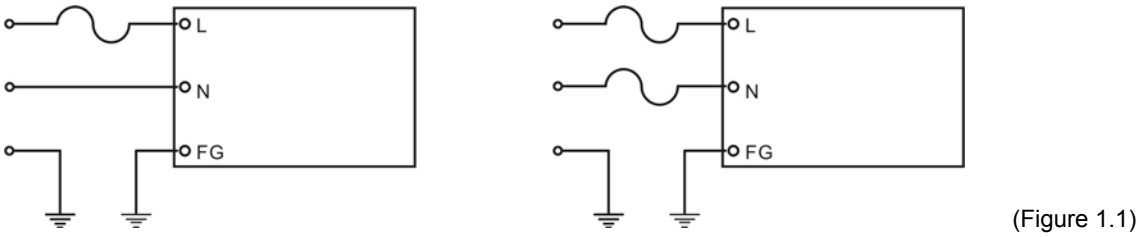
1. Screws for Switching Power Supply (AQS & AQF Series)

Please be aware the length of screw should not be longer than 3 mm while you mounting/ adopting our power supply on your end application, in case screw break through Mylar or PCB Board result in short circuit.

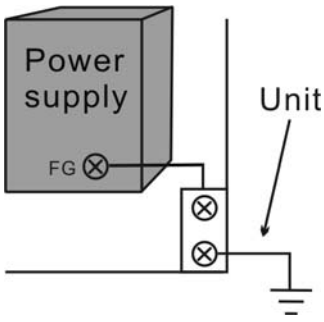
2. AC Input Line Connection

The pin of AC line (L), ac neutral (N), and the third wire safety ground (FG) should be retained from the AC power outlet to the power supply input terminals without accidental interchange. (Figure 1.1)



(Figure 1.1)

The FG pin should be connected to the equipment where power supply is placed as thicker and shorter to protect electric shock or noise interference. (Figure 1.2)

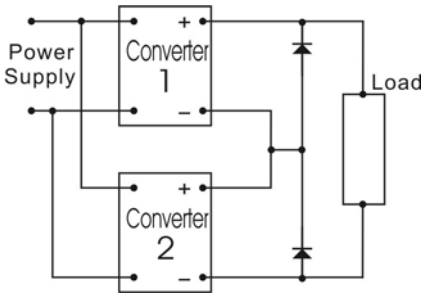


(Figure 1.2)

3. Series and parallel operation

I. Series operation

Most power converters can be operated in series if they have overload limitation by either constant current or constant power circuits. To protect each output from the reverse voltage applied by the other unit in the event of load short circuits, reverse biased diodes are used as shown in Figure 2.1.

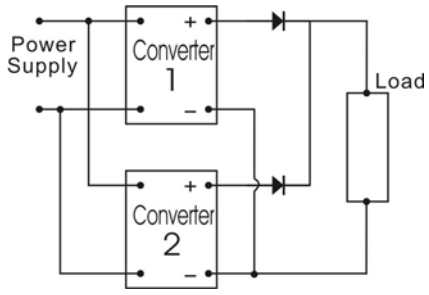


(Figure 2.1)

II. Parallel operation

This is only recommended with power converters specifically designed for parallel connection. In the parallel redundant scheme illustrated in Figure 2.2 one of the power converters could be replaced by a battery followed by a DC-DC converter to provide a no-break power system in the event of main supply failure.

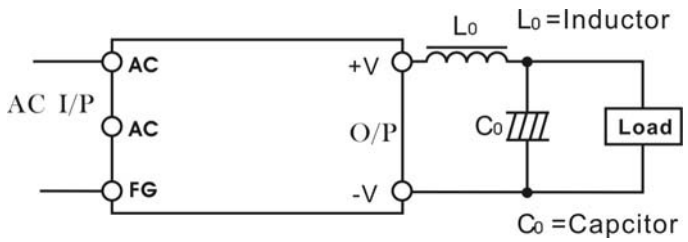
If we want to put the two power supplies in parallel, we have to adjust the output voltage to be the same for both of them.(Hence, if the power supply doesn't support this function of output voltage adjustment, then it shall not be put into parallel)



(Figure 2.2)

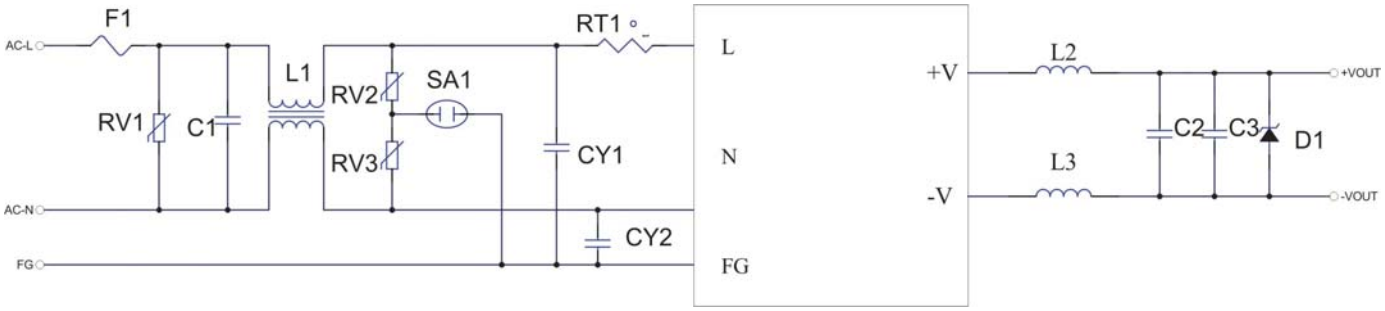
4. Reduce the output ripple and noise

Using a LC filter or a Capacitor reduces the output ripple and noise. (Figure 3.1)

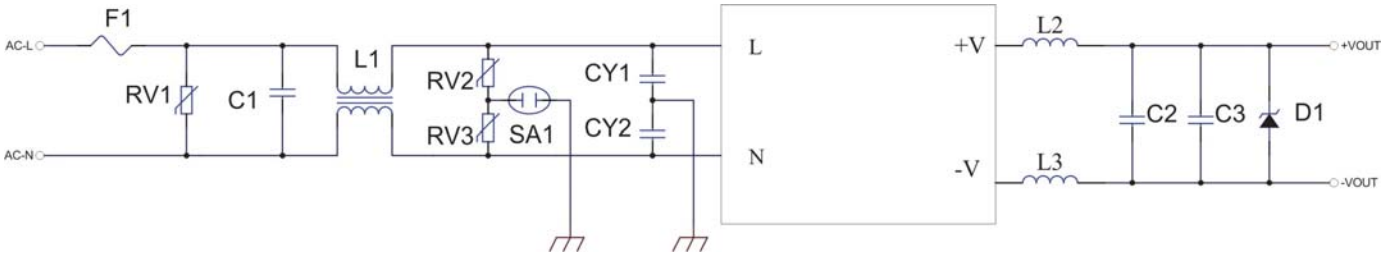


(Figure 3.1)

5. Class I suggested circuit for lowering EMC circuitry connection



Class II suggested circuit for general application circuitry connection



Item	Location		Description
1	F1	AHC / AHCN / APCN / ATCN / ANCN / ASC	Slow blow Fuse 1.5A / 250V
		AUC / AFC/ AFCN / AVC / AKC / AFC20 / AFC20N / MTC	Slow blow Fuse 2A / 250V
		ALC / AHC08 / AHCH05 / AOCH05 / AHCH10 / AOCH10	Slow blow Fuse 2A / 300V
		AFCH25 / ATCH30 / ANCH50	Slow blow Fuse 2.5A / 300V
		ARC60	Slow blow Fuse 2.5A / 250V
		AIC/AOC/AJC/ANC50/AEC60/AQC100/MFC15/MZC20/MTC30/MSC/MSC60	Slow blow Fuse 3.15A / 250V
		AYC / AZC / AOCH / ATC30	Slow blow Fuse 3.15A / 300V
		AQC125/MQC100/MQCS150/MQCS100	Slow blow Fuse 4A / 250V
2	RV1	Vin(max)=264	14S471K or 20S471K
		Vin(max)=305	14S561K or 20S561K
3	RV2	Vin(max)=264	14S471K or 20S471K
		Vin(max)=305	14S561K or 20S561K
4	RV3	Vin(max)=264	14S471K or 20S471K
		Vin(max)=305	14S561K or 20S561K
5	C1	X Capacitor	0.1uF~0.68uF 300V X1
6	L1		10~50mH

Item	Location		Description
7	D1	TVS (Vout=3.3V)	SMBJ5.0A or 600W ↑ (Peak)
		TVS (Vout=5V)	SMBJ7.0A or 600W ↑ (Peak)
		TVS (Vout=9V)	SMBJ12A or 600W ↑ (Peak)
		TVS (Vout=12V)	SMBJ20A or 600W ↑ (Peak)
		TVS (Vout:15V)	SMBJ20A or 600W ↑ (Peak)
		TVS (Vout=24V)	SMBJ30A or 600W ↑ (Peak)
		TVS (Vout=48V)	SMBJ64A or 600W ↑ (Peak)
8	CY1	Y Capacitor	220pF~4700pF 250V/300V Y2
9	CY2	Y Capacitor	220pF~4700pF 250V/300V Y2
10	RT1		Φ8~Φ20 10R
11	L2		3.3uH~100uH
12	L3		3.3uH~100uH
13	C2	Aluminum	47uF or 47uF ↑
14	C3	Soild Capacitor	0.1uF
15	SA1	Surge absorber (Vout=5VDC)	3KV

1. An external varistor is mandatorily required for both AYC and AZC in order to pass EN61000-4-5

2. The following products, AHC、AHCN、AVC、AUC、AYC、AZC、AFC20H、AFD25、AOD10, pass EN61000-4-5 without a built-in varistor. Customer is recommended but not required to add a varistor for better protection against Surge at will.

3. The rest of products, with a built-in varistor, pass EN61000-4-5. Customer may add a varistor for better protection against Surge at will.