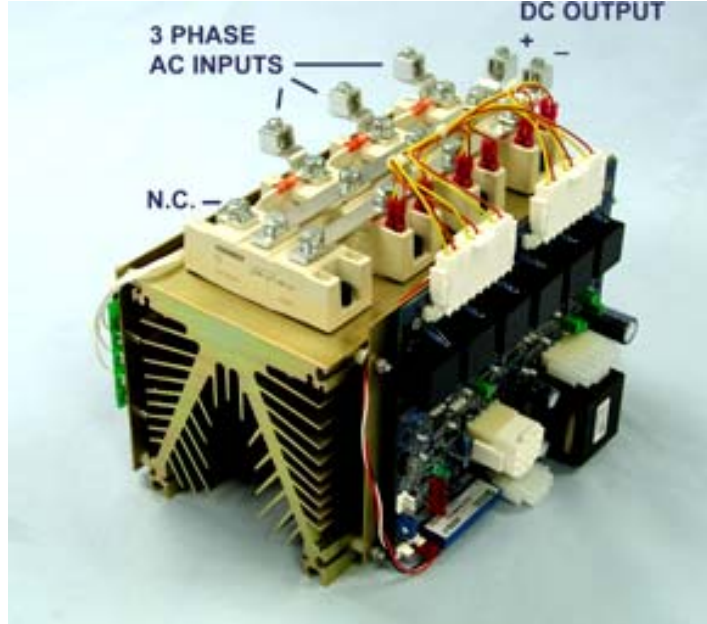


CAP6636 AC-DC Converter

Description:

The CAP6636 is a three-phase AC to DC Converter assembly. The assembly includes the three-phase SCR converter bridge, a free wheeling diode, the thermal management system, a BAP1950 SCR phase control gate firing board, an R-C-MOV snubber for each SCR and all bus work. It is rated at 125 Amps output and up to 660 volts AC input at 50 or 60 Hz.



Typical use for the CAP6636 is as an AC-DC controller for OEM equipment; boost charger power supplies for rail and many other applications. The CAP6636 can be voltage limited and current regulated for precision DC applications.

Contact APS for higher power system requirements.

Specifications:

Input

Parameter	Min	Typ	Max	Units
Ambient Temperature	-40		50	°C
Input AC Voltage	50	480	660	Volts
Frequency	47	60	77	Hz

SCR Modules

Parameter	Min	Typ	Max	Units
Average Current		125	130	Amps
One cycle peak current			4,000	Amps
Blocking Voltage			1,600	Volts
Module Isolation Voltage	3,500			Volts
dV/dt	1,000			V/μs
di/dt (non-repetitive)	300			A/μs

BAP1950 Gate Firing Board Power Requirements

Parameter	Min	Typ	Max	Units
Input Voltage ¹	100	115	130	Vac
Power rating			24	VA

Converter Output

Parameter	Min	Typ	Max	Units
Output Voltage	0		900	Vdc
Current	0		125	Amps
Ripple Frequency (at 60 Hz)		360		Hz

Isolation

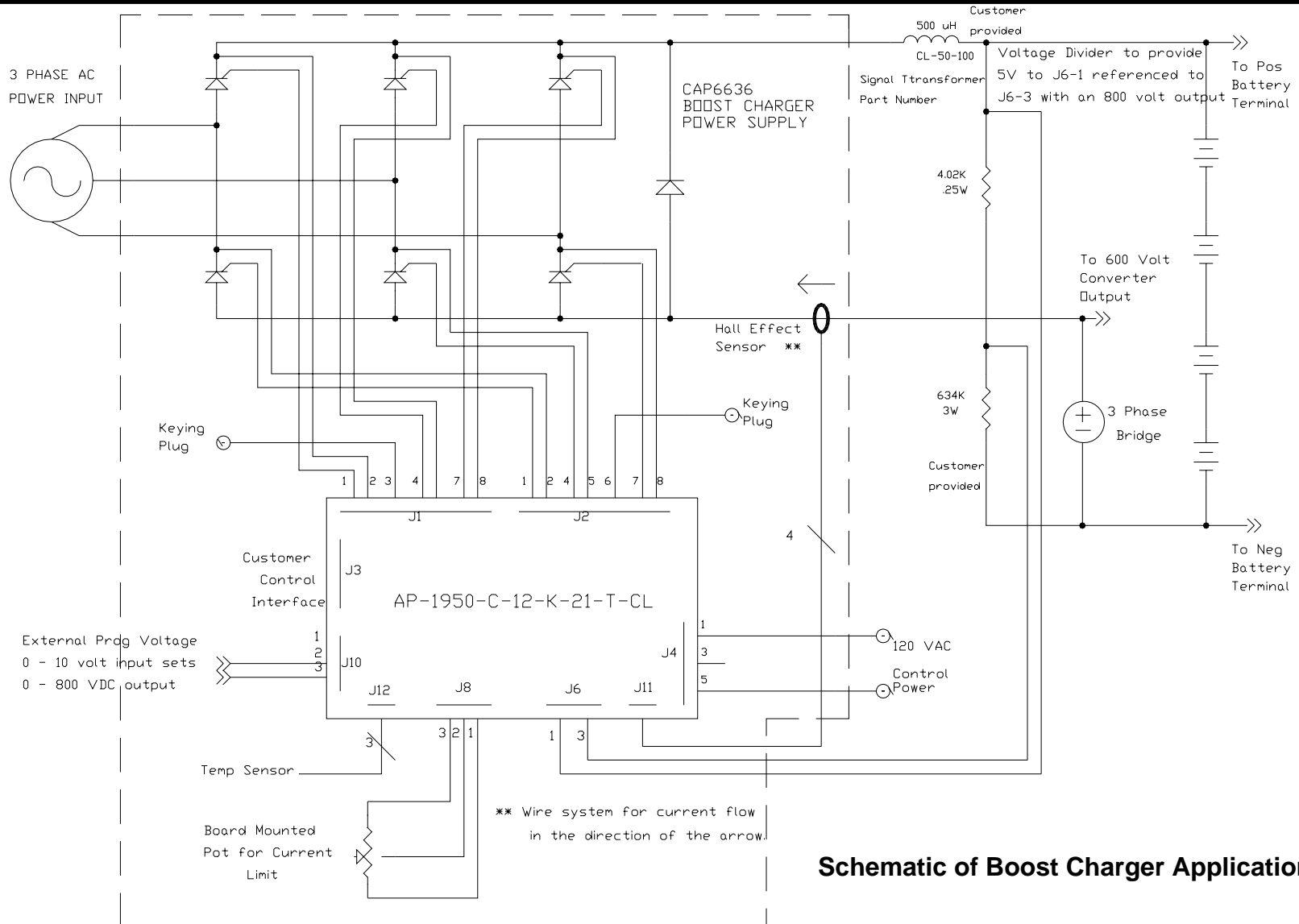
The low level signal inputs are isolated from the high level DC output and AC input in the following manner:

Isolation	Isolation Method
AC Supply	The AC supply is sensed through a resistor voltage divider with a 1meg Ω isolation resistance on each phase.
AC Supply and DC Load	5,000V _{ac} (60 sec.) – rating from gate pulse transformers
DC Load	1500V _{rms} (cont.) rating of isolation amplifier
BAP1950 Input Power	2500V _{ac} (1 min.) from input transformer on board.

Feedback Signals

Feedback Signal	Impedance
Rectifier Output Voltage	Attenuator voltage generated across 1Meg Ω resistor
Rectifier Current	50A:4.00V ratio from Hall Effect current transducer on the assembly

¹ Other input voltages are available. Please consult APS for further information.



Schematic of Boost Charger Application

