

# Power-Conditioning for **Online UPS** **Industrial Applications**



- Automated processing
- Non-linear loads
- CNC
- Wire EDMs
- Additive manufacturing



**PFC-IG303** 10KVA - 400KVA

Advanced Active Power PFC UPS  
with **Predictive Analysis Technology**

Optimise production process to improve Productivity and profitability...

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. ISOLATION PROVIDES PROTECTION OF LOADS AGAINST LIGHTNING. GALVANIC ISOLATION VIA TRANSFORMER IS THE ONLY WAY TO SAFELY PROTECT LOADS FROM HIGH ENERGY TRANSIENTS, WHICH ARE CLAMPED AT THE AC INPUT FROM PROPAGATING TO THE OUTPUT.



Galvanic Isolation for Comprehensive Power Protection

## Advanced Active Power PFC-IG303 Online UPS

### Features

- POWER FACTOR CORRECTED
- DIGITAL SIGNAL PROCESSOR
- ISOLATION TRANSFORMER
- SNMP
- AUTOBYPASS

### Power Factor Correction

- REDUCES THE RUNNING COST IN TERMS OF ELECTRICITY BILLS
- PREVENTS 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 CONVERSION

### Topology

- EXTENDED PFC WITH PFM PWM SWITCHING

### Interface

- SNMP COMPATIBLE
- USER-FRIENDLY LCDDISPLAY
- TRUE RMS READING
- FAULT CONDITION
- STATUS DISPLAY
- EVENT LOGGING

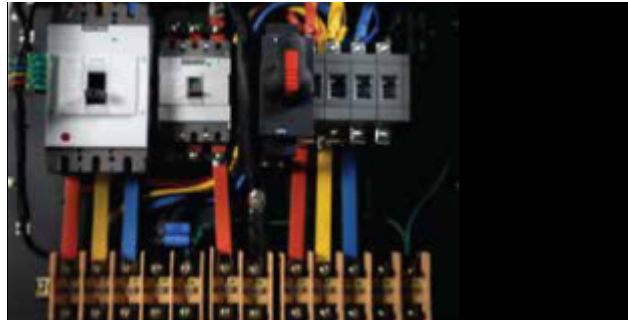
### Ideal Power-conditioner

- 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.

### Applications

■ PROCESS AUTOMATION ■ NON-LINEAR LOADS ■ CNC ■ WIRE EDMS ■ ADDITIVE MANUFACTURING

## Uninterrupted Premium Quality Power using Power-Conditioning topology

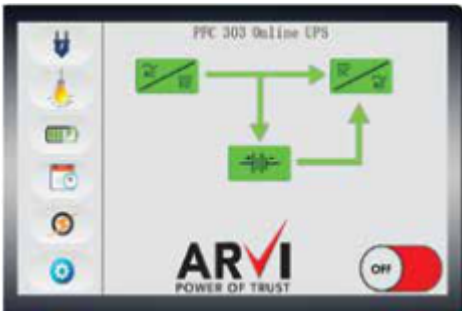
THE FACTORS CONTRIBUTING TO THE PRE-MATURE FAILURE OF ELECTRICAL GADGETS AND EVANTUALLY THE SYSTEM FAILURE IS NOT LIMITED ONLY TO VOLTAGE FLUCTUATIONS BUT ALSO THE POOR QUALITY OF POWER. HENCE, IMPORTANCE SHOULD NOT ONLY BE GIVEN FOR POWER AVAILABILITY BUT ALSO FOR QUALITY POWER AVAILABILITY.

## PFC-IG303 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.

TFT, touch screen, color display



**Graphical display of UPS status, load percentage and battery levels**

- INPUT VOLTAGE
- OUTPUT VOLTAGE
- BATTERY VOLTAGE
- OUTPUT POWER IN KVA
- OUTPUT POWER IN KW
- OUTPUT PF
- OUTPUT FREQUENCY
- LOAD PERCENTAGE
- OVER-TEMPERATURE WARNING

**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**

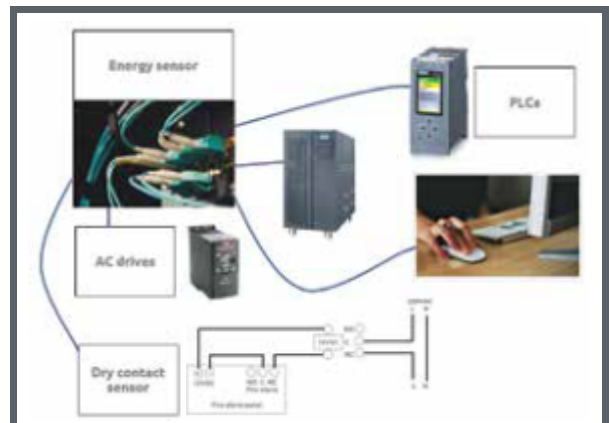
**MONITORING      DIAGNOSIS      PREVENTIVE ACTION**



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

**MODBUS-BMS Interface**

BMS - BUILDING MANAGEMENT SYSTEM / BAS - BUILDING AUTOMATION SYSTEM / IAS - INDUSTRIAL SYSTEM AUTOMATION SYSTEM, IS A COMPUTER-BASED CONTROL SYSTEM INSTALLED IN BUILDINGS THAT CONTROLS AND MONITORS THE BUILDING'S ENERGY USAGE, LIGHTING, SAFETY, HEATING/COOLING, POWER SYSTEMS, SECURITY AND SURVEILLANCE. COMMUNICATE WITH OTHER EQUIPMENT, NOTIFY FAULTS OR POWER OUTAGE TO CARRY-OUT PREVENTIVE / CORRECTIVE ACTION ARE SOME OF THE UNIQUE BENEFITS OF BMS.



# Technical Specifications

## 10KVA - 400KVA PFC-IG303 - Series Online UPS

DSP based, IGBT inverter-IGBT converter Online UPS.		
RATING	10KVA - 400KVA	
<b>INPUT</b>		
Input Voltage Window	330VAC - 470VAC	
	45-55Hz	
Input PFC	100% load	> 0.95
Soft start for 0-20 seconds power walk-in.		
<b>RECTIFIER</b>		
	IGBT based full bridge	
Voltage Regulation	( ± ) 1%	
Converter Protection	Advanced Electronic Protection for device safety backed up, with MCB's/ MCCBs & fast acting fuses	
Inverter Type	IGBT based MPWM with instantaneous Sinewave Control	
Nominal Voltage	415VAC, 3Φ, P-P / 230VAC, 1Φ, P-N	
Frequency	50 Hz ± 0.1Hz	
Total Harmonic Distortion	Linear Load	< 2%
	Non Linear Load	< 5%
Remains within +/- 5% & recover to normal within 20 msec		
Over Load Capacity	100%	Continuous
	110%	10 Minutes
	150%	1 Minute
Mode of Operation	Designed for Continuous operation	
	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.	
Manual Bypass	Provided	
	<ul style="list-style-type: none"> <li>• Input / Low / Fail • Output overload • Over temperature • Battery low</li> </ul>	
	<ul style="list-style-type: none"> <li>• Mains on • UPS on • Battery Low • Overload</li> </ul>	
	<ul style="list-style-type: none"> <li>• Input Voltage • Output Voltage • Load current • Output Frequency • Battery Voltage</li> </ul>	