



Low-impedance | Isolation transformer | Line conditioner

Model

ILc-15000-0232

80 amps
15 kW
15 kVA
208 volts
Single phase

Low-Impedance Isolation Transformer Line Conditioner

TSi Power's ILc Series line conditioner provides the best all-round power conditioning and surge protection for sensitive electronic equipment. The integral isolation transformer provides 100% isolation from the input ac line, the secondary neutral-to-ground bond eliminates all surge voltages between neutral and ground. Surge protection and noise filtering are superior to conventional surge protection & filtering devices.

Typical applications

Designed for situations where reliability and predictability matter to the enterprise. Examples include: telecommunications equipment, file servers, routers, digital copiers, office machines, industrial controllers (PLC), automatic test equipment (ATE), laboratory analyzers and other sensitive, specialized microprocessor-based equipment.

Key benefits

ILc Series conditioners reduce the need for a high quality ground and a dedicated line, while eliminating interference from adjacent sources of disturbances. ILc contributes to enhanced operation, improved repeatability, fewer reboots and system lock-ups and extended operating life. In addition, a reduction in equipment down time and service costs can be expected.

How the ILc-15000 works

This ILc line conditioner utilizes a low-impedance transformer, capacitors and ultra-fast Metal Oxide Varistors (MOVs) in an optimized 3-way noise filtering and IEC 61312 compliant surge protection design to provide maximum protection of sensitive industrial and telecommunications equipment against harmful surges, spikes and noise produced by lightning strikes, utility grid switching and heavy machinery turn on and off cycles. The neutral-ground bond at the output winding of the transformer also provides maximum protection against the harmful effects of stray voltage and/or noise on the neutral conductor.



Key features

- Coordinated surge protection per IEC 61312
- Low-impedance isolation transformer
- True isolation
- Common-mode noise elimination
- Advanced noise and interference filter reduces dV/dt from 6kV/μS to less than 10V/μS
- High efficiency
- Input circuit breaker
- Low weight
- Quiet operation
- Five year warranty



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Specification	ILc-15000-0232
Electrical	
Capacity in VA (watts)	15kVA (15kW)
Transformer technology	Low-impedance isolation transformer
Input Rating	
Nominal voltage	208 volts ac, single phase
Operating input voltage	190 to 240 volts ac
Nominal frequency	47 to 63Hz
Maximum input current	80A
Input circuit breaker	Two pole, 90A circuit breaker is included.
Operating displacement power factor	0.3 leading to 0.3 lagging
Output Rating	
Nominal output voltage	208 volts ac, single phase
Load regulation	Better than +/-2%
Power efficiency	95% (typical)
Load power factor	Tightly coupled isolation transformer winding provides compatibility with switchmode power supplies and SCR controlled devices.
Ac output quality	Qualifies as a separately derived ac power source per NEC 250-5D.
Surge protection	A three-stage surge protection system forms a hybrid filter recommended by IEC 61312 (coordination of surge protective devices). Filter consists of an isolation transformer, capacitors and MOVs.
Surge test conditions	Per ANSI/IEEE C62.41-1991 single pulse, ring and combination wave. (Category C test waveforms: 6000V, 3000A, 8x20µS).
Surge test results (remnant voltages)	Single pulse: L-N: 50V, L-G: 50V, N-G: 0.5V Ring wave: L-N: 20V, L-G: 20V, N-G: 0.5V Combination wave: L-N: 250V, L-G: 250V, N-G: 0.5V
Reduction in rate of voltage rise/fall (dv/dt)	The measured rate of voltage rise/fall (dV/dt) of the remnant waveform is <10V/µS w/input test waveform dV/dt of 6kV/µS. (600:1 reduction ratio).
Common mode noise filtering	Neutral-to-ground bond eliminates all noise or voltage on output neutral.
Normal mode noise filtering	A built-in inductor-capacitor filter attenuates EMI/RFI noise from the output.
Mechanical	
Input/output connection	Hard-wired (terminal blocks).
Dimensions	610mm (24") wide x 710mm (28") high x 560mm (22") deep.
Finish and weight	Powder-painted. Weight is approx. 181kg (400 lbs).
Environmental and Warranty	
Ambient temperature	0° to 40°C (32° to 104°F). 10 to 90% relative humidity (non-condensing).
Heat loss and cooling	At 80% load, heat loss is approx. 850 BTU/hr. Convection cooled.
Warranty (expected life)	Five year limited warranty, parts and labor. (twenty years).

TSi's ongoing product improvement process makes specifications subject to change. Other companies product names herein are for identification purposes only, and may be trademarks of their respective companies. These units are for indoor use only.

Note: Unit ships on a wooden pallet for ease of shipping and handling.



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ILc system architecture

