



## UNISIN 3100 HARMONIC FILTER BROAD SPECTRUM HARMONIC FILTER FOR SINGLE OR 3 PHASE NONLINEAR LOADS AT ANY VOLTAGE LEVEL



- *Mitigates severe harmonics (80% or higher)*
- *Guaranteed limits for THD (TDD) and each harmonic per IEEE 519 or user specification*
- *Unaffected by changes in upstream system*
- *No adverse impact on system resonance*
- *Constant THD reduction from no load to full load*
- **CLEAN POWER**
- **ENERGY SAVINGS**
- **REDUCED MAINTENANCE**
- **IMPROVED SYSTEM PERFORMANCE**
- **HIGH RELIABILITY (PASSIVE DEVICE)**
- **ONE FILTER FOR ALL HARMONICS, CUSTOM DESIGNED**

**THE UNISIN 3100 IS INSTALLED CLOSE TO THE NONLINEAR LOAD OR ANY CONVENIENT LOCATION SUCH AS DISTRIBUTION (OR ISOLATION) TRANSFORMER.**

### **THE UNISIN 3100:**

THE UNISIN 3100 IS DESIGNED FOR ANY TYPE OF NONLINEAR LOAD, INCLUDING: DC TRANSMISSION, PWM INVERTERS, VARIABLE SPEED DRIVES, UPS SYSTEMS, EMERGENCY LIGHTING SYSTEM INVERTERS (UL 924) AND LARGE SWITCH MODE POWER SUPPLIES. MITIGATES TRIPLEN HARMONICS, EXCELLENT FOR GENERATOR PARALLELING.

- **REDUCES** SYSTEM LOSSES
- **IMPROVES** POWER FACTOR
- **REDUCES** VOLTAGE AND CURRENT HARMONICS (IEEE 519 OR BETTER)
- **REDUCES** VOLTAGE WAVEFORM PEAKS
- **REDUCES** INTERFERENCE
- **REDUCES** COMMON MODE NOISE
- **REDUCES** NEUTRAL TO GROUND VOLTAGE

**MUCH LESS INITIAL COST AND SPACE THAN CONVENTIONAL APPROACH**

**UNISIN POWER TECHNOLOGY**  
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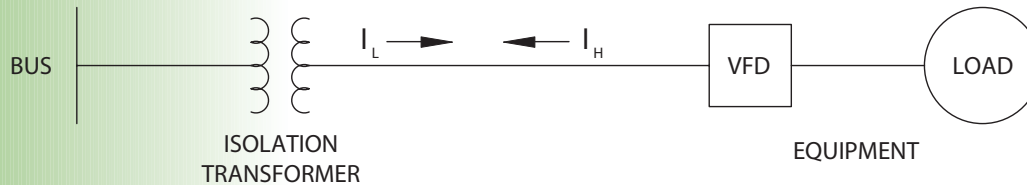




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## USER INFORMATION REQUIRED

***User must provide a single line diagram and all impedance information, for example:***



### A. Equipment Information

- Single or 3 phase (60 Hz if not indicated)
- Type of load and rating (e.g. 25 HP motor or UPS 25 KVA)
- Nominal input voltage range and tolerance (e.g. 480 V $\pm$ 5%)
- Set voltage and actual terminal voltage (e.g. 480 V and 478 V)
- Rating: rated amp and maximum amp at nominal voltage  
for example: 70 A rated and 100 A maximum

### B. Harmonic Spectrum (worst condition)

Harmonic Order	3	5	7	9	11	13	15	17	19	23	25
PU, or actual value (amps)											

### C. Power Frequency Load Current and Power Factor (full load and minimum load)

For example: 70 A, pf = 0.9 at full load; 40 A, pf = 0.6 at half load

### D. Bus Nominal Voltage and Range

For example: 480 V (+/- 5%), or 480 V nominal and 504 V maximum

### E. Isolation Transformer (if any) and Secondary Nominal Voltage Range

- Phase
- KVA
- Voltage
- Z (%), and X/R  
For example: 3 phase, 225 KVA, 4160 V - 480 V, Z = 6%, X/R = 3.5,  
or Series Reactor X = 5%

### User should list all specific requirements, such as:

- Filtering efficiency percentage, or percentage of harmonic current upstream
- THD at point of connection, such as at bus or at secondary of isolation transformer
- Enclosure required if other than Surface Mount Type NEMA 1.



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