

Preempting critical power needs with reliable edge



Technical Specifications*

Description	Standard Specification
I - Structure	
Capacity	15 KVA (Range - 5 KVA to 50 KVA) wide input range
Mechanical	19" CNC fabricated rack, using CRC sheet duly powder coated with white & blue size 19" duly 1800(H) x 600(W) x 400(D)mm
Thickness	1.66 mm CRC sheet is used
IP Protection	IP 21, suitable for indoor use
Tests	Designed to comply EMI/RFI as per FCC class-A. Burst test as per IEC 62.41 and environmental test as per TEC QM-333, category B2
Safety	Designed as per IEC 60950 safety standards
Compliance	CE Certified
MTBF	More than 70,000 Hrs.
II - Central processing unit	
Micro controller	High-Speed micro controller, true RMS for all voltage & current, all the inputs to the measurement board is duly protected against surge as per IEEE-62.41. The measurement circuit is rated at least twice of the maximum input range, each independent for AMF & LCU
Time	Real time & date-programmable
Event logs	Last 500 events
RS 232 Port	For PC interface to adjust the critical data and unload the alarms. This port is used for configuration of PFC's. Data is extended through RS 232 port.
Data Transfer:	PIU is equipped with suitable GPRS Modem/GPRS DTU and able to process the data It is able to connect via RS 232 Port to power plants for energy meter reading or with any other specific equipment.
Energy	Able to measure the Mains, DG and DC Channel Energy.
Digital spare inputs	16 Digital inputs for system management (optional)
Network management system	Central management system with MIS all over India sites (Optional)
III - LCU with isolation transformer	
Type	Micro controller based, true RMS, static line conditioner
Power rating	3 phase input, with auto phase selector (optional)
Rated input voltage range	110V to 485Vac L to L
Rated output voltage	220V +/- 10%
Input frequency range	47-53Hz
Total harmonic distortion (THD)% of Voltage/Current	<3%
Input power factor at 100% load@415V i/p & 215Vo/p	>0.95
Output load power factor at 100% load@415V i/p & 215Vo/p	>0.95 (Load dependent)
Efficiency at full load & min/max i/p range	>97.5%
Dynamic response time	400V/us
Response time	<10ms

Description	Standard Specification
IV - Protections	
Input	4-POLE 160AMP MCCBs
Voltage protection levels - 2 at input	High Voltage Disconnect (HVD) 485V after 10 milliseconds Low Voltage Disconnect (LVD) 110V after 5 seconds
Voltage protection levels-2 at LCU	Input - HVD 485V; LVD 110V Output HVD 250V (immediate); LVD 190V after 3 sec
Insulation	>1000 megohms
Inter winding capacitance	<10nf
Input/Output isolation	6KV
Winding	Double wound with copper foil shielding
Inrush Current	144 Amp (Equal to Max full load Current)
Temperature	-5°C to 55°C
Lightening	Protection from multistrike lightening class B+C, 50KA, as per IEC 61312-3
Humidity	RH 95%
V - Auto mains failure system	
DG trip protection (safety with alarms)	
Low lub oil (supply of LLOP not in scope), Low fuel level (sensor not in scope of ACME), Over load (adjustable depending on diesel generator capacity) (>110%-factory setting), Voltage protection. (a) HVD & LVD-+/-5V above/ below the range, HCT/HWT	
Delays	
DG on load after DG starts and supply healthy (30 Seconds), Blackout delay for 10 seconds between mains and DG contactor changeover - DG cooling time - 5 minutes, Three attempt for DG start with delay between attempts (40-40-40 sec), DG lock time after three very short mains restoration 10-10-20 minutes Automatic SMPS Based CVCC for 12V/120AH DG Battery Charging	
VI - Safety & security systems provided	
VII - AC distribution unit & control (can be customised as per user requirement)	
AC distribution unit	Standard Configuration
Input Protection	Yes
MCCB/MCB's	Mains, DG, SMPS, Power point, Lighting, Aviation lamp, Battery charger, Air conditioners
VIII - Miscellaneous	
Real time based, Dry contact	
Accessories	Aviation lamp controller, Surge arrester. (Class B+C), Auto phase selector, Room temperature sensor
IX - Measuring system	
Display Frequency Currents Voltage	
DG set measurements	Mains/DG status, DG accumulated hours, DG voltage
Mains measurements	Input voltage, Output voltages for LCU modules
LED indications	Mains ON, DG ON, Smoke/Fire alarm, Over load, LCU Fail, Fuel Low, DG fail to start, DG fail to stop, Alternator fail, LLOP, DG overload, Mains fail, system battery low, DG battery low, HCT/HWT, High shelter temperature, PIU Battery Low, Mains Fail.
List of potential free contacts	As per configuration