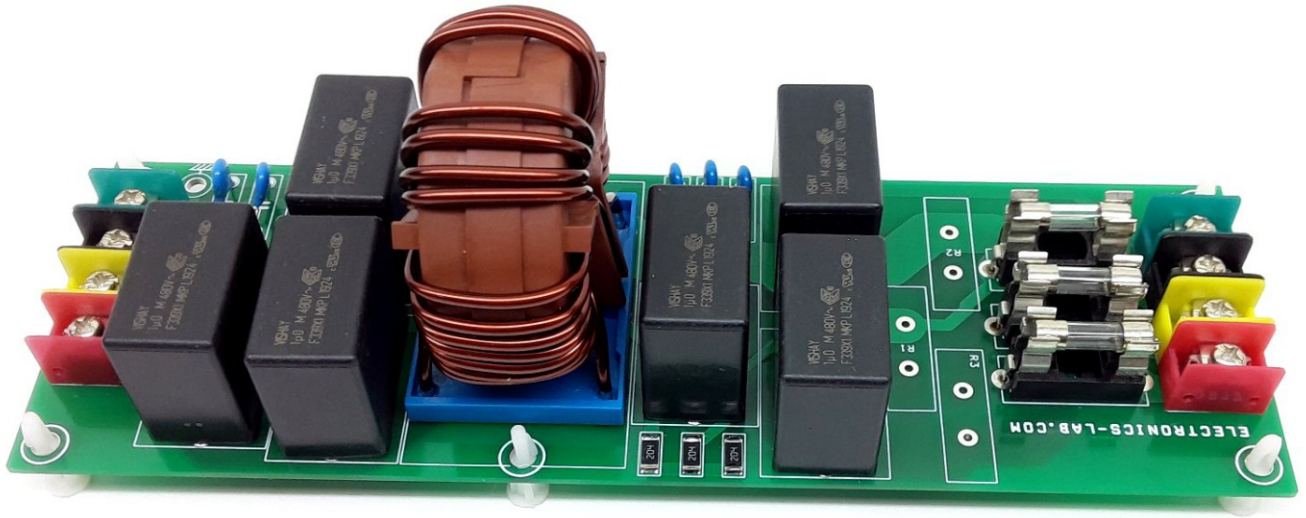
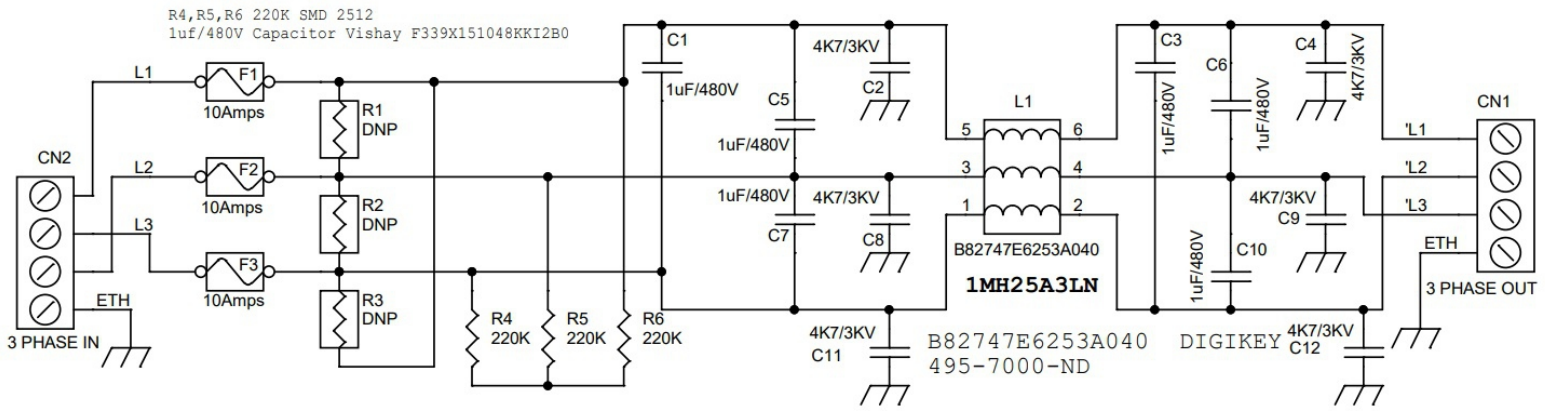
3 Phase (3 Wire) EMI Filter – 480VAC

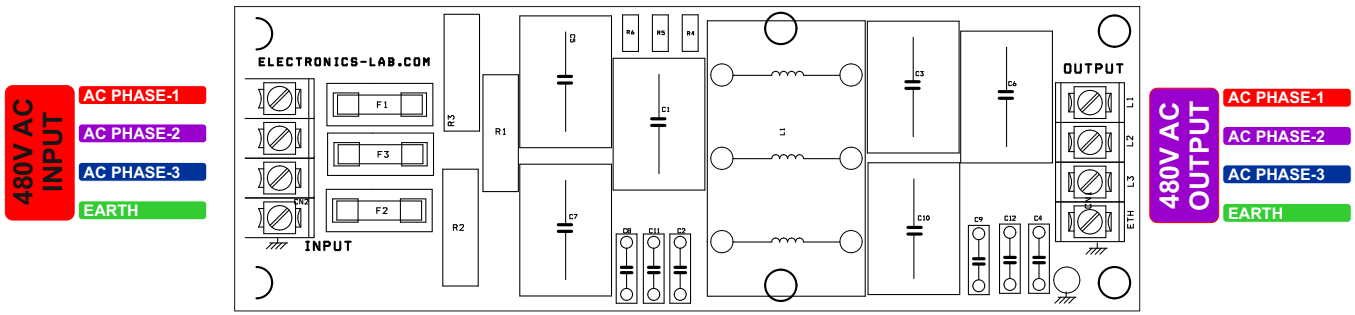
The project presented here is a 3 Phase (3Wire) EMI Power line filter which reduces electromagnetic interference and noise conducting in to and out of equipment power lines. These EMI filters can prevent electromagnetic noise of equipment going into the power line and disturb the proper functions of other devices such as communication devices, digital circuits, and robotics thus noise generated from switched power electronics. This single-stage board is designed and built using a high-quality common mode inductor and AC capacitors. This filter can be used to filter EMI noise in AC power lines 480VAC and can handle currents up to 10A. 3 x fuses are provided for over current and short circuit protection. It is easy to connect inputs and outputs using Barrier's screw terminals. 6 x 4.2MM mounting holes were provided for easy mounting of the PCB.

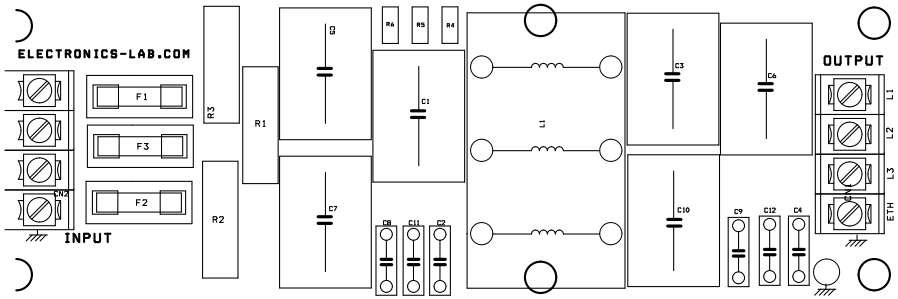
Features

- High Quality 3 Phase EMI Filter Using Common Mode Inductor
- Rated Input Supply up to 480V AC 50-60Hz
- Horizontally Mounted Common Mode Choke
- 3X Fuse on All 3 Phase Inputs for Protections
- 6 X 4.2 MM Mounting Holes
- Barrier Screw Terminals for Inputs and Outputs
- PCB Dimensions 217.17 X 70.49MM

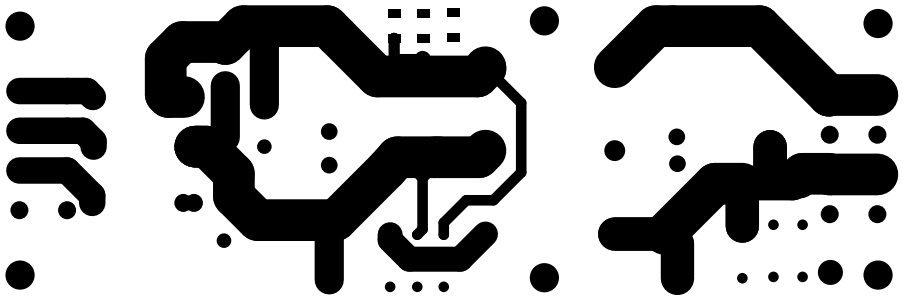



R4,R5,R6 220K SMD 2512
1uf/480V Capacitor Vishay F339X151048KKI2B0
CN2
3 PHASE IN
L1
L2
L3
ETH
F1
F2
F3
10Amps
10Amps
10Amps
R1
DNP
R2
DNP
R3
DNP
R4
220K
R5
220K
R6
220K
C1
1uF/480V
C5
1uF/480V
C7
1uF/480V
4K7/3KV
C2
4K7/3KV
C8
4K7/3KV
C11
L1
5
6
3
4
1
2
B82747E6253A040
1MH25A3LN
B82747E6253A040 DIGIKEY
495-7000-ND
C3
1uF/480V
C6
1uF/480V
C10
1uF/480V
C4
4K7/3KV
C9
4K7/3KV
C12
4K7/3KV
CN1
'L1
'L2
'L3
ETH
3 PHASE OUT

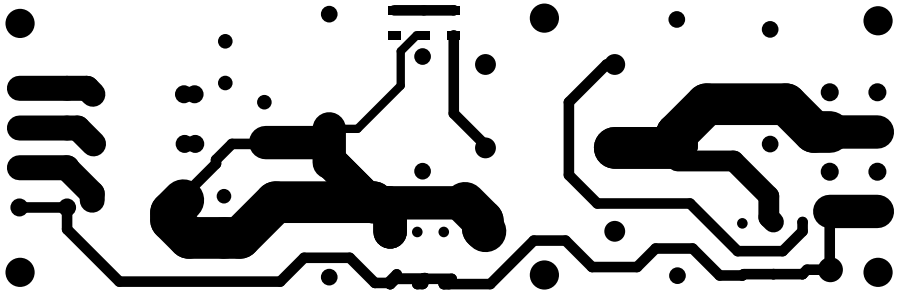

480V AC INPUT
AC PHASE-1
AC PHASE-2
AC PHASE-3
EARTH
ELECTRONICS-LAB.COM
INPUT
OUTPUT
480V AC OUTPUT
AC PHASE-1
AC PHASE-2
AC PHASE-3
EARTH



SILK SCREEN TOP



BOTTOM LAYER



TOP LAYER