




Doc No: AES/FM3.2/Spec/01.

Power Control Unit FM 3.2 Technical Specifications

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Technical Specifications

PCU FM 3.2 Specifications				
Ser No.	Parameter	Description		
I	1	Cabinet	Outdoor Cabinet/Indoor Cabinet	
	2		1.6mm CRCA sheet, RAL 7035 for entire cabinet, IP55 standard, powder coated	
	3		Floor mounting	
	4		Front panel is openable with hinged door	
	5		Earth Bus provided at the bottom inner side of the cabinet	
	6		Display and keys are provided inside the cabinet	
	7		MCB are provided inside the cabinet	
	8	W x D x H	600x400x1200	
	9		Grey color Fixed	
	10		Cable Entry is from the bottom of the Panel	
II	1	Integrated System	Surge Protection Device	
	2		Best Phase selection for SVR for Air Conditioners	
	3		3.0 KVA, Static Voltage Regulator for Air Conditioners	
	4		Intelligent Power Management, Monitoring, AMF & Alarm Functions	
	5	Power Capacity	25KVA	
II.A	1	Surge Protection Device	Class C SPD provided	
II.B	1	Best Phase Selection	Selects best phase out of the three phases available in reference to voltage setting	
	2		Time delay provided for change over between phases	
	3		Priority switching R Y B	
	4		Protection against fast transients	
	5		Suitable time and voltage hysteresis provided to avoid chattering of contactors	
	6		Low Cut Off 100V (L-N)(Site selectable)	
	7		High Cut Off 270V (L-N)(Site selectable)	
	8		Indicators: Input and Output Supply ON	
III	1	Static Voltage Regulator	3.0 KVA	
	2		Input 100V - 270V (L-N)	
	3		Output 220±10%V AC (1 Phase Output)	


	4		Power Switching Device: Relays
	5		High voltage cut off: provided
	6		Low Cut Off Voltage: Provided
	7		Over Load Protection: Thro' HRC Fuse provided at the output
	8		Cooling: Natural Air Cooling
IV.A	1	Intelligent Power Management- Measurement & Display	Mains voltage is displayed on the LCD.
	2		DG voltage is displayed on the LCD
	3		load current is displayed on LCD
	4		Mains Frequency is Displayed on LCD
	5		DG Frequency Displayed on LCD
	6		Room Temperature Displayed on LCD
	7		Power Plant voltage is displayed
	8		DG Battery Voltage Displayed on LCD
	9		DG Hour Displayed on LCD
	10		DG KWH Displayed on LCD
	11		Speed in RPM Displayed on LCD
	12		Date and time Displayed on LCD
	13		Mains Run Hours Displayed on LCD
	14		Power Plant Battery Run Hours Displayed on LCD
	15		Regulated Output Voltage to the Air Conditioners Displayed on LCD
	16		Load Current Output to Air Conditioners Displayed on LCD
	17		DG Fuel Level Displayed on LCD
	18		Power Plant Battery AH Displayed on LCD
IV.B	1	Intelligent Power Management- DG Control	Auto Start & Stop of DG with facility to start manually
	2		Crank Attempts (Programmable upto 10 attempts)
	3		Crank time programmable
	4		Start Delay Timer
	5		Stop Delay Timer
	6		DG Run Hour Timer
	7		DG Rest Hour Timer
	8		Periodic Test Timer
	9		DG Under & Over Voltage- Programmable
	10		DG Under & Over Frequency- Programmable



	11		DG Trial Run Delay programmable
	12		DG Trial Run Duration programmable
	13		DG Pre- Heat Duration programmable
	14		DG Crank ON Period programmable
	15		DG Inter Crank Gaps programmable
	16		DG Warm Up Period programmable
	17		DG Cooling Period programmable
	18		DG Stop Pulse Period programmable
	19		DG Battery Low Limit programmable
	20		DG ON if 48V System Battery goes below specified Volts programmable
	21		DG ON if System Battery below Specified AH (programmable from 0AH to 999AH)
	22		DG ON if room temp is above specified Temperature programmable
IV.C	1	Other Controls	Aviation Lamp Control 1.Built in aviation lamp control 2.Resettable timer for easy access 3.Controller switch ON and OFF as per timer settings
	2		Fuel Optimizer 1.Built in fuel optimizer 2.Minimum DG utilization
	3		Built in Fire/Smoke/Door Open Detectors Complete shut down on detection of fire/smoke is provided One fire smoke sensor can be connected.
	4		RS 232 communication Port 1. IPM can be monitored and programmed by using RS 232 port 2.All events recording is available through the com port
IV.D	1	Indications & Alarms (*Alarms)	Mains ON
	2		Load on Mains
	3		provided
	4		Room temperature High*
	5		System Battery Low*
	6		Door Open*
	7		Smoke/Fire*
	8		AC Fault*
	9		Over load*
	10		DG ON
	11		Load on DG

	12		DG Fail to START*
	13		DG Fail to STOP*
	14		Alternator Fail*
	15		LLOP
	16		HCT/HWT*
	17		Over/ Under Speed*
	18		DG Battery Low*
	19		Low Fuel Level*
	20		V-Belt Failure*
	21		DG Contactor Error (In LCD Display)
	22		EB Contactor Error (In LCD Display)
	23		Emergency STOP (In LCD Display)
	24		All alarms are provided using the global alarm and the messages are displayed on the LCD
	25		DG Volt beyond specified Limits
	26		DG Frequency beyond specified Limits
	27		Neutral Fail
	28		RTC fail
	29		EEPROM Fail
	30		AC overload
IV.E	1	Potential Free Contacts	Mains Fail/Mains ON
	2		LLOP
	3		HWT/HCT
	4		DG Fail to START
	5		DG Fail to STOP
	6		Low Level Fuel
	7		Door Open
	8		Fire/Smoke
	9		DG ON/STOP
	10		Room Temperature High
	11		Load on DG
	12		DG Fault
	13		Hooter
	14		V-Belt
	15		Alternator Fail
	16		Periodic Test ON
	17	Global PFC	Neutral Fail
	18		Temperature Sensor Fail

	19		Overload Alarm
	20		DG running under speed
	21		DG voltage not Ok
	22		DG frequency not ok
	23		DG running over speed
	24		DG 12 V battery low
	25		AC SVR fail
	26		AC1 fail
	27		AC2 fail
	28		AC over load
	29		Surge device alarm
	30		48V battery low
	31		48V battery AH not set
	32		Emergency alarm
	33		SMS link fail
	34		Down link fail
	35		RTC fail
	36		EEPROM fail
IV.F	1	Power & Control Circuits	MCB for EB & DG Input
	2		Contactors with AC1 duty for auto changeover
	3		Individual MCB's for load distribution and control circuits
	4		Push buttons for DG START, STOP, EB & DG Contactor ON & OFF
	5		Emergency Push Button for DG Stop
	6		Auto/Manual Selector switch
	7		Battery Charger, SMPS type, 13.8V, 10 Amps
	8		Over load protection
	9		12V 7AH battery is provided
	10		Dual battery charger for IPM Battery
	11		Additional MCB Provided for 12V, & 7AH battery
IV.G	1	AC Distribution MCBs	SP 20A- AC1
	2		SP 20A- AC2
	3		SP 63A- SMPS 1
	4		SP 63A- SMPS 2
	5		SP 16A- Power Point
	6		SP 6A- Lighting Point
	7		SP 6A- Aviation Lamp

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