The increasing use of modern power electronic apparatus (drives, uninterruptible power supplies, etc.) produces nonlinear current and thus loads the network with harmonics. The capacitance of the power capacitor forms a resonant circuit in conjunction with the feeding transformer. Experience shows that the self-resonant frequency of this circuit is typically between 250 and 500 Hz, i.e. in the region of the 5th and 7th harmonics. Typical loads requiring harmonic filtering include 6 pulse drives (AC / DC), 3 phase UPS, frequency converters.

Active Harmonic Filters

With L&T's active harmonic filters, reduce your THD levels to within IEEE/CEA limits. These filters are IGBT-based power converters. This filter injects negative of the harmonic current resulting in practically no harmonic distortion. Phase balancing and power factor correction is also achieved.

Features:

- 30-600 A Active filter in 3 phase 3 wire/4wire
- Stand-alone & modular units
- Response time less than 1 ms
- Easy diagnosis of fault conditions with alarms
- Easy configuration & parameter monitoring with LCD touch screen HMI

Reactors – Harmonic Filtering

Detuned harmonic filters are the series combination of a reactor and power capacitor. This filter offers higher impedance for high frequency harmonics. This prevents harmonic resonance and amplification.

7% reactor mitigates 5th harmonic & above
- For industries with drives, converters & other power electronic devices

14% reactor mitigates 3rd harmonic & above
- For IT industries
- For industries with high single-phase non-linear load

Features

- Available as 7% (189 Hz) & 14% (133 Hz) detuned filters
- Copper & Aluminium wound reactors
- Very low operating losses - 3 to 5 W / kVAr
- High linearity - 1.8 times the rated current
- Low noise
- Auto-thermal cut-off

Detuned Aluminium Reactor

Active Harmonic Filter