



PFC 303

Advanced Active Power
PFC Online UPS

5KVA - 200KVA

with Predictive Analysis Technology



Regenerative load handling



20th year of OEM
manufacturing and export



100% indigenously designed
in the in-house R&D



HARSH ENVIRONMENT DESIGN

ARVI
POWER OF TRUST

Optimise production process to improve Productivity and profitability...



**Galvanic Isolation for
Comprehensive Power Protection**

Galvanic isolation offers

Comprehensive Protection and High Availability.

Mains grade raw power contains impurities and large percentages of harmonics injected into the line by various non-linear loads. The common problem of neutral drift can produce considerable increase in output voltage and permanently destroy your critical loads and data.

Isolation transformers increase load protection and ensure human safety by isolating the AC leakage current from developing a potential between the input and ground. Isolated output enhances the attenuation of common mode noise by increasing the impedance between the input and output.

Provides protection of loads against lightning. Galvanic isolation via transformer is the only way to safely protect loads from lightning. It provides protection from high energy transients, which are clamped at the AC input from propagating to the output.

Advanced Active Power PFC Online UPS

Features

- Power Factor Corrected
- Digital Signal Processor
- Isolation Transformer
- SNMP
- Autobypass

Power Factor Corrections

- Reduces the running cost in terms of electricity bill
- Prevent the overrating of electrical wire
- Reduce reflected harmonics back to the source
- Savings in sizing of utility transformer & generator

Technology

- DSP technology IGBT inverter - IGBT converter

Interface

- SNMP compatible
- User-friendly LCD display
- True RMS reading
- Fault condition
- Status display
- Event logging

Topology

- Bifilar PWM switching

Ideal Power-conditioner

- Constant Frequency source
- Premium Quality Galvaically isolated Power
- Power Factor Corrector

100% Indigenous design



IGBT based PFC rectifier



Industrial Grade
Designed for Harsh Environment

100% Indigenous Factory - With In-House R&D.

- CNC, laser cutting, wire EDM cutting etc
- Process and Automation application
- Data centres, IT, servers
- Office, Hospitals, Educational institutes

- MRI & CT scanners
- Digital & offset printing
- Analytical & research labs

Uninterrupted Premium Quality Power using Power-Conditioning topology

The factors contributing to the pre-mature failure of electrical gadgets and eventually the system failure is not limited only to voltage fluctuations but also the poor quality of power. Hence, importance should not only be given for power availability but also for quality power availability.



PFC 303 is a complete Power-conditioner & Power Factor Corrector

Optimises the product life & process uptime by 35%-40%.

- Constant voltage, frequency, High Grade Premium quality power.
- Galvanic isolation at the output.
- Operating ambient temperature 0-45 degrees.
- Overload handling capability of 150% for 1 minute.
- High surge handling capability.



Best In-house R&D
ISO 9001-2015

National award winner from SoftDisk "Most innovative power solution of the year 2016."

Predictive self analysis

The uptime is significantly enhanced using the intelligent DSP based Predictive Self Analysis built-in in the UPS. Using 16 sensors, the UPS periodically carries-out Self Analysis of various parameters and initiates alarm for preventive and corrective action well in advance and facilitates high uptime of machines and process.

SNMP-simple network monitoring protocol

Monitoring

Diagnosis

Preventive action



**GSM based
SMS pre-trip alert for
initiating necessary
preventive action.**

Remote ups monitoring software interface

Monitor the UPS mains input voltage, output voltage, battery voltage, load percentage etc from a remote location.

SNMP feature facilitates the user to **carry-out preventive action remotely** without physically reaching the UPS. Pre-trip alarm pops on the monitoring screen prompting the user/system admin/maintenance engineer to initiate preventive action. Without the SNMP feature, the pre-trip alarms are often unnoticed as the UPS is located away from the users and can cause ungraceful shutdown of machines/servers/process.

Regenerative energy (4-quadrant load) handling capability.

All the 3PH-3PH Online UPS of Arvi are capable of handling regenerative energy and PFC303 is no exception. PFC303 senses the regenerative back feed voltage (AC voltage) and clamps the same using resistive load bank.

The re-regenerative braking energy is produced in the following conditions...

Quickly decelerating a high inertia (mechanical arm, flywheel), controlling the speed of a load moving downwards (Milling, cutting, declining conveyor), sudden drop in load torque (Drilling operation, industrial saw), repetitive acceleration and retardation to stop etc.

The conventional Online UPS cannot absorb this energy and the DC bus voltage starts increasing and leads to failure of DC capacitor and switching device.

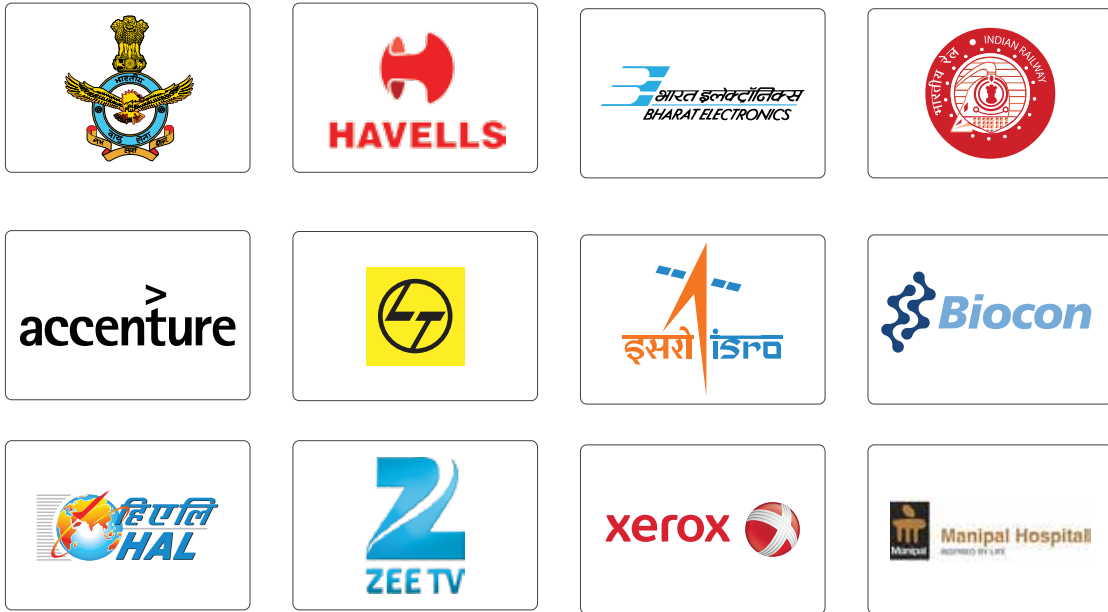
Technical Specifications

5KVA - 200KVA PFC 303 - Series Online UPS

TECHNOLOGY			DSP based, IGBT inverter-IGBT converter Online UPS.
RATING			5KVA - 200KVA
DC BUS			192VDC - 360VDC
INPUT			
Input Voltage			415VAC, 3Ø & N
Input Voltage Window			330VAC - 470VAC
Input Frequency			45-55Hz
Input PFC	100% load		> 0.95
Power walk in			Soft start for 0-20 seconds power walk-in.
RECTIFIER			
Type			IGBT based full bridge
Voltage Regulation			(±) 1%
Ripple Voltage			< 2%
Converter Protection			Advanced Electronic Protection for device safety backed up, with MCB's/ MCCBs & fast acting fuses
INVERTER			
Inverter Type			IGBT based MPWM with instantaneous Sinewave Control
Output PF			0.8 lagging to Unity
Nominal Voltage			415VAC, 3Ø, P-P / 230VAC, 1Ø, P-N
Regulation			(±) 1%
Frequency			50 Hz ± 0.1Hz
Waveform			True Sinewave
Total Harmonic	Linear Load		< 2%
Distortion	Non Linear Load		< 5%
Transient Response			Remains within +/- 5% & recover to normal within 20 msec
Over Load	100%		Continuous
Capacity	110%		10 Minutes
	150%		1 Minute
Crest Factor			3:1
Mode of Operation			Designed for Continuous operation
ISOLATION			True Online with complete galvanic isolation.
Inverter Protection			Advanced Electronic Protection for device safety backed up with MCB's/ MCCBs & fast acting fuses, high speed pulse by pulse electronic device protection over voltage / under voltage protection, Electronic over current trip.
BYPASS			
Manual Bypass			Provided
ALARMS			
			• Input / Low / Fail • Output overload • Over temperature • Battery low
LED Indications (Single LED with multi function)			
			• Mains on • UPS on • Battery Low • Overload
			• Input Voltage • Output Voltage • Load current • Output Frequency • Battery Voltage

Approved vendors for

Our esteemed customers have been using PFC303 for various applications across the country from past 19yrs and have certified the performance of the same.



PARTIAL LIST



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