

Harmonic Priority only affects the unit when harmonic mode and at least one other mode of operation is enabled. When the total current output of the active filter required exceeds the units rating harmonic priority will determine which mode will have priority. With harmonic priority set to 100% the unit will output all current necessary to correct the harmonic content. Any output capacity left over will be used to correct PF and/or load balancing. Conversely with harmonic priority set to 0% the unit will output all the fundamental current required to correct for power factor and/or load balancing. Any capacity left over will be used for harmonic mitigation. When the unit is sized to correct both harmonic current and fundamental currents, PF and/or load balancing, this parameter will have no affect.

The total percentage of adding Harmonic priority to fundamental priority can be greater than 100%. The rated output current of the active filter is equal to the rms-sum of the harmonic and reactive current injected. The following table provides a representation of this relationship. All values are in percent of rated output current.

**Table 14: Dual Mode Output Percentiles**

Harmonic current drawn by load	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%
Maximum reactive current available	0%	44%	60%	71%	80%	87%	92%	95%	98%	99%	100%

The following formula is used to calculate this current relationship:

$$I_{o/p}^2 = I_h^2 + I_r^2 \quad \text{OR}$$

$$I_{o/p} = \text{SQRT}(I_h^2 + I_r^2)$$