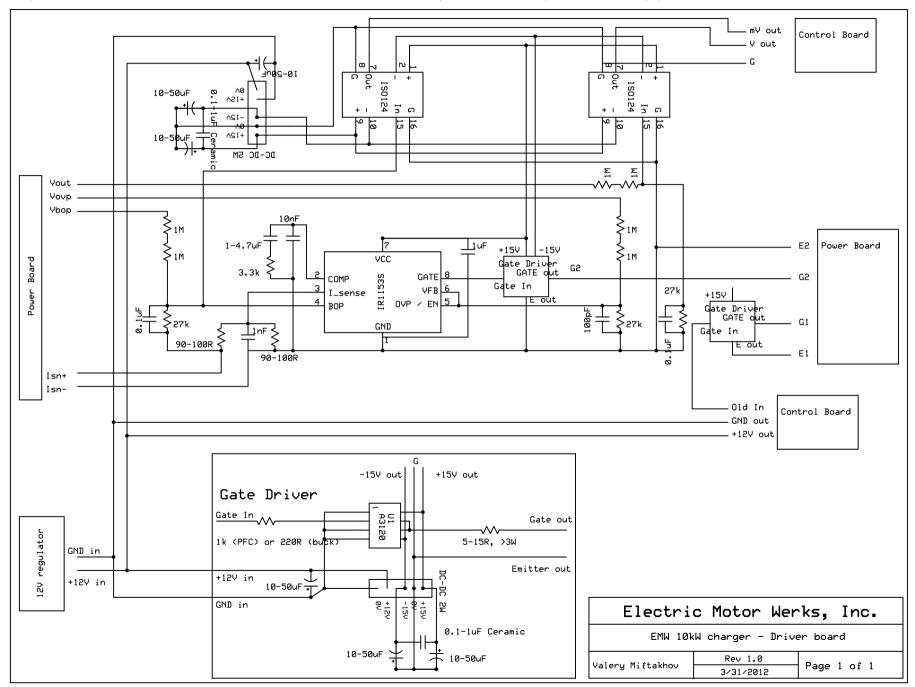Note: Vovp, Isn+/- power board connections are not used in the non-PFC version. Also, a number of components are not populated for that version. See detailed build manuals

Control Board

mV out
V out
G

ISO124
ISO124

10-50uF
0.1-1uF
10-50uF Ceramic
DC-DC 2W
0V
+12V
-15V
0V
+15V

Power Board

Vout
Vovp
Vbop

1M
1M

10nF
1-4.7uF
3.3k

0.1uF
27k
90-100R
1nF
90-100R

VCC
COMP 2
I_sense 3
BOP 4
IR11538S
GATE 8
VFB 6
OVP / EN 5
GND
7
1

1uF
+15V -15V
Gate Driver
GATE out   G2
Gate In
E out

1M
1M
100pF
27k
27k
0.1uF

Power Board
E2
G2

+15V
Gate Driver
GATE out   G1
Gate In
E out

G1
E1

Isn+
Isn-

Old In
GND out
+12V out

Control Board

Gate Driver

-15V out   G   +15V out

Gate In
1k (PFC) or 220R (buck)

U1
A3120
1

Gate out
5-15R, >3W

Emitter out

12V regulator

GND in
+12V in

+12V in
10-50uF
GND in

DC-DC 2W
+12V
0V
-15V
+15V
0V

0.1-1uF Ceramic
10-50uF
10-50uF

Electric Motor Werks, Inc.

EMW 10kW charger - Driver board

| Valery Miftakhov | Rev 1.0 | Page 1 of 1 |
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