



The only way to catch up
with the future is with
PACE



Manufacturing of Power Systems is centered at PACE POWER owned and operated facility spread over 15000 Sq.Ft. Company represents a young, dynamic and dedicated Engineering staff which gives PACE POWER customers a Combination of design expertise and production efficiencies. PACE POWER's Customers include major International OEMs, who use its power systems applications including telecommunications, computing, medical devices and office automation. PACE Power do focus on innovative designs, which would meet the challenging requirements of its customers.



System Comprises...

Power Management Unit (PMU) is a fully automatic telecom BTS power solution, used in GSM Network, CDMA, Optical repeater networks etc. **PMU** replaces the existing conventional disintegrated power solutions in the telecom network, like Servo Stabilizer, Isolation Transformer, Relay based AMF panel, Generator control Unit and Counter, ACDB, Fire alarm, AC controller, Surge protection devices, Aviation timer etc.

The **PMU** consists of the following modules, integrated in the single cabinet and reduces the floor space as well as wall space in the telecom site. Also, the complexity of interconnecting all these modules is avoided.



POWER MANAGEMENT UNIT



MAJOR MODULES OF THE PMU

- ▼ Surge Protection Devices - SPD's (Optional)
- ▼ Line Conditioner Unit (LCU)
- ▼ PMU Controller
 - Automatic Mains Failure (AMF) functions.
 - Monitoring various parameters of Mains and DG.
 - Alarms & Potential free contacts for various faults
 - Real time clock and event recording facility
 - Fire Alarm Module
 - Aviation Lamp Control
- ▼ AC Distribution unit
- ▼ DG Battery Charger
- ▼ Air Conditioner Controller (Optional)
- ▼ Auto Phase selector
- ▼ Fuel Optimiser
- ▼ Display unit

KEY FEATURES

- ▼ Compact & Modular design – Easy replacement of sub-modules at site
- ▼ Minimum Generator utilization (Fuel savings and less DG wear and tear)
- ▼ Immense savings of space and Installation materials (Savings in Capex and Opex)
- ▼ MTTR is as low as 15 minutes (Down time is less)
- ▼ MTBF is high due to usage of reliable components and non-movable parts.
- ▼ Dedicated **PMU** controller with True RMS display of Voltage current and frequency display, scrolling display , lamp indications, Alarm extension features provided
- ▼ Automatic and Manual Modes of operation
- ▼ Battery voltage and shelter inside temperature monitoring feature to switch on the DG set – Fuel saving
- ▼ DG Battery and PMU battery voltage supervision
- ▼ Performance, fault data storage features provided for easy maintenance.
- ▼ Inbuilt lightning and surge protection devices provided (Optional)
- ▼ Built-in circuit provided to monitor DG / PCM circuitry

PMU CONTROLLER

- ▼ Micro Processor based controller, working voltage 8 volts to 16 volts DC with battery back-up and auto changeover to BTS Battery facility provided.
- ▼ AMF functions are incorporated
- ▼ Display Digital & LCD.
- ▼ Monitoring and metering Provided.
- ▼ Digital output (Relay Out) : Commonly required parameters.
- ▼ Digital Fault inputs : Commonly required parameters.
- ▼ Programmable parameters through Laptop - PC front panel keys
- ▼ Event recording: 500 events, which can be converted to MS Excel for diagnosis(optional)
 - ▶ Parameter list with date and time stamping.
 - ▶ Fault events with date and time stamping.
 - ▶ DG start and stop event log with date and time stamping.
- ▼ RS 232 port provided for any change in setting through laptop (optional)

LCU WITH ISOLATION TRANSFORMER

- ▼ Micro processor based controller
- ▼ Static stabilizer output is 220v +13 %
- ▼ Built-in Isolation transformer
- ▼ Thyristor based static Line conditioner unit.
- ▼ Dynamic response 400V/sec.
- ▼ Built-in high voltage and low voltage protection at input and output with response time of less than 10msec.
- ▼ Modular design for easy replacement of LCU control module.



GENERAL TECHNICAL SPECIFICATIONS

Input Power Supply	Single Phase	Two Phase	Three Phase
Capacity (For Standard Models) Customization can be done based on needs.	5 KVA 7.5 KVA	12.5 KVA 15 KVA 25 KVA 2x7.5 KVA (15 KVA)	15 KVA (3x5 KVA) 25 KVA (3x8.3 KVA)
Model No.	PMU 1. 11-5 PMU 1. 11-7.5	PMU 1. 21-12.5 PMU 1. 21-15 PMU 1. 21-25 PMU 1. 23-15	PMU 1. 33-15 PMU 1. 33-25
Trade Mark	PMU	PMU	PMU
INPUT			
Input Voltage Range	140V-280V or 90-270 Line to Neutral	240V-480V or 155-465 Line to Line	240V-480V or 155-465 Line to Line
Input Current at Lowest Input Voltage	Total KVA/Lowest Input Voltage	Total KVA/Lowest Input Voltage	Total KVA/Lowest Input Voltage
Frequency	47 - 53 Hz	47 - 53 Hz	47 - 53 Hz
OUTPUT			
Rated Output Voltage	220V+10% or 13% Line to Neutral	220V+10% or 13% Line to Neutral	220V+10% or 13% Line to Neutral
Output Current Max. AMPS	Total KVA / Output Voltage	Total KVA / Output Voltage	Total KVA / Output Voltage
System Efficiency	94%	94%	94%
AC DISTRIBUTION (STANDARD)			
Circuit breaker Type	DIN Class C Type	DIN Class C Type	DIN Class C type
EB Input	63A - 1 No. 63A - 1 No.	63A - 1 No. 80A - 1 No. 125A - 1 No.	63A - 1 No. 63A - 1 No.
DG Input	63A - 1 No. 63A - 1 No.	63A - 1 No. 80A - 1 No. 125A - 1 No.	63A - 1 No. 63A - 1 No.
Load Distribution : Site load details and circuit breaker current ratings are configured as per requirement.			
Power Plant (SMPS)	As per Requirement	As per Requirement	As per Requirement
Air Conditioner	As per Requirement	As per Requirement	As per Requirement
Battery Charger	6 Amp (SP)-1No.	6 Amp (SP)-1No.	6 Amp (SP)-1No.
Lighting	6 Amp (SP)-1No.	6 Amp (SP)-1No.	6 Amp (SP)-1No.
Power Point	16Amp (SP)-1No.	16Amp (SP)-1No.	16Amp (SP)-1No.





MECHANICAL			
Dimension in mm	W600XD400XH1200 (5 & 7.5 KVA)	W600XD400XH1400 (12.5 & 15 KVA) W600XD 500XH1600 (2x7.5 KVA & 25 KVA)	W600XD500XH1800 (25 KVA)
Weight incl. Line Conditioner Units (Apprx.)	110/130 Kgs	170/180/220 Kgs	290/340 Kgs
Ingress Protection	IP21	IP21	IP21
Construction	Sheet metal fabricated cabinet of 1.6mm thick sheets for covers and 2 mm thick for hinged door.		
Earthing /Grounding	A common earth busbar provided inside top of the PMU and all the internal earth wires are terminated to the common earth busbar. Provision is made to connect external earth cables.		
Cable entry	Cable entry provision is made at the top of PMU and cable entry holes are provided with rubber grommets or plastic cable glands.		
Foundation holes	PMU grouting holes 4 nos. of 14 mm dia provided at bottom.		
Equipment	Powder coated and Can be provided in any shade based on requirement.		
Packing	Wooden or Cardboard packing with cushion		
ENVIRONMENTAL			
Noise level	< 65 dB	< 65 dB	< 65 dB
Operating Temperature	-5° to +55° C	-5° to +55° C	-5° to +55° C
Storage Temperature	-20° to +80° C	-20° to +80° C	-20° to +80° C
Humidity	RH 95%	RH 95%	RH 95%
STANDARDS			
Conducted Emission	: Meets Class A Group II limits of CISPR 11		
Radiated Emission	: Meets Class A Group II limits of CISPR 11		
Electrical Fast Transient (EFT)	: IEC 61000-4-4:2001		
Electro Static Discharge (ESD)	: IEC 61000-4-2:2001		
Surge Immunity	: IEC 61000-4-5:2001		
R.F. Conducted Immunity	: IEC 61000-4-6:2001		
Environment	: TEC QM 333 B2		
MTBF	: PMU material & workmanship shall be of professional quality and meet the MTBF requirement. The MTBF of the PMU is more than 70000 hrs.		
Safety	: IEC 60950		



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pmu POWER
MANAGEMENT
UNIT

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