with Anti-Shoot-Through Circuitry
- Loss of Communications (Optional)
- Loss of Sync (Optional)

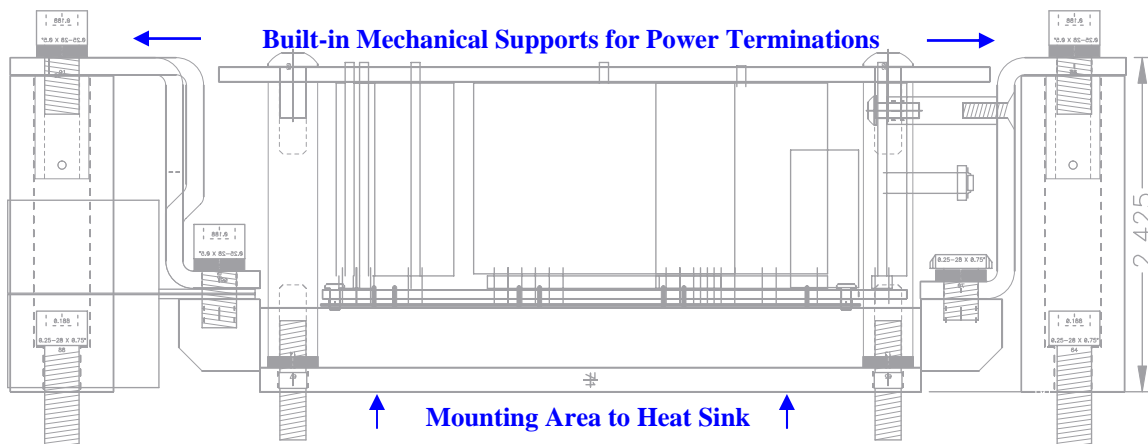


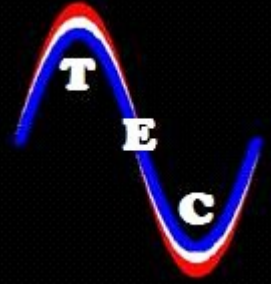
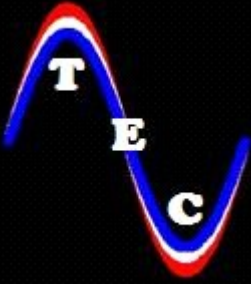
All - In - One (AIO) Power Converter

Top View of AIO Power Converter



Side View of AIO Power Converter





All - In - One (AIO) Power Converter

Available Options:

- Packaged Unit with Input and Output Filters
- Self Powered Touch Screen LCD Display
- BLDC Encoder Fiber Optic Interface
- Fiber Optic Communications
- Fiber Optic Sync for Multiple Converters
- BLDC Sensorless Interface
- High Speed Fiber Optic CAN or RS-232 Communications

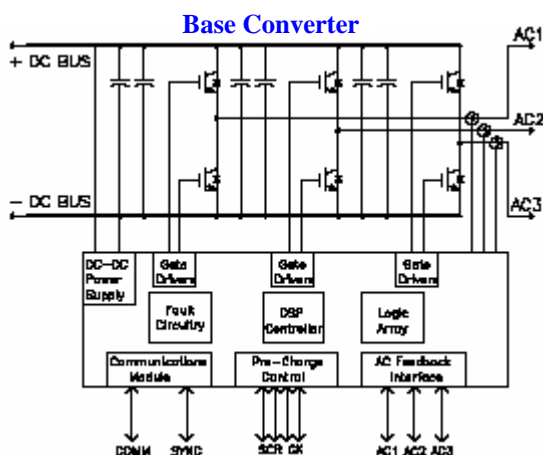
Cooling Options:

- Liquid Cooled
- Air Cooled

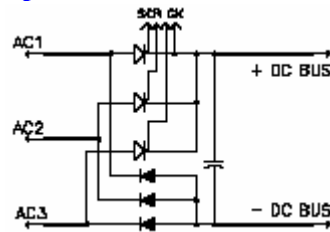
Typical Configurations:

- Motor Controller with Diode Rectifier, Main Capacitors, Pre-Charge, and Input Fusing
- Active Rectifier with Main Capacitors, Pre-Charge, and Input Fusing
- Plain Converter with Main Capacitors, Pre-Charge, and Output Fusing

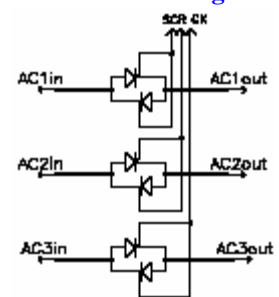
Configurations:



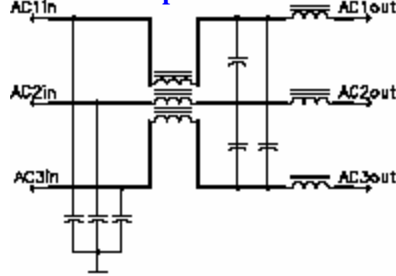
Input Rectifier with Pre-charge



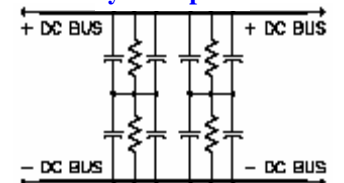
AC Pre-charge

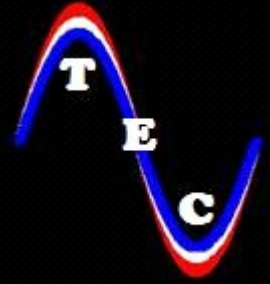
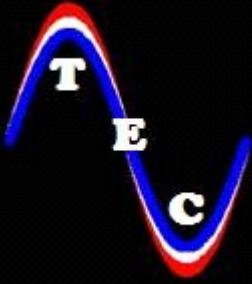


Input Filter



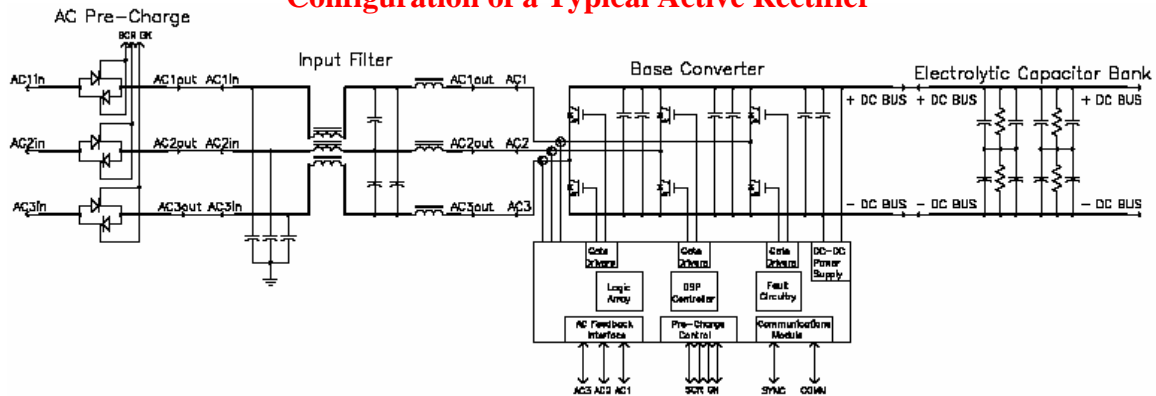
Electrolytic Capacitor Bank





All - In - One (AIO) Power Converter

Configuration of a Typical Active Rectifier



Numbering System:

- (1) Base Description
AIO = All-In-One Power Converter
- (2) Output Current (in Amps)
038, 050, 075, 115, 150 or 225
- (3) DC Link Voltage
04 = 150 to 400 V
08 = 300 to 800 V
12 = 500 to 1200 V
- (4) Heat Sink
A = Air Cooled
L = Liquid Cooled
- (5) Cap Bank
N = None
E = Electrolytic
F = Film
- (6) Communications
R = RS-232 with Power
C = CAN
F = Dual Fiber Optic
D = Status Display
- (7) AC Feedback
1 = Standard
2 = High Precision
3 = BLDC Sensorless
- (8) Discrete I/O
1 = Dual Relays
2 = SCR Pre-charge Control
3 = Power Interface for Phase Control

- (9) Plug-In Options
0 = None
1 = Touch Screen LCD Display
2 = LCD Display Only
- (10) Code
A = Active Rectifier
I = Induction Motor Control
R = Regulated Voltage Output
B = BLDC Motor Control
H = Harmonic Compensator
V = VAR Generator
C = Custom
- (11) Configuration
1 = Converter Only
2 = Converter + Pre-charge + Diode Input
3 = Converter + AC Pre-charge
- (12) Fusing
0 = None
1 = AC Side
2 = AC and DC Side
- (13) I/O Filters
0 = None
1 = AC Input Filter
2 = Voltage Output Filter
3 = Input Inductor Only
4 = Output Inductor Only
- (14) Enclosure
F = Open Frame
V = Vented Enclosure
S = Sealed Enclosure

Example: AIO 075 08 A E F 1 2 0 A 3 1 0 F

1 2 3 4 5 6 7 8 9 10 11 12 13 14