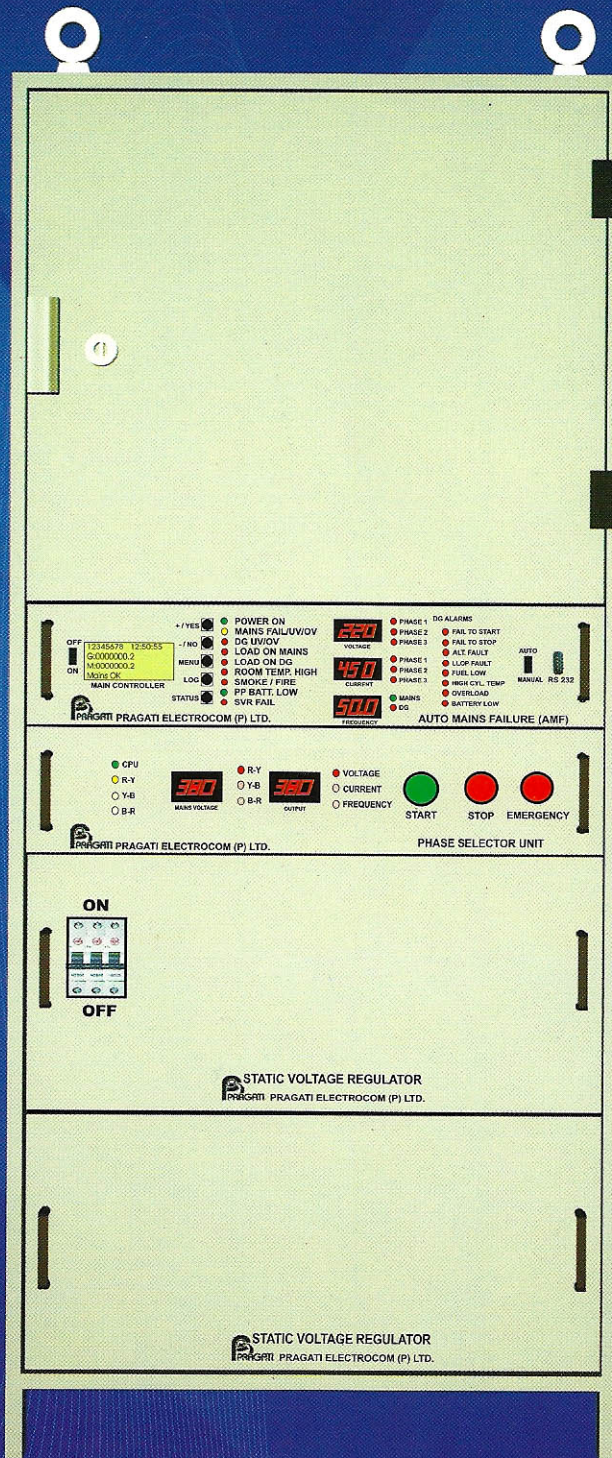


Power Management System

For Telecom Sites

PMS 3000S



Ultimate Power Management Solution with Dual Benefit

Save Power !!

Save Money !!

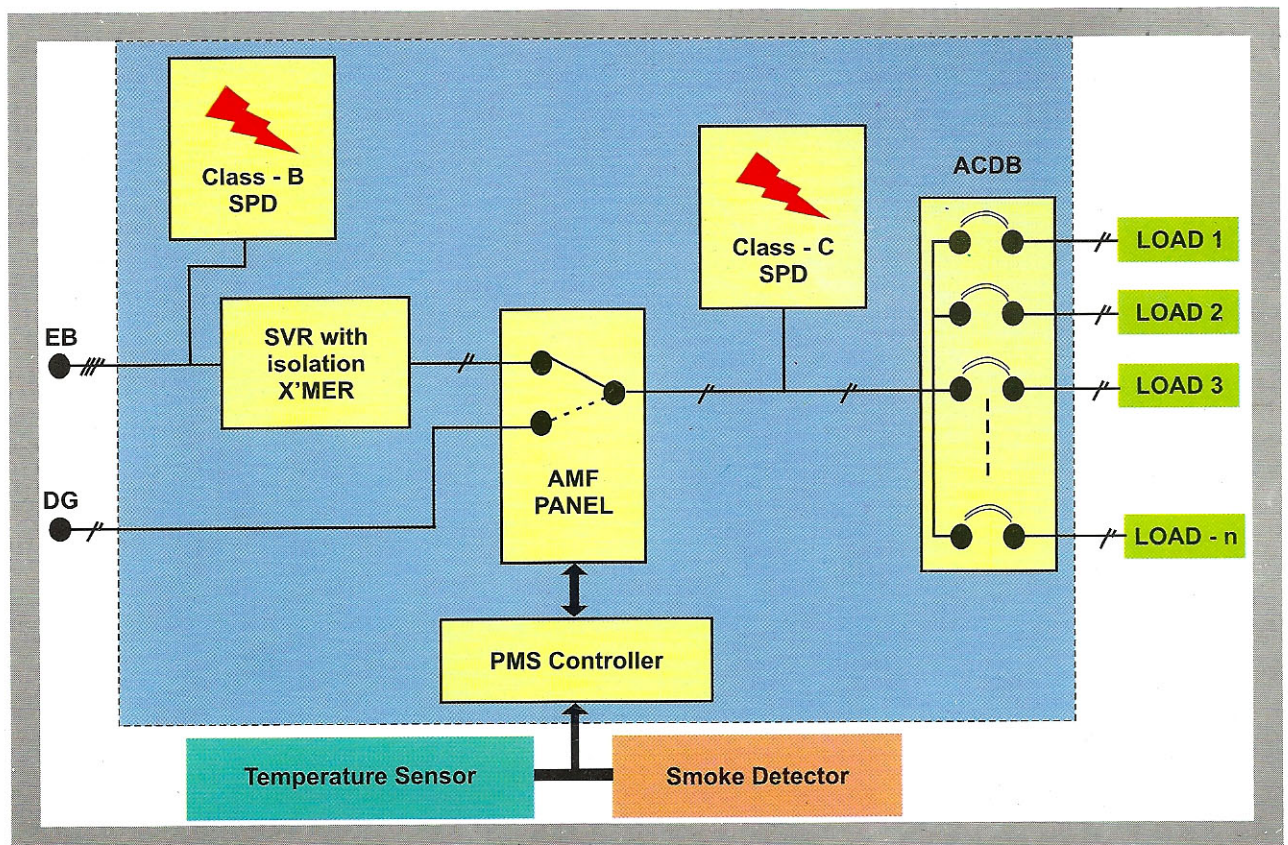
The Power Management System PMS 3000-S is a modular unit to provide stable & conditioned AC power suitable for various equipments at Telecom Site. This PMS has a 3-phase input with Six options:

- A. Single Phase Output with best two phases of the input used for conversion to single phase. Input Line Voltage 240V - 495V :- SP1
- B. Single Phase Output with best two phases of the input used for conversion to single phase. Input Line Voltage 200V - 495V :- SP2
- C. Single Phase Output with best two phases of input used for conversion to single phase. Input Line Voltage 155V - 495V :- SP3
- D. Three Phase Output. Input Line Voltage 240- 495V :- TP1
- E. Three Phase Output. Input Line Voltage 200- 495V :- TP2
- F. Three Phase Output. Input Line Voltage 155- 495V :- TP3

The PMS 3000-S combines the following discrete equipments in a modular single panel:

1. Static Voltage Regulator (SVR) with Isolation Transformer
2. For Single phase Output Unit SP1, SP2, SP3 - Best phase selector
3. AMF (Auto Mains failure) panel for DG sets
4. Fire Alarm System (FAS)
5. AC distribution board (ACDB)
6. Aviation Lamp Power Supply
7. Digital Temperature Sensor & Battery voltage Sensor with fuel saver logic
8. Surge protection devices - Class B & Class C
9. Alarm panel for potential free contacts
10. AC Controller (Optional)
11. Remote Monitoring (Optional)

Block diagram of the Power Management System PMS 3000-S



A) Specifications:

Operating Temp	0°C to 60°C
Operating RH	0% to 95%
Best-phase selection	For Single Phase Output Unit SP1 to SP3 Integrated Auto Phase Selection Unit to select the best two phases out of three to power the IT-SVR's.
Type	Micro controller based, true RMS, Static Voltage Regulator (SVR)
Power rating	5 KVA to 50 KVA
Bypass of IT+SVR	For Three Phase Output Unit – TP1 to TP3 From Mails Input to AMF panel input a bypass switch
Transformer Insulation	Temperature rise of the transformer is as per Class-F Specs
Rated input voltage range	240V to 495V Line – Line SP1, TP1 200V to 495V Line – Line SP2, TP2 155V to 495V Line – Line SP3, TP3
Rated output voltage	220 V ± 8% Line-Neutral (isolated output) for all SVRs and 220V± 5%(optional)
Input Frequency range	47-52 Hz
Efficiency at full load for full	> 95%
Critical dv/dt of Solid State	> 400V / microsec
Protections :	
Voltage protections by SVR (1st level protection) *Can be set as per requirement	Input High Voltage cut-off at 500V. Cut-in at 465V
	Input Low Voltage cut-off at 235V. Cut-in at 265V (the output of the SVR is completely shut-off immediately for HV/LV) (SP1 & TP1)
	Input Low Voltage cut-off at 195V. Cut-in at 265V (the output of the SVR is completely shut-off immediately for HV/LV) (SP2 & TP2)
	Input Low Voltage cut-off at 150V. Cut-in at 265V (the output of the SVR is completely shut-off immediately for HV/LV) (SP3 & TP3)
	Output High Voltage cut-off at 250V (immediate)
Voltage protections by PMS microcontroller (2nd level protection)	Output Low Voltage cut-off at 190V (with delay of 3 sec)
	Input High Voltage cut-off at 500V after 2 sec
	Input Low Voltage cut-off at 235V after 5 sec (SP1 & TP1)
	Input Low Voltage cut-off at 195V after 5 sec (SP2 & TP2) Input Low Voltage cut-off at 150V after 5 sec (SP3 & TP3)
Transformer Insulation	>1000 Mega Ohms
Transformer Input/output	6 kV (measured between the shorted input & shorted output terminals)

B) AMF (Auto Mains failure) panel for DG sets

1. Protections and Controls:

- 1.1 **Mains Protection:** Over & Under Voltage.
- 1.2 **DG Protection:** Over & Under Voltage, Over Load, LLOP, HWT, Low Fuel, Emergency Stop.
- 1.3 **AMF Protection:** MCB's in control & Load circuits, Mechanical Interlock in EB & DG contactors.
- 1.4 **Fire Alarm and Detection**
- 1.5 **Door Open detection**
- 1.6 **Surge Protection (Class B & Class C type)**
- 1.7 **DG Delays:** Load on DG after DG Start, Load on Mains after mains restores, DG Stop delay after load is transferred to mains. Maximum continuous DG run time control.
- 1.8 **DG "Fuel Saver" Logic**
- 1.9 **DG Battery Charger & DG Controller**

2.0 Air Conditioner Controller:

Sequential running of two Air Conditioners by sensing shelter temperature and comparing it with two set points & monitoring compressor run time.

3.0 Measurement & Alarms:

- A. DG set measurements: Voltage, Current, Frequency, Max demand KW, DG accumulated run hours in Auto Mode, DG accumulated run hours in Manual Mode, DG accumulated run hours in all modes. DG energy meter (KWH)
- B. Mains measurements: Voltage, Current, Mains Accumulated Hour, Output KW, Max Demand KW, Mains energy meter (KWH)
- C. LED Indications: Status of all parameters related to Mains & DG.
- D. Alarm system: Potential free contacts for all critical alarms for remote transmission.

4.0 AC distribution unit & Control (ACDB)

- A. Distribution is as per SLDs
- B. Auto / Manual mode of operation for DG start / stop
- C. Aviation lamp Control



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