SUPLET®

Technical Specification

Common Redundant Power Supply (CRPS)

SAC550AA

90Vac to 264Vac Input; 12Vdc/45A, 12Vsb/2.1A Output
180Vdc to 300Vdc Input; 12Vdc/45A, 12Vsb/2.1A Output

RoHS Compliant

Features

- Compliance with the RoHS EU Directive 2011/65/EU & (EU)2015/863
- 550W output power
- 90Vac-264Vac/180-300Vdc Input
- 80PLUS® Platinum efficiency
- N+N (N≤3) Redundant
- Hot-pluggable
- Active current sharing
- PMBus® compliant
- Conducted/Radiated EMI Class A Limits
- 40mm*73.5mm*185mm(H*W*D)

Applications

- Repeaters
- Transmitters
- Enterprise Networks
- Industrial equipment
- Switches

Description

The SAC550AA is a common redundant power supply (CRPS). It can operate from 90Vac to 264Vac and 180Vdc to 300Vdc input, and +12/+12Vsb dual outputs. The output power, output voltage and output current can be reported to system. It provides input over/under protection, output over current protection, output over voltage protection, output short circuit and over temperature protection.

Electrical Specifications

Unless otherwise indicated, specifications apply over all operating input voltage, resistive load, and room temperature conditions.

Input Characteristics

Parameters		Units	Specifications			Notes & conditions
			Min.	Typ.	Max.	
AC Input Voltage Range		Vac	90	-	264	1. 90Vac~264Vac, 12Vo, 45A max. load 2.The data above are not as the safety standard for input current
DC Input Voltage Range		Vdc	180	-	300	
AC Rated Input Voltage Range		Vac	100	-	127	
		Vac	200	-	240	
DC Rated Input Voltage		Vdc	-	240	-	
Maximum input current	100≤Vrms≤127	A	-	-	7	Maximum rated input current is being tested at 100Vac and 200Vac
	200≤Vrms≤264	A	-	-	3.5	
	240Vdc	A	-	-	3.5	Maximum rated input current is being tested at 200Vdc.
Frequency		Hz	47	50/60	63	
Power Factor	10%load		0.85	-	-	230Vac/50Hz and 115Vac/60Hz
	20%load		0.94	-	-	
	50%load		0.98	-	-	
	100%load		0.99	-	-	
ITHD	5-10%load	%	-	-	20	230Vac/50Hz and 60 Hz 115Vac/60Hz
	10-20%load	%	-	-	15	
	20-40%load	%	-	-	10	
	40-50%load	%	-	-	8	

	50-100% load	%	-	-	5	
Input Inrush Current		A	-	-	25	25℃, cold start
AC Line Dropout/ Hold-up Time		ms	-	-	10	

Output Characteristics

Parameters		Units	Specifications			Notes & conditions
			Min.	Typ.	Max.	
Output Voltage set point	12V Main	Vdc	11.4	12	12.6	
	12Vsb	Vdc	11.4	12	12.6	
Output current	12V Main	A	1	-	45	90~264Vac
	12Vsb	A	0.1	-	2.1	
Output Power(220)		W	-	550	-	Total power of +12V and +12VSB
Output Power(110)		W	-	550	-	100~240Vac, total power of +12V and +12VSB
Line Regulation		%Vo	-	-	±5	
Temperature Coefficient		%/℃	-	-	±0.01	
Dynamic Loading	12V Main	Vdc	11.4	-	12.6	Frequency Range: 50Hz-5kHz, Step load Size: 60% of max load Load Slew Rate: 0.5A/usec Test Capacitive load:1000uF.
	12Vsb	Vdc	11.4	-	12.6	Frequency Range: 50Hz-5kHz Step load Size: 1.0A Load Slew Rate: 0.5A/usec Test Capacitive load:100uF
Capacitive Load	12V Main	μF	2000	-	22000	
	12Vsb	μF	10	-	3300	
Ripple and Noise	12V Main	mVp-p	-	-	120	100%load, 20MHz bandwidth, being tested with a 104 ceramic capacitor and 470uF electrolytic capacitor(low internal resistance) at 12V main output.

	12Vsb	mVp-p	-	-	120	100%load, 20MHz bandwidth, being tested with a 104 ceramic capacitor and 10uF tantalum capacitor at 12VSB output.
Turn on/off Overshoot		%Vo	-	-	±5	
12V Main Output Rise Time		mS	10	-	70	Time for Vo to rise from 10% of Vo(nom) to 95% of Vo(nom), 100% load
12Vsb Output Rise Time		mS	1	-	25	Time for Vo to rise from 10% of Vo(nom) to 95% of Vo(nom), 100% load
Turn on Delay Time		s	-	-	3	
Hold Time	12V Main	mS	11	-	-	100% Load
	12Vsb	mS	70	-	-	
Current Share		%	-	-	±5	50% load-100% load
Hot-plugging			Support hot-plugging, no insulation breakdown at input terminals			

Alarm Characteristics

Parameter	Units	Specifications			Notes & conditions
		Min.	Typ.	Max.	
Input Under Voltage Alarm	Vac	75	78	81	50% load
	Vdc	162	165	168	
Input Under Voltage Alarm Recovery	Vac	81	84	87	
	Vdc	167	170	173	
Input Over Voltage Alarm	Vac	302	305	308	
	Vdc	327	330	333	
Input Over Voltage Alarm Recovery	Vac	295	298	301	
	Vdc	323	326	329	
Output Large Current Alarm	A	52	55	58	12V output with load

Over Temperature Alarm	℃	64	67	70	Temperature at the module's air inlet

Amber LED blinking at1Hz under power supply alarms.

Protection Characteristics

Parameter		Units	Specifications			Notes & conditions
			Min.	Typ.	Max.	
Input over voltage protection		Vac	305	308	311	
		Vdc	333	336	339	
Input over voltage protection Recovery		Vac	295	298	301	
		Vdc	323	326	329	
Input Under Voltage Protection		Vac	72	75	78	50% load, hysteresis≥5Vac
		Vdc	157	160	163	
Input Under Voltage Protection Recovery		Vac	81	84	87	
		Vdc	167	170	173	
Output Over Voltage Protection	12V Main	Vdc	13	-	14.5	50% load, power-off mode
	12Vsb	Vdc	13	-	14.5	
Output Over Current Protection	12V main	A	55	60	65	Power-off mode Latch-up after four times hiccup.
	12Vsb	A	2.8	-	5	Automatic recovery
Short Circuit Protection	12V main		Power-off mode Latch-up after four times hiccup.			
	12Vsb		Automatic recovery			
Over Temperature Protection		°C	67	70	73	Automatic recovery , hysteresis≥5℃

General Characteristics

Parameter		Units	Specifications			Notes & conditions
			Min.	Typ.	Max.	
Efficiency	10% load	%	82	-	-	230Vac/50Hz, The fan is powered by external

	20% load	%	90	-	-	source, 25℃
	50% load	%	94	-	-	
	100% load	%	91	-	-	
MTBF		Hour	-	-	250,000	80%load, SR332, Issue 3, 45℃
Failure Isolation		It can be isolated after the PSU is failure				

Environment Characteristics

Parameter	Units	Specifications			Notes & conditions
		Min.	Typ.	Max.	
Operating Temperature	℃	0	-	55	
Storage Temperature	℃	-40	-	70	
Relative Humidity	%(H)	5	-	95	Non-condensing, meet the conditions that reaching 95% relative humidity require, dry bulb thermometer 55℃ and wet bulb thermometer 54℃
Operating Altitude	m	0	-	5000	
Cooling	Air cooling				
Vibration	Non-operating, sinusoidal vibration: 5 to 500Hz@0.5gRMS, 0.5 oct/min in each of three mutually perpendicular axes. The test duration shall be 15mins per three vibration. Random vibration: from 5Hz@0.01g^2/Hz to 20 Hz@0.02^2/Hz (slant). From 20 Hz to 500 Hz@0.02^2/Hz (flatness). Input acceleration speed=3.13gRMS. The test duration shall be10 minutes for each axis for a total test duration of 30mins.				
Thermal Shock(transportation)	Non-operation: From -40℃ to +70℃, 50 cycles, 30℃minutes, ≥change time≥15℃ /minutes, exposure time of temperature limit is 30mins for each half cycle.				

Safety Specification

Items	Notes & conditions
Safety Certification	IEC/UL/EN62368 and GB4943
Isolation Voltage (input-output)	1500Vac isolation voltage, test duration 1 minute, leak current less than 10mA, no arcing or breakdown
Isolation Resistance (input-output)	Isolation resistance ≥10MΩ at 90% relative humidity, non-condensing and 500Vdc test voltage

Leakage Current (input-ground)	<1mA(264Vac, 50/60Hz input)
Leakage Resistance	<0.1Ω(40A/2min)

EMC Specification

Parameters		Class	Notes & conditions
Conducted Emission		CLASS A	FCC/ICES, CISPR 22, EN 55032
Radiated Emission		CLASS A	FCC/ICES, CISPR 22, EN 55032
ESD	Air	+/-15kV	EN 61000-4-2, Criterion A
	Contact	+/-8 kV	EN 61000-4-2, Criterion A
RS		80MHz-2GHz, 3V/m, 80%AM, Criterion A	EN61000-4-3
CS		150KHz-80MHz, 3Vrms, 80%AM, Criterion A	EN61000-4-6
Electrical fast transient/burst		+/-2KV, Criterion A	EN61000-4-4
Surge		+/-1KV difference mode; +/-2KV common mode, Criterion A	EN61000-4-5
Voltage dips, short interruptions		Test duration 10ms, dip to 0%UT, Criterion A Test duration 500ms, dip to 70%UT, Criterion C Test duration 200ms, dip to 40%UT, Criterion C Test duration 5000ms, dip to 0%UT, Criterion C	EN61000-4-11

Performances Criterion

A: Normal performance within the specification limits.

B: Temporary degradation or loss of function or performance which is self-recoverable.

C: Temporary degradation or loss of function or performance which requires operator intervention or system reset.

R: Allow of no damage except protective devices, and which could recover after protective devices are replaced.

AC Line Dropout/Hold up Time

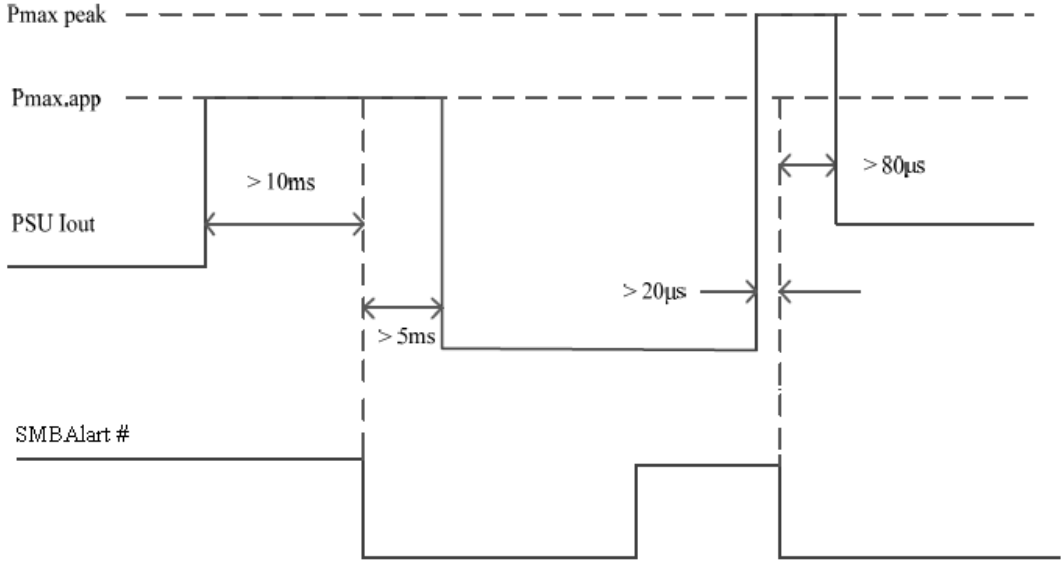
An AC line dropout is defined to be when the rated AC input drops to 0Vac at any phase of the AC line for any length of time. During an AC dropout the power supply shall meet dynamic voltage regulation limits. An AC line dropout of any duration shall not cause tripping of control signals or protection circuits. If the AC dropout lasts longer than the hold up time, the power supply will recover and meet all turn on sequences. The power supply shall meet the AC dropout limits over rated AC voltages and frequencies shown in Table below. A dropout of the AC line for any duration shall not cause damage to the power supply.

Loading during AC dropout/holdup	Holdup time/Dropout duration
100% of rated load	10ms

Peak power

Spec. of peak power

Output	Maximum duration time	CLST peak 20s duration time	Pmax duration time	Pmax peak 100us duration time
12V	PSU rating	Rated+6A	Rated+30A	Rated+45A
12Vsb	2.1A	2.8A	NA	NA



Note: unspecified dotted lines are duration time from alert signal warning to output current low

Mating capacitive loading for Peak power

Peak power	Peak current	System capacitance	Duration time	Output voltage overshoot
Rated+540W	Rated+45A	6x1500uf	100us	±5%

Control Signal

PS-ON signal

PSON# signal is required to remotely turn on/off the power supply module. PSON# is an active low signal that turns on the +12V power rail. When the signal is at logic high voltage, +12V output will be turned off (except for 12Vsb). This signal is pulled to standby voltage by a pull-up resistor internal to the power module. It is required to provide 5mA or above pull-down current from external. Refer to following Table for timing diagram.

PSON# Signal Characteristic

Signal Type	Accepts an open collector/drain input from the system. Pull up to VSB located in power supply.	
PSON# = Low	ON	
PSON# = High or Open	OFF	
	MIN	MAX
Logic level Low(power supply ON)	0V	0.4V
Logic level High(power supply OFF)	2.4V	3.46V
Source current, Vpson = low		4mA

PWOK

PWOK is a power OK signal and will be pulled HIGH by the power supply to indicate that all the outputs are within the regulation limits of the power supply. When any Output voltage falls below regulation limits or when AC power has been removed for a time sufficiently long so that power supply operation is no longer guaranteed, PWOK will be de-asserted to a LOW state. See the following table for a representation of the timing characteristics of PWOK. The start of the PWOK delay time shall inhibited as long as any power supply output is in current limit.

PWOK# Signal Characteristic

Signal Type	Accepts an open collector/drain input from the system. Pull up to VSB located in power supply.	
PWOK = High	Power OK	
PWOK = LOW	Power Not OK	
	MIN	MAX
Logic level Low, Isink = 400uA	0V	0.4V
Logic level High, Isource = 200uA	2.4V	3.46V
Source current, PWOK = high	—	2mA
Sink current, PWOK = low	—	400uA
PWOK rise and fall time	—	100us

SMBalert signal

This signal indicates that the power supply is experiencing a problem that the user should investigate. This shall be asserted due to Critical events or Warning events. The Signal shall activate in case of critical component temperature reached a warning threshold point, general failure, over-current, over voltage, under voltage, failed fan. This signal may also indicate the power supply is reaching its end of life or is operating in an environment exceeding the specified limits.
This signal is to be asserted in parallel with LED turning solid Amber or blink Amber.

SMBAlert# Signal Characteristic

Signal Type	Accepts an open collector/drain input from the system. Pull up to VSB located in power supply.	
Alert# = High	OK	
Alert# = LOW	Power Alert to System	
	MIN	MAX
Logic level Low, Isink = 400uA	0V	0.4V
Logic level High, Isource = 200uA	2.4V	3.46V
Source current, Alert# = high		2mA
Sink current, Alert# = low		400uA
SMB alert# rise and fall time		100us

VIN_GOOD#

This signal is an output to indicate AC power is existence and is within operation range. It should act from high to low level within 4ms only for Vin drops out to zero and input voltage brown-out events. The 4ms timing is defined as Vin = 0 to Vin_GOOD signal low level.

Signal type	Pull-up 1kΩ to internal 3.3 V located in power supply	
VIN_GOOD = High	Input voltage is in operating range	
VIN_GOOD = low	Input voltage is out of operating range	
	MIN	MAX
Logical Level Low, ISINK = 4 mA	0 V	0.4V
Logical Level High, ISINK = 50uA	2.4V	3.46 V
Sink current, VIN_GOOD #=low		4 mA
Sink current, VIN_GOOD # = high		50uA
VIN_GOOD # rise and fall time		400uS

TTL signal

The below table is a TTL signals summary, which presents all the pull-high resistance and pull-up location. The ripple voltage for all TTL signals shall be less than 250mV@B.W=20MHz.

Pin No.	Pin Name	Pin Type（I/O/A）	Active	Pull-up Location	Pull-up Res. Of system(kΩ)	Pull-up Res. Of PSU(kΩ)	Pull-up Vol.(V)
A19	SDA	I/O	-	P	-	10	3.3
A20	SCL	I/O	-	P	--	10	3.3
A21	PSON#	I	Low	P	-	20	3.3
A22	SMBAlert#	O	Low	S/P	>4.7	8.2	<5
A25	PWOK	O	High	P	>4.7	1	3.3

B19	A0	I	-	P	-	10	3.3
B20	A1	I	-	P	-	10	3.3
B22	Smart Redundant Bus	I/O	High	P	-	-	-
B23	12Vout Load Share Bus	A	-	-	-	-	-
B24	Present	Input	Low	P	-	0	GND
B25	Vin_GOOD#	O	High	P	-	1	3.3

Note:
P is PSU, S is system.

Power Supply LED Indicator

LED indicators function in front panel as below. The location of LED shall meet ESD requirements

	Bicolor LED	
Power Supply Conditions	GREEN LED	AMBER LED
No AC power to all power supplies	OFF	OFF
One of unit be supplied AC (1+1 backup)	OFF	ON
The PSU is power-off caused by major failure. Input UVP/OVP, OTP, OCP/OVP(12V main) Fans fault(being damaged, removed or blocked for over 15s)	OFF	ON
PSU alarms when it works High temp(Inlet temperature>62deg(PMBUS read) , Input over/under alarm, output over power, large current, slow fan	OFF	1Hz Blink AMBER
AC input normal, only +12Vsb has output(remote off)	1Hz Blink Green	OFF
Outputs are normal	ON	OFF
Software upgrading	2Hz Blink Green	OFF

Timing & sequence

General timing

Item	Description	Min	Max	Units
$T_{sb\_on\_delay}$	Delay from AC being applied to 12Vsb being within regulation	-	1500	ms

T_{12VSB_rise}	Output voltage rise time(12Vsb)	1	25	ms
T_{12V_rise}	Output voltage rise time from each main output	10	70	ms
$T_{DC\_on\_delay}$	Delay from AC being applied to all outputs voltage being within regulation	-	3000	ms
T_{vout_holdup}	Time 12Vl output voltage stay within regulation after loss of AC	11	-	ms
T_{pwok_holdup}	Delay from loss of AC to deassertion of PWOK	10	-	ms
$T_{pson\_off\_delay}$	Delay from PSON# de-asserted to power supply turning off	-	5	ms
$T_{pson\_on\_delay}$	Delay from PSON# active to output voltages within regulation limits	5	400	ms
T_{pson_pwok}	Delay from PSON# deactive to PSOK being deasserted	-	5	ms
T_{pwok_on}	Delay from output voltages within regulation limits to PWOK asserted at turn on	100	500	ms
T_{pwok_off}	Delay from PWOK deasserted to +12V output dropping out of regulation limits.	1	-	ms
T_{pwok_low}	Duration of PWOK being in the deasserted state during an off/on cycle using AC or the PSON signal.	100	-	ms
T_{sb_vout}	Delay from +12Vsb being in regulation to O/Ps being in regulation at AC turn on	50	1000	ms
T_{12VSB_holdup}	Delay from loss of AC to dessertion of +12Vsb	70	-	ms

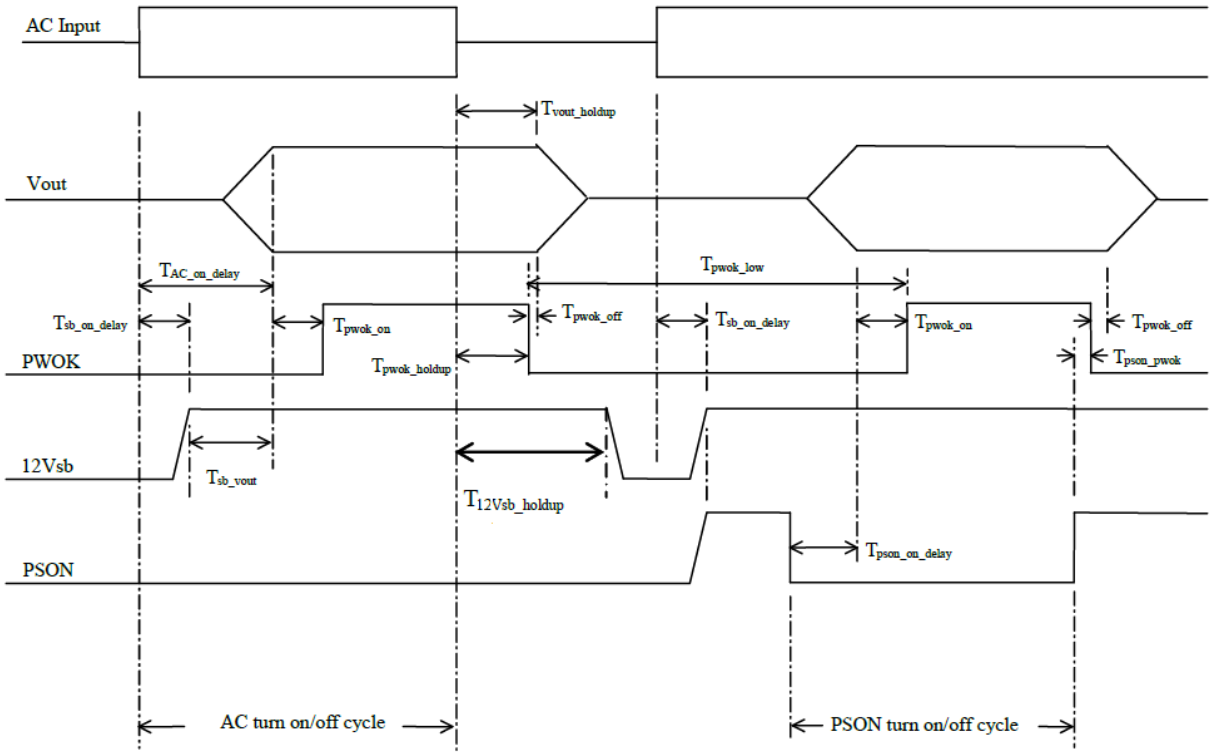


Figure 1 Timing Diagram

Cooling

There is a 40*40*28mm fan in the PSU which is designed for self-cooling and partial system cooling. The fan has double ball bearing and can adjust speed by temperature control. In 1+0 configuration, the air flow is about 22.9CFM at maximum load and maximum temperature decline, normal airflow. Cold air flows from output terminals into PSU. The fan supports speed regulation, rotated speed report and faults alarm. The general noise is less than 70dB at 25℃.

PMBUS commands

Command Code	Designation	Read/Write R/W	Number of Data Bytes	Comment
01h	OPERATION	R/W	1	Power on/off command Power on: default 0x80 Power off: default 0x00 In wireless or other application fields, the PSU outputs are required to recover automatically after the system turn off it via the command. Return 0x00 before automatic recovery, return 0x80 after automatic recovery
02h	ON_OFF_CONFIG	R	1	On/OFF setting, the returned value is defined by signals and polarity in the specification
03h	CLEAR_FAULTS	W	0	Be used to clear all alarms and faults. If the PSU is not required to report warnings and faults, the command will not be carried out.

19h	CAPABILITY	R	1	Be used to determine the contents as follows: 1. Whether the PSU support PEC and SMBALERT. 2. Maximum supported bus speed
20h	VOUT_MODE	R	1	Set reporting data format and coefficient of output voltage, default linear data mode
3Ah	FAN_CONFIG_1_2	R	1	Be used to configure up to two fans associated with one PMBus device. Default duty circle In the application field where more than one fan used, the locations of FAN1 and FAN 2 need to be defined in project SE.
3Bh	FAN_COMMAND_1	R/W	2	Read and regulate duty circle of FAN1
4Ah	IOUT_OC_WARN_LIMIT	R	2	The IOUT_OV_WARN_LIMIT command sets the value of the output current that causes an output overcurrent warning.
78h	STATUS_BYTE	R	1	The STATUS_BYTE command returns one byte of information with a summary of the most critical faults. STATUS_WORD low byte
79h	STATUS_WORD	R	2	The STATUS_WORD command returns two bytes of information with a summary of the unit's fault condition.
7Ah	STATUS_VOUT	R	1	The STATUS_VOUT command returns one data byte of information with output voltage faults and warnings.
7Bh	STATUS_IOUT	R	1	The STATUS_IOUT command returns one data byte of information with output current faults and warnings. The command is followed by the bit status the PSU needs to support.
7Ch	STATUS_INPUT	R	1	The STATUS_INPUT command returns one data byte with contents as follows: whether the input is over/under voltage, whether there is power loss, whether there is over current.
7Dh	STATUS_TEMPERATURE	R	1	The STATUS_TEMPERATURE command returns one data byte with contents as follows: Whether there is over temperature warning/ protection
7Eh	STATUS_CML	R	1	CML status command
81h	STATUS_FANS_1_2	R	1	The STATUS_FANS_1_2 command reports on the status of any fans installed in position 1 or position 2.
82h	STATUS_FANS_3_4	R	1	The STATUS_FANS_3_4 command reports on the status of any fans installed in position 3 or position 4.
88h	READ_VIN	R	2	Read input voltage analog signal, linear data
89h	READ_IIN	R	2	Read input current analog signal, linear data
8Bh	READ_VOUT	R	2	Read output voltage analog signal, linear data
8Ch	READ_IOUT	R	2	Read output current analog signal, linear data

8Dh	READ_TEMPERATURE_1	R	2	Read Temperature 1 information, linear data. The command will be used as default if only one temperature is required to report.
90h	READ_FAN_SPEED_1	R	2	Read FAN 1 speed, linear data, unit: Rpm. The command will be used as default if only one fan speed is required to report
96h	READ_POUT	R	2	Read output power Read each output power via PAGE command when there are multi-outputs.
97h	READ_PIN	R	2	Read input power
98h	PMBUS_REVISION	R	1	PMBUS_REVISION command stores or reads the revision of the PMBus to which the device is compliant.. Returned value default as 0x22, which indicates that it support V1.2
99h	MFR_ID	Read-block	Variable	Be used to either set or read the manufacturer's ID Return manufacturer's English name.
9Ah	MFR_MODEL	Read-block	Variable	The MFR_MODEL command is used to either set or read the manufacturer's model number. For custom PSU and self-developed module, it returns component name defined in the specification such as PPC32 A009.
9Bh	MFR_REVISION	Read-block	Variable	The MFR_REVISION command is used to either set or read the manufacturer's revision number. For custom PSU and self-developed module, it returns revision defined in the specification such as V1.1
9Ch	MFR_LOCATION	Read-block	Variable	The MFR_REVISION command is used to either set or read the manufacturing location of the device. The format is country+city such as CHINA SHENZHEN
9Dh	MFR_DATE	R/W block	Variable	The MFR_DATE command is used to either set or read the date the device was manufactured The format is XXMMDD. The block number is specified to 0x06 in the protocol
9Eh	MFR_SERIAL	R/W block	Variable	The MFR_SERIAL command is used to either set or read the manufacturer's serial number of the device.
A0h	MFR_VIN_MIN	R	2	The MFR_VIN_MIN command sets or retrieves the minimum rated value, in volts, of the input voltage.
A1h	MFR_VIN_MAX	R	2	The MFR_VIN_MAX command sets or retrieves the maximum rated value, in volts, of the input voltage.
A2h	MFR_IIN_MAX	R	2	The MFR_IIN_MIN command sets or retrieves the maximum rated value, in amperes, of the input current.
A3h	MFR_PIN_MAX	R	2	The MFR_PIN_MIN command sets or retrieves the maximum rated value, in

				watts, of the input power.
A4h	MFR_VOUT_MIN	R	2	The MFR_VOUT_MIN command sets or retrieves the minimum rated value, in volts, to which the output voltage may be set.
A5h	MFR_VOUT_MAX	R	2	The MFR_VOUT_MAX command sets or retrieves the maximum rated value, in volts, to which the output voltage may be set.
A6h	MFR_IOUT_MAX	R	2	The MFR_IOUT_MAX command sets or retrieves the maximum rated value, in amperes, to which the output may be loaded.
A7h	MFR_POUT_MAX	R	2	The MFR_POUT_MAX command sets or retrieves the maximum rated output power, in watts, that the unit is rated to supply.
A8h	MFR_TAMBIENT_MAX	R	2	The MFR_TAMBIENT_MAX command sets or retrieves the maximum rated ambient temperature, in degrees Celsius, in which the unit may be operated.
A9h	MFR_TAMBIENT_MIN	R	2	The MFR_TAMBIENT MIN command sets or retrieves the minimum rated ambient temperature, in degrees Celsius, in which the unit may be operated.

FRU Data

Item	Address	Value	Description/Area Type
1	0000H	0x01	Format Version/Common Header
2	0001H	0x01	Internal Use Area Offset
3	0002H	0x00	Chassis Info Area Offset
4	0003H	0x00	Board Info Area Offset
5	0004H	0x03	Product Info Area Offset
6	0005H	0x0B	Multi Record Area Offset
7	0006H	0x00	Pad
8	0007H	0xF0	Common Header Check Sum(100H-Lower Byte(Sum of (00H-06H))
1	0008H	0x01	Internal Use Area
2	0009H	0xXX	
3	000AH	0xXX	
4	000BH	0xXX	
5	000CH	0xXX	
6	000DH	0xXX	
7	000EH	0xXX	
8	000FH	0xXX	
9	0010H	0xXX	
10	0011H	0xXX	
11	0012H	0xXX	
12	0013H	0xXX	

13	0014H	0xXX	
14	0015H	0xXX	
15	0016H	0xXX	
16	0017H	0xXX	
1	0018H	0x01	Product Area Format Version 7:4 - reserved, write as 0000b 3:0 - format version number = 1h for this specification
2	0019H	0x08	Product Area Length (in multiples of 8 bytes)
3	001AH	0x00	Language code,0=English
4	001BH	0xCA	Manufacturer Name type/length byte
5	001CH	0x53	S
6	001DH	0x55	U
7	001EH	0x50	P
8	001FH	0x4C	L
9	0020H	0x45	E
10	0021H	0x54	T
11	0022H	0x20	Blank
12	0023H	0x20	Blank
13	0024H	0x20	Blank
14	0025H	0x20	Blank
15	0026H	0xCC	Product Name type/length byte
16	0027H	0x53	S
17	0028H	0x41	A
18	0029H	0x43	C
19	002AH	0x35	5
20	002BH	0x35	5
21	002CH	0x30	0
22	002DH	0x41	A
23	002EH	0x41	A
24	002FH	0x20	Blank
25	0030H	0x20	Blank
26	0031H	0x20	Blank
27	0032H	0x20	Blank
28	0033H	0xCC	Product Part/Model Number type/length byte
29	0034H	0x53	S
30	0035H	0x41	A
31	0036H	0x43	C
32	0037H	0x35	5
33	0038H	0x35	5
34	0039H	0x30	0

35	003AH	0x41	A
36	003BH	0x41	A
37	003CH	0x20	Blank
38	003DH	0x20	Blank
39	003EH	0x20	Blank
40	003FH	0x20	Blank
41	0040H	0xC3	Product Version type/length byte
42	0041H	0x31	1
43	0042H	0x2E	.
44	0043H	0x30	0
45	0044H	0xCF	Product Serial Number type/length byte
46	0045H	0xXX	Need to consistent with SPEC label
47	0046H	0xXX	Need to consistent with SPEC label
48	0047H	0xXX	Need to consistent with SPEC label
49	0048H	0xXX	Need to consistent with SPEC label
50	0049H	0xXX	Need to consistent with SPEC label
51	004AH	0xXX	Need to consistent with SPEC label
52	004BH	0xXX	Need to consistent with SPEC label
53	004CH	0xXX	Need to consistent with SPEC label
54	004DH	0xXX	Need to consistent with SPEC label
55	004EH	0xXX	Need to consistent with SPEC label
56	004FH	0xXX	Need to consistent with SPEC label
57	0050H	0xXX	Need to consistent with SPEC label
58	0051H	0xXX	Need to consistent with SPEC label
59	0052H	0xXX	Need to consistent with SPEC label
60	0053H	0x20	Blank
61	0054H	0xC0	Asset Tag type/length byte
62	0055H	0xC0	FRU File ID type/length byte
63	0056H	0xC1	End of Fields
64	0057H	0xXX	CHECKSUM(100H-LOWBYTE(Sum of(18H-56H)))
1	0058H	0x00	Record Type ID 0x00 = Power Supply Information
2	0059H	0x02	7:7 – End of list 6:4 – Reserved, write as 000b 3:0 – Record Format version (=2h unless otherwise specified)
3	005AH	0x18	Record Lenth of MutiRecord
4	005BH	0xXX	Record Checksum(100-LOWBYTE(Sum of(5DH-74H)))
5	005CH	0xXX	Header Checksum(100-LOWBYTE(Sum of(58H-5BH)))
1	005DH	0x26	15:12 – Reserved, write as 0000b 11:0 - Overall capacity (watts) (LSB First) 550W
2	005EH	0x02	

3	005FH	0x26	Peak VA 550W
4	0060H	0x02	
5	0061H	0x19	Inrush Current 25A
6	0062H	0x0A	Inrush Interval 10ms
7	0063H	0x10	Low end Input voltage range 1 (10mV, LSB First) 100V
8	0064H	0x27	
9	0065H	0x9C	High end Input voltage range 1 (10mV, LSB First) 127V
10	0066H	0x31	
11	0067H	0x20	Low end Input voltage range 2 (10mV, LSB First , Zero if single range) 200V
12	0068H	0x4E	
13	0069H	0xC0	High end Input voltage range 2 (10mV, LSB First , Zero if single range) 240V
14	006AH	0x5D	
15	006BH	0x32	50Hz Low end Input frequency range
16	006CH	0x3C	60Hz High end Input frequency range
17	006DH	0x0A	Input dropout tolerance in ms(10ms)
18	006EH	0x0E	Binary flags: 7:5 – Reserved, write as 0000b 4:4 – Tachometer pulses per rotation/Predictive fail pin polarity 3:3 – Hot Swap Support 2:2 – Autoswitch 1:1 - Power factor correction 0:0 - Predictive fail support
19	006FH	0x5D	0:7 Peak Wattage(LSB) 605W
20	0070H	0xA2	11:8 PeakWattage(MSB)/12:15 Time in Seconds 10S
21	0071H	0x00	Combined Watt Outputs 7:4 V1 and 3:0 V2
22	0072H	0x00	Combined Watt (LSB)
23	0073H	0x00	Combined Watt(MSB)
24	0074H	0x00	Predictive fail tach lower threshold(RPS)
1	0075H	0x01	Record Type ID 0x01 = DC Output Information Record
2	0076H	0x02	7:7 End of list,6:4 = 000B,3:0 Record Format Version = 2
3	0077H	0x0D	Record Lenth of MutiRecord
4	0078H	0xXX	Record Checksum(100-LOWBYTE(Sum of(7AH-86H)))
5	0079H	0xXX	Header Checksum(100-LOWBYTE(Sum of(75H-78H)))
1	007AH	0x81	Output information 7:7 – Standby 6:4 – Reserved, write as 000b 3:0 – Output number +12VSB
2	007BH	0xB0	Nominal voltage (10 mV) 12.0V
3	007CH	0x04	

4	007DH	0x74	Maximum negative voltage(10 mV) 11.4V
5	007EH	0x04	
6	007FH	0xEC	Maximum positive voltage(10 mV) 12.6V
7	0080H	0x04	
8	0081H	0x78	Ripple and Noise pk-pk 10Hz to 30 MHz (mV) 120mV
9	0082H	0x00	
10	0083H	0x00	Minimum Current Draw(mA) 0A
11	0084H	0x00	
12	0085H	0x34	Maximum Current Draw(mA) 2.1A
13	0086H	0x08	
1	0087H	0x01	Record Type ID 0x01 = DC Output Information Record
2	0088H	0x82	7:7 End of list,6:4 = 000B,3:0 Record Format Version = 2
3	0089H	0x0D	Record Lenth of MutiRecord
4	008AH	0xXX	Record Checksum(100-LOWBYTE(Sum of(8CH-98H)))
5	008BH	0xXX	Header Checksum(100-LOWBYTE(Sum of(87H-8AH)))
1	008CH	0x01	Output information 7:7 – Standby 6:4 – Reserved, write as 000b 3:0 – Output number +12V
2	008DH	0xB0	Nominal voltage (10 mV) 12.0V
3	008EH	0x04	
4	008FH	0x74	Maximum negative voltage(10 mV) 11.4V
5	0090H	0x04	
6	0091H	0xEC	Maximum positive voltage(10 mV) 12.6V
7	0092H	0x04	
8	0093H	0x78	Ripple and Noise pk-pk 10Hz to 30 MHz (mV) 120mV
9	0094H	0x00	
10	0095H	0x00	Minimum Current Draw(mA) 0A
11	0096H	0x00	
12	0097H	0xC8	Maximum Current Draw(mA) 45A
13	0098H	0xAF	

Check list :

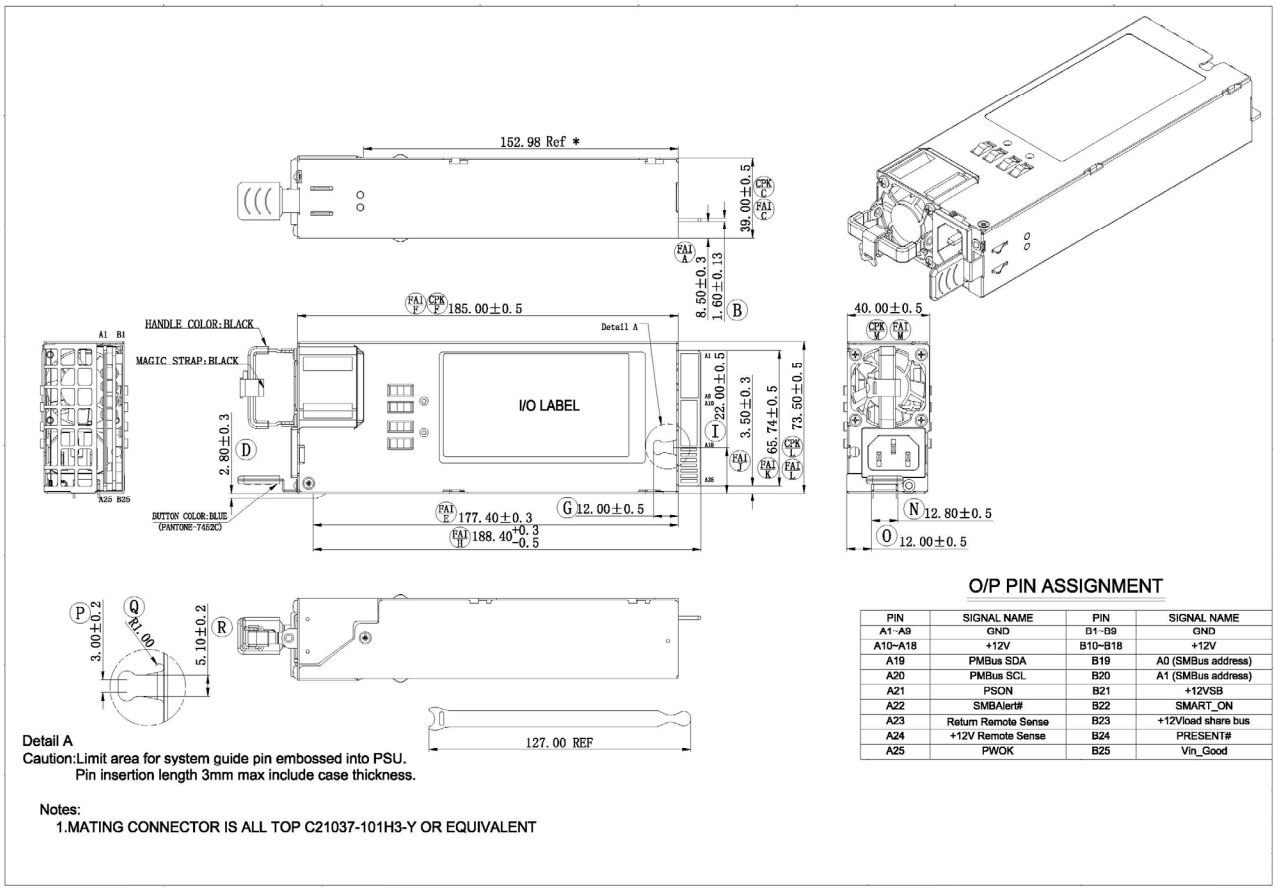
No.	Item	Address	Description
1	Checksum1	0x0007H	100H-(Low Byte Sum of(00H~06H))
2	Checksum2	0x0057H	100H-(Low Byte Sum of(18H~56H))
3	Checksum3	0x005BH	100H-(Low Byte Sum of(5DH~74H))
4	Checksum4	0x005CH	100H-(Low Byte Sum of(58H~5BH))
5	Checksum5	0x0078H	100H-(Low Byte Sum of(7AH~86H))

6	Checksum6	0x0079H	100H-(Low Byte Sum of(75H~78H))
7	Checksum7	0x008AH	100H-(Low Byte Sum of(8CH~98H))
8	Checksum8	0x008BH	100H-(Low Byte Sum of(87H~8AH))
9	Manufacturer Name	1CH~21H	Use the ASCII code "SUPLET"
10	Product Name	27H~2EH	Use the ASCII code "SAC550AA"
11	Part/Module No.	34H~3BH	Use the ASCII code "SAC550AA"
12	Product Version No.	41H~43H	Use the ASCII code "1.0"
13	Product Serial No.	45H~52H	Use the ASCII code Need to consistent with SPEC label
14	Unused Area	99H~FFH	0x00

Mechanical Characteristics

Outline dimension
Width: 73.5mm
Height: 40mm
Depth: 185mm excluding golden finger

Dimensions as below



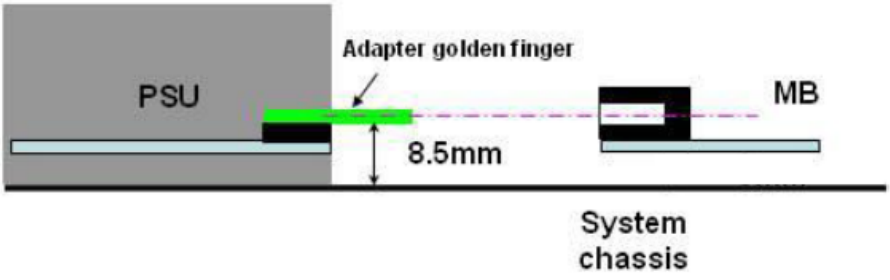
Detail A
Caution:Limit area for system guide pin embossed into PSU.
Pin insertion length 3mm max include case thickness.

Notes:
1.MATING CONNECTOR IS ALL TOP C21037-101H3-Y OR EQUIVALENT

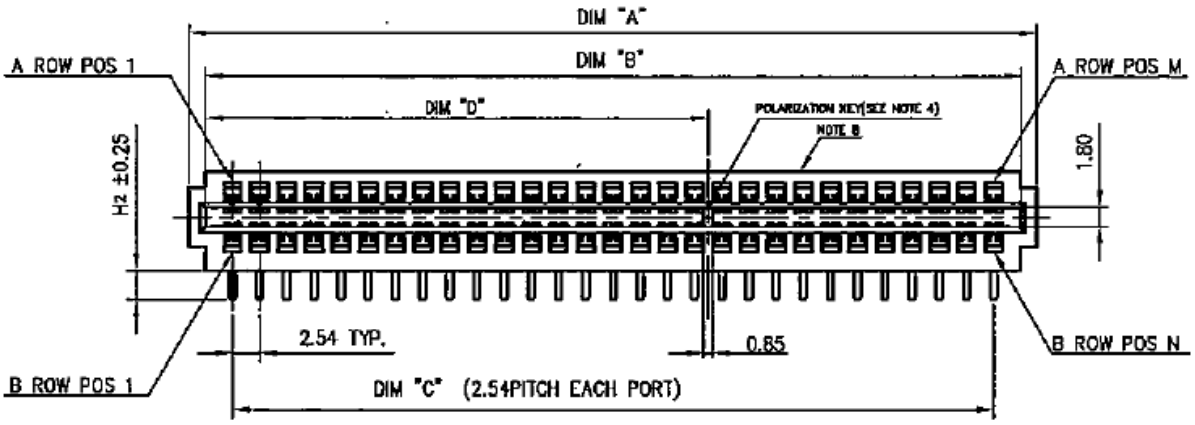
O/P PIN ASSIGNMENT

PIN	SIGNAL NAME	PIN	SIGNAL NAME
A1~A9	GND	B1~B9	GND
A10~A18	+12V	B10~B18	+12V
A19	PMBus SDA	B19	A0 (SMBus address)
A20	PMBus SCL	B20	A1 (SMBus address)
A21	PSON	B21	+12VSB
A22	SMBAlert#	B22	SMART_ON
A23	Return Remote Sense	B23	+12Vload share bus
A24	+12V Remote Sense	B24	PRESENT#
A25	PWOK	B25	Vin_Good

The height of adapter golden finger to 8.5mm



Gold finger pin assignment as below:

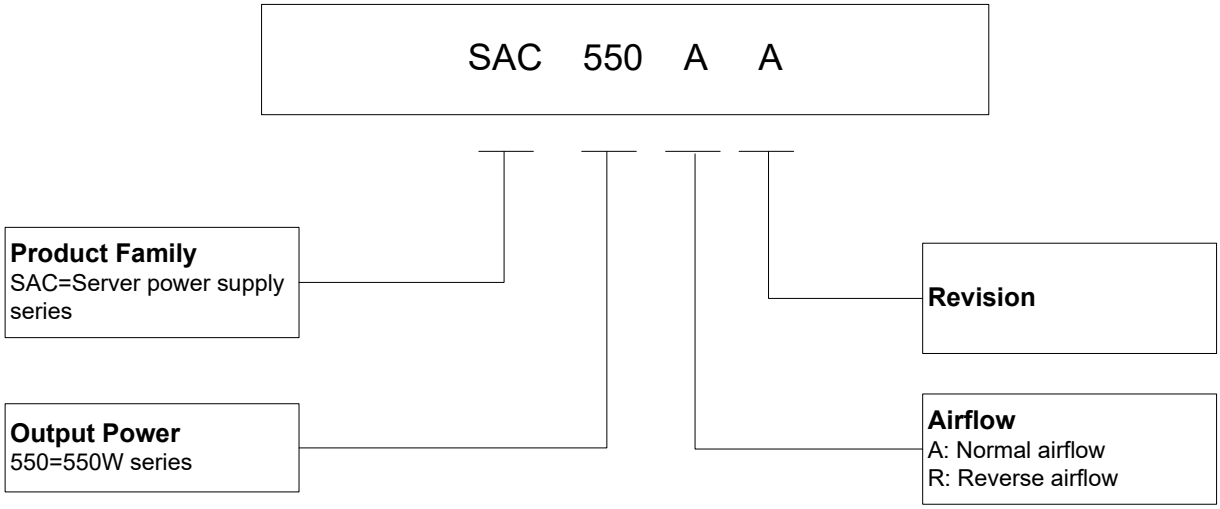


Connector vendor: FCI
Connector family: High Power Edge
Connector part number: 10035388-102LF

Pin No.	Symbol	Pin Type	Function
A1-A9, B1-B9	GND	Isolated Ground	12V Main and 12VSB Standby Power Return; long pin length
A10-A18, B10-B18	12V	Isolated Power	12V Main Output; standard pin length
A19	SDA	I/O	SMBus/PMBus Data; short pin length
A20	SCL	Input	SMBus/PMBus Clock; 100KHz short pin length
A21	PSON	Input	Active Low ; 12V Main output ON/OFF Control; short pin length
A22	SMBus ALERT#	Output	Active Low; interrupt line for devices that want to trade their ability to master for a pin; standard pin length
A23	RETURNS	Analog Input	12v Main Output Remote Sense -; standard pin length
A24	+12VRS	Analog Input	12V Main Output Remote Sense +; standard pin length
A25	PWOK	Output	PWOK Active High, indicates 12V Main is valid; standard pin length
B19	A0	Input	PMBus Address Bit 0; standard pin length
B20	A1	Input	PMBus Address Bit 1; standard pin length
B21	12VSB	Isolated Power	12V Standby Output; standard pin length
B22	CR_1	Analog Input	Smart; standard pin length

B23	12LS	Analog I/O	12V Main Output Load Current Sharing; standard pin length
B24	Present	Output	PSU is present or not; standard pin length
B25	VIN_GOOD	Output	Short; Indicate the status of input voltage

Naming Rules On Models



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