












MIRUS offers a complete line of highly efficient Harmonic Mitigating Products to address the many problems associated with harmonic generating non-linear loads in applications such as Oil & Gas (drilling & pumping), Water/Waste Water, Chillers & other HVAC equipment, Marine Vessels, Data Centers (servers & cooling equipment), Telecommunications and Broadcasting Facilities.

Harmonic Filters		
PRODUCTS		APPLICATIONS
	<b>LINEATOR™ AUHF</b> 3-Phase Passive Harmonic Mitigation Filters for line side harmonics from VSD non-linear loads	Reduces harmonics generated by Variable Speed Drives to meet the limits of IEEE Std 519, EN 50160, IEC 61000-3-12, G5/4, and GB/T 15459. Exceeds 18-pulse performance, in a smaller footprint, at lower cost and without sacrificing energy efficiency. Free 'SOLV' computer simulation software simplifies harmonic compliance analysis.
	<b>AUHF-HP</b>	High Performance (<5% ITHD). Ideal for meeting specifications where current harmonic must meet less than 5%.
	<b>AUHF-HP2</b>	High Performance (<5% ITHD). Designed specifically for EC Fans and other high efficiency, integrated permanent magnet motor technology with low DC bus capacitance.
	<b>AUHF-ED</b>	For extreme environments, such as excessive background voltage distortion (up to 12% VTHD), high ambient (up to 55°C) or high elevation (above 3000 ft).
	<b>AUHF-MOS</b>	Marine Duty and Offshore Specific Lineator. Designed for harsh environments and addresses all marine certifying body requirements.
	<b>AUHF-L</b>	Liquid Cooled Lineator Harmonic filter designed for smaller footprint and optimized for use with liquid cooled drives/equipment.
	<b>ATL</b>	All-in-one Autotransformer and Harmonic filter. For applications when the VSD voltage rating is different from the service voltage. Combines the proven harmonic mitigating performance of the Lineator™ AUHF with step-down or step-up voltage transformation.
	<b>SUHF:</b>	Passive filters for 3-ph VSDs when only 1-ph power is available.
	• <b>1Q3</b>	Creates partial or quasi 3 <sup>rd</sup> phase. Reduces the need for VSD derating.
	• <b>1T1</b>	For 1 phase 2-wire in and 1 phase 2-wire out applications.
	<b>INVERSINE™ AUSF</b> Advanced Universal Sine-wave Filter	Provides sinewave output voltage and current for drive applications when PWM Inverters are used. Used to resolve problems such as motor and winding failure, motor noise, cable insulation degradation, premature VSD failure and reflected wave phenomenon and high EMI/RFI. Optional common-mode filter reduces bearing failures due to common-mode currents.
Power Inductors / Reactors		
PRODUCTS		APPLICATIONS
	<b>GENLINK™</b> Dissimilar Pitch Neutral Limiter (DPNL) uniquely wound multiple coil reactor	Reduces circulating current in the common neutral and/or ground wires of paralleled generators with dissimilar pitches or generators paralleled with the utility. Blocks circulating current without reducing system fault level.
	<b>ACR, DCC</b> Iron Core Power Inductors	Iron Core AC Power Inductors and DC Chokes for large LV VSD applications. Standard designs start at 800A to 3200A at 480V and 690V
	<b>ACR-L, DCC-L</b> Liquid Cooled Iron Core Power Inductors	Iron Core AC Power Inductors and DC Chokes with water connection for liquid cooled systems.
	<b>ACRA</b> Air Core Inductors	AC Inductors built with an air core utilized to limit available short circuit current. Typically used when electrical upgrades raise the system fault level and current limiting is required to prevent having to replace existing equipment.


**Transformers**

PRODUCTS	APPLICATIONS
 <p><b>ULLTRA™</b> Ultra Low Loss TRAnSformer that exceeds efficiency requirements of DOE 2016</p>	<p>Ideal for government, municipal, educational and institutional facilities where LEED certification is required to meet 'High Performance' and 'Green' building designations or anywhere lower energy costs are desired.</p>
 <p><b>ULLTRA™ H1E, H2E</b> Harmonic Mitigating Isolation Transformers</p>	<p>Harmonic mitigating, high efficiency, phase shifting transformer with low zero sequence impedance windings designed to cancel harmonics to replace standard or K-rated transformers to enhance power quality and save energy. Exceeds DOE 2016 requirements.</p>
 <p><b>ELIMINATOR™ SERIES:</b></p> <p><b>NCE™</b> Neutral Current Eliminator. Parallel connected zero sequence harmonic filter/autotransformer.</p> <p><b>CNCE™</b> Combined Neutral Current Eliminator. Series connected low zero sequence autotransformer</p> <p><b>5-7,5-13,11-13</b> 3-phase, 3-wire auto-transformers with 30°, 15° or 20° phase shift between input and output</p>	<p>Autotransformer configurations used in commercial and residential buildings for removal of 3<sup>rd</sup>, 5<sup>th</sup>, 7<sup>th</sup>, 9<sup>th</sup>, 11<sup>th</sup>, 13<sup>th</sup>, 15<sup>th</sup>, etc. harmonics. NCE and CNCE devices are easily combined for a complete solution.</p> <p>For 3-phase, 4-wire systems where neutral current is high. Connected in parallel near the harmonic generating non-linear loads (usually connected at the distribution panel), to provide an alternate path for 3rd, 9th, &amp; 15th current harmonics (triplens).</p> <p>Phase shifting autotransformer with low zero sequence impedance at its output. Connected in series on a 3-phase, 4-wire service with non-linear loads, to provide an alternate path for the triplen harmonics and phase shift 5th and 7th current harmonics to cancel with those 5th and 7th harmonics from other loads on the distribution system.</p> <p>Allows for the creation of quasi 12, 18 or 24-Pulse systems where multiple 3-phase rectifiers, such as variable frequency drives, are in use.</p>

**Power Distribution Units**

PRODUCTS	APPLICATIONS
 <p><b>ONICS™ SERIES:</b></p> <p><b>HMPC</b> Harmonic Mitigating Power Center. Power Distribution Units (PDU) with harmonic mitigation</p> <p><b>HMRP</b> Harmonic Mitigating Remote Panelboard. Up to 4 Circuit Breaker panelboards with built-in passive harmonic filtering</p>	<p>Power distribution unit incorporating Mirus' patented and proven ultra high efficiency, Harmonic Mitigation Transformer (HMT) technology. Ideal for the raised floor environment.</p> <p>Eliminates the need for K-rated transformers and double ampacity neutrals. Ideal for broadcasting, telecommunications, data centers, call centers and all office environments with personal computers. Easily installed in either raised or solid floor applications. Ideal for removal of harmonics in 240/415V applications.</p>

**Power Metering and Alarming Monitor**

PRODUCTS	APPLICATIONS
 <p><b>INSIGHT™</b> Power Meter and Alarm Monitor.</p>	<p>Designed to continuously monitor Mirus products such as the Lineator™ Harmonic Filter, Onics™ Power Distribution units, and any Ulltra™ or Harmony™ transformer. Also available for individual OEM/Integrator application.</p>