



Features :

- Seamless switching between main and backup power
- UART 3.3 V communication protocol can be customized
- Protections: Short circuit、Overload、Battery reverse polarity
- 120% peak power capability, Main power long-term
- Accurate AC input voltage, output voltage, output current detection
- Mandatory emergency function, battery maintenance function
- Independent lighting electrical detection, fire alarm controller linkage emergency control signal
- Battery pack inspection (reserved interface)
- Program-controlled air cooling

Application :

- Applied to fire emergency lighting and evacuation indication system, including centralized power supply non-centralized control type and centralized control type

Specification

MODEL		CFS-500-41
INPUT	VOLTAGE RANGE	187~253VAC
	FREQUENCY RANGE	47~63Hz
	Backup power voltage	36VDC /Range: 27~42VDC
	EFFICIENCY(Typ.)	91%
	AC CURRENT(Typ.)	4A/230VAC
	INRUSH CURRENT(Typ.)	40A/230VAC (cold start)
	LEAKAGE CURRENT	<0.3mA/240VAC
OUTPUT	DC VOLTAGE	41.5V
	CURRENT RANGE	0~12A
	RATED POWER	500W (Including charging channel)
	RIPPLE&NOISE(max.)	420mVp-p
	VOLTAGE TOLERANCE	±2.0%
	LINE REGULATION	±1%
	LOAD REGULATION	±2.0%
	OVER SHOOT (max.)	5%Vout
	SETUP TIME (max)	3S
	CAPACITIVE LOAD (min)	10000uF
	CONVERSION TIME	0mS
PROTECTION	OVER LOAD	120%~150% rated output power/Self-recovery
	SHORT CIRCUIT Note6	When the main power is short-circuited, the power goes into the protection mode, and the fault can be recovered automatically. When the backup power is connected, the battery fuse needs to be installed at the battery end. If the output is short-circuited, the fuse will fuse, if the output current does not reach the fuse value, the power supply will turn off the output, after the failure to resume
	BATTERY REVERSE	no damage,recovers after fault condition is removed
BACKUP POWER MANAGEMEN	CHARGING CURRENT	1.9A/Range:1.8~2.0A
	FIOAT CHARGING VOLTAGE	40.8VDC/Range:39.8~41.2VDC
	FIOAT CHARGING VOLTAGE	34VDC/Range:33.2~34.8VDC
ENVIRONMENT	WORKING TEMP,HUMIDITY	-10~+50°C, 20~90%RH non-condensing
	STORAGE TEMP,HUMIDITY	-40~+60°C, 10~95%RH
	ALTITUDE	≤3000m
	Heat dissipation mode	Program-controlled air cooling
Electromagnetic compatibility immunity	Safety standards	GB4717-2005、GB14287.1-2014 and other standards for the power part of the requirements
	Withstand voltage	I/P-O/P 3KVAC,I/P-FG 1.5KVAC,FG-O/P 0.5KVAC
	Isolation resistance	I/P-O/P, I/P-FG, O/P-FG:100MΩ/500Vdc/25°C/70%RH

Specification

		Parameter	Standard	Test Level / Note	
Electromagnetic compatibility immunity	Electromagnetic compatibility emission	Conducted emission	BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22 CAN ICES-3(B)/NMB-3(B),CNS13438,GB17625.1EAC TP TC 020,MSIP KN32	----	
		Radiated emission	BS EN/EN55032(CISPR32),FCC PART 15 / CISPR22 CAN ICES-3(B)/NMB-3(B),CNS13438,GB17625.1EAC TP TC 020,MSIP KN32	----	
		Harmonic current	BS EN/EN61000-3-2,GB9254	----	
		Voltage flicker	BS EN/EN61000-3-3	----	
			BS EN/EN55035		
	Electromagnetic compatibility immunity		Parameter	Standard	Test Level /Note
			ESD	BS EN/EN61000-4-2	Level 4, 8KV /15KV
			RF field susceptibility	BS EN/EN61000-4-3	Level 4
			EFT bursts	BS EN/EN61000-4-4	Level 3, 2KV
			Surge susceptibility	BS EN/EN61000-4-5	Level 3, 1KV
			Conducted susceptibility	BS EN/EN61000-4-6	Level 4
			Magnetic field immunity	BS EN/EN61000-4-8	Level 4
	Voltage dips , interruption	BS EN/EN61000-4-11			
OTHERS	DIMENSION	292.5*139*73mm			
	Warranty	18 months			
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. Line regulation ,voltage must be measured from the output terminal. 5. Efficiency needs to be measured when the backup power is in a floating charge state				

Specification

Mandatory emergency function: The forced emergency interface adopts two modes of 2.54-2P terminal and self-locking stroke switch. If the forced emergency interface is short-circuited or the stroke switch is pressed, the power supply enters the forced emergency state, under this condition, the function of back-up over-discharge protection is invalid, the strong-up interface short circuit is removed, and the power supply returns to normal working state.

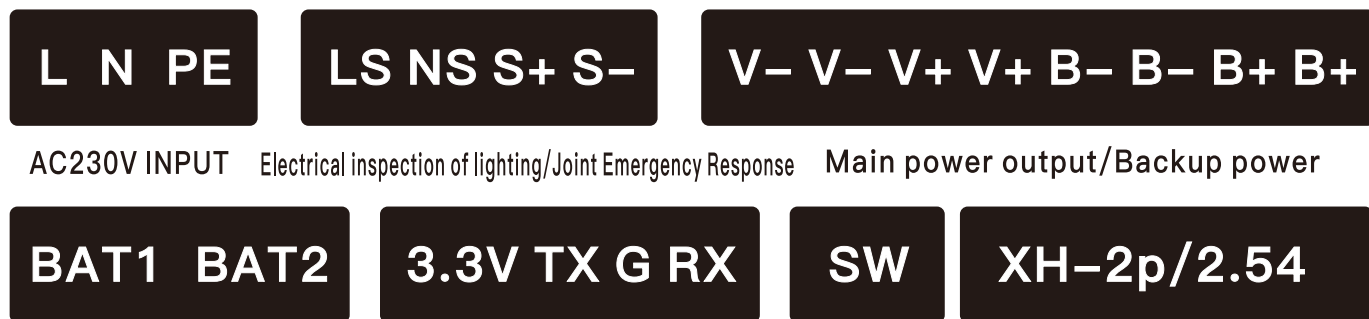
Lighting 220VAC detection function: Lighting 220VAC detection interface, using KF128-2P screw terminal (5.0 pitch), lighting 220VAC once the loss of the report signal to the lamp control equipment, used to start lighting.

Fire alarm control linkage emergency function: The function is controlled by the switch quantity, the switch is closed (short circuit) then enters the normal emergency mode and reports.

Communication function: The power supply uploads various fault signals to the controller (charging port short circuit, standby open circuit, output overload, battery under-voltage fault, output open circuit, main power fault, battery sampling line open circuit/short circuit), power supply working state (strong up mode, manual mode, automatic mode), charging state, single battery voltage (optional), main voltage, output voltage, output current, charging limit voltage, overdischarge voltage, etc., see the details of the communication protocol. The precision of the main voltage (50Hz) is $\pm 2\%$ (minimum resolution is 1v), the error of the DC voltage sampling value and the actual value is less than or equal to 0.5 V, the current sampling value and the actual value error is less than 0.9 a, and according to the instruction of the controller, change the working state of the power supply. UART 3.3 V communication mode is used between power supply and emergency lighting controller, and XH2.54-4P connector is used for communication interface.

Expand the function: Through the external module, can support isolation of 5V/2 output, isolation of 232 communication functions.

Schematic diagram of product wiring:



Stand by for inspection/Reserve Communication interface Strong Start button, strong start interface

Product installation dimension diagram:

