LL-PFC
LOW LOAD – POWER FACTOR CORRECTOR
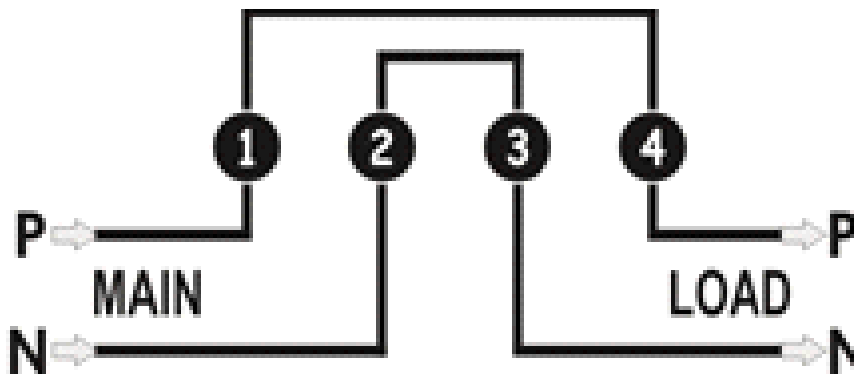
- For 1P2W Installation.
- Improves Power Factor by switching 1P capacitors.
- 16x1 LCD display to show Present PF, Avg.PF, KWh and KVAh.
- LED stage indication and Over Voltage indication.
- Comprehensive measurement data available on RS485 port.
- Hybrid switching technology to improve relay life multifold over competing products.
- Plug and Play – No external CTs required.

Technical Specifications

Operating Voltage	:	240VAC Nominal
Maximum Load Current	:	45 Amps
Connection Scheme	:	1P2W
Parameter Measured and Displayed	:	Volts (between 160VAC to 270VAC)
		Amps (0 to 45 Amps)
		Capacitor Amps (0 to 20 Amps)
		Load PF (0.2 LG to 0.2 LD)
		Average PF (achieved after last reset)
		Capacitor KVAR delivered
		Present System KVAR
		KWh (auto rollover after 9999999.9 KWh)
		KVAh (auto rollover after 9999999.9 KVAh)
Display	:	16x4 LCD Module
Connectivity	:	RS485 port using MODBUS RTU

LL-PFC is a power factor corrector product which is meant for 1P domestic loads in those areas where utility based on KVAh. LL-PFC can make significant savings in electricity bill by correcting the power factor and thereby reducing the system KVA.

LL-PFC is based on proven electrical measurement and control experience of Trinity, gain over 25 years. The product consists of three sub-systems :

1)   Accurate Electrical Measurement :

The metering of electrical parameters is micro-controller based.

The measurement module measures to high accuracy, the prevailing volts, prevailing load current and from first principles, calculates power, power factor and energies. Use of precision components and CTs assures sustained accuracy over years.

2)   Control Module :

The micro-controller drives up to four electromechanical relays for switching capacitors of various sizes. Switching of capacitor load requires specially selected and rated electromechanical relays. In addition to augment the life of the relay contacts as well as the capacitors. The switching operations are synchronized to zero crossing. Series chokes are used to prevent in-rush currents.

3)   SMART VAR mitigation algorithm :

Based on years of VAR control products, this algorithm strives to achieve close-to-unity power factor while simultaneously keeping the switching operations to a minimum. The smart algorithm measures the present capacitive VAR in the system and the needed VAR, before finding the best-fit combination of available capacitors to come close to unity power factor.

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*Specifications are subject to change without notice due to continuous improvement.