



Doc No: AES/FM2.4/Spec/01.


Power Control Unit

FM 2.4

Technical Specifications

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Title : PCU FM2.4 Technical Specifications

Issue No Issue : 1

Date : 21st July 2008.

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Ser No.	Parameter	Description	
I	1	Cabinet	The panel is fabricated from 1.6mm CRCA sheet, powder coated and front open able type with hinged door. Earth bus bar is provided on top inner side of the cabinet. The display and keys are available on the front panel, whereas switches and MCB's etc are provided inside the cabinet on opening of front door.
	2		Floor mounting
	3		Front panel is openable with hinged door
	4		Earth Bus provided at the upper side of the cabinet
	5		Display and keys are provided inside the cabinet
	6		MCBs are provided inside the cabinet
	7	W x D x H	600x400x1650
	8		Siemens Grey color Fixed
	9		Cable Entry is from the upper side of the Panel
II	1	SYSTEM CONFIGURATION	<p>The Panel is fitted with the following modules.</p> <ol style="list-style-type: none"> 1) MCCB' for EB input 2) MCB for DG input. 3) Class-C Surge Arrestors on 3 phases. 4) Automatic Best Phase Pair Selector 5) Static Voltage Regulator 6) Generator Controller Unit(AGCU) 7) Fire, smoke, High room temperature detectors with
	2	Power Capacity	25KVA
	3	Mains Input	3 Phases. The best 2 phases selected and given to the Isolation transformer/SVR.
	4	DG Input	1-PHASE, 230V
III	1	Best Phase Selection	An automatic best phase selector, which will select two best phases out of three phases to derive the output. Controlled

			by micro controller based controller which senses phase to phase voltages. The contactor coils are driven by phase to neutral voltage.
	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
IV	1	Static Voltage Regulator	<p>Isolation Transformer with Static Voltage Regulation</p> <p>Load capacity : 25KVA</p> <p>Technology : micro controller based controller, Thyristor tap</p> <p>Change in Transformer secondary side. No of taps : 3</p> <p>I/p ph-ph range : 280-465 (eq PN voltage 165 -270) O/p : 220 +/- 10%</p>
	2		High voltage cut off: provided
	3		Low Cut Off Voltage: Provided
V	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		DG Fuel Level Displayed on LCD
	16		Power Plant Battery AH Displayed on LCD
VI	1	Intelligent Power	Auto Start & Stop of DG with facility to start manually
	2		Crank Attempts (Programmable upto 10 attempts)
	3		Start Delay Timer
	4		Stop Delay Timer
	5		DG Run Hour Timer
	6		DG Rest Hour Timer
	7		Periodic Test Timer
	8		DG Under & Over Voltage- Programmable
	9		DG Under & Over Frequency- Programmable
	10		DG Trial Run Delay programmable
	11		DG Trial Run Duration programmable
	12		DG Pre- Heat Duration programmable
	13		DG Crank ON Period programmable
	14		DG Inter Crank Gaps programmable
	15		DG Warm Up Period programmable
	16		DG Cooling Period programmable
	17		DG Stop Pulse Period programmable
	18		DG Battery Low Limit programmable
	19		DG ON if 48V System Battery goes below specified Volts
	20		DG ON if System Battery below Specified AH (programmable)
	21		DG ON if room temp is above specified Temperature
VII	1	Other Controls	Fuel Optimizer 1.Built in fuel optimizer 2.Minimum DG
	2		RS 232 communication Port
VIII	1	Indications &	Mains ON



	2		Load on Mains
	3		Room temperature High*
	4		System Battery Low*
	5		Over load*
	6		DG ON
	7		Load on DG
	8		DG Fail to START*
	9		DG Fail to STOP*
	10		Alternator Fail*
	11		LLOP
	12		HCT/HWT*
	13		Over/ Under Speed*
	14		DG Battery Low*
	15		Low Fuel Level*
	16		V-Belt Failure*
	17		Emergency STOP (In LCD Display)
	18		All alarms are provided using the global alarm and are displayed on the LCD
	19		DG Volt beyond specified Limits
	20		DG Frequency beyond specified Limits
	21		Neutral Fail
	22		RTC fail
	23		EEPROM Fail
IX	1	Potential Free Contacts	Door open
	2		DG Fail to STOP
	3		Low Level Fuel
	4		Fire/Smoke
	5		DG Fault
	6	Global PFC	Neutral Fail
	7		Temperature Sensor Fail
	8		Overload Alarm
	9		DG running under speed
	10		DG voltage not Ok
	11		DG frequency not ok
	12		DG running over speed
	13		DG 12 V battery low
	14		AC SVR fail



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	15		Room Temperature High
	16		Dg failed to start
	17		DG LLOP
	18		48V battery low
	19		48V battery AH not set
	20		Emergency alarm
	21		SMS link fail
	22		RTC fail
	23		EEPROM fail
X	1	AC Distribution	SP 20A- AC1
	2		SP 20A- AC2
	3		SP 32A- SMPS 1
	4		SP 32A- SMPS 2
	5		SP 32A- SMPS 3
	6		SP 16A- Power Point
	7		SP 6A- Lighting Point
	8		SP 6A- Aviation Lamp