1500 Watt, CSF1500 Series, Fully Enclosed (Single Output)

- Universal AC Input 90-264 VAC
- Fully Enclosed, Chassis Mounting
- Output Trim 70-100%
- Remote On/Off / Remote Sense
- Parallel / Current Share, Output Good Signal
- Full Approvals UL/C-UL/CE, Low Cost and Small Size
- Protected For Over Voltage / Over Current
- Built-in Inrush Current Protection
- 4 Year Warranty

Specification

Input Voltage.....90~264 VAC, 47~63 Hz
Inrush Current..... 60 A typ @ 240 VAC
Output Voltage..... See table below
Output Voltage Trim..... 70 ~ 100 % Typical
Remote ON/OFF..... Available
Remote Sensing..... Available
Auxiliary Power(AUX) .....12V / 1A for Remote ON/OFF control
Alarm Signal..... ..... POK (Open collector output)
Parallel/Series Operation..... Available
Line Regulation..... +/-1%
Load Regulation..... +/- 1%
Operating Temperature..... -10°C to 70 °C, plus derating
Storage Temperature..... -20 °C to +85 °C
Safety Standards..... UL, C-UL, CE
EMC Standards..... Complies with FCC part 15, VCCI-A, CISPR22-A EN55022-A
Dimensions..... 330(L) x 126.5(W) x 82(H).
Weight..... 3.8Kg each

Models and Ratings

Model	Output Voltage	Output Current	Efficiency
CSF1500-05	5 V	240 A	80%
CSF1500-09	9 V	150 A	85%
CSF1500-12	12 V	125 A	87%
CSF1500-15	15 V	100 A	87%
CSF1500-24	24 V	63 A	90%
CSF1500-28	28 V	54 A	90%
CSF1500-36	36 V	42 A	90%
CSF1500-48	48 V	32 A	91%

Please see next pages for connections and mechanical details

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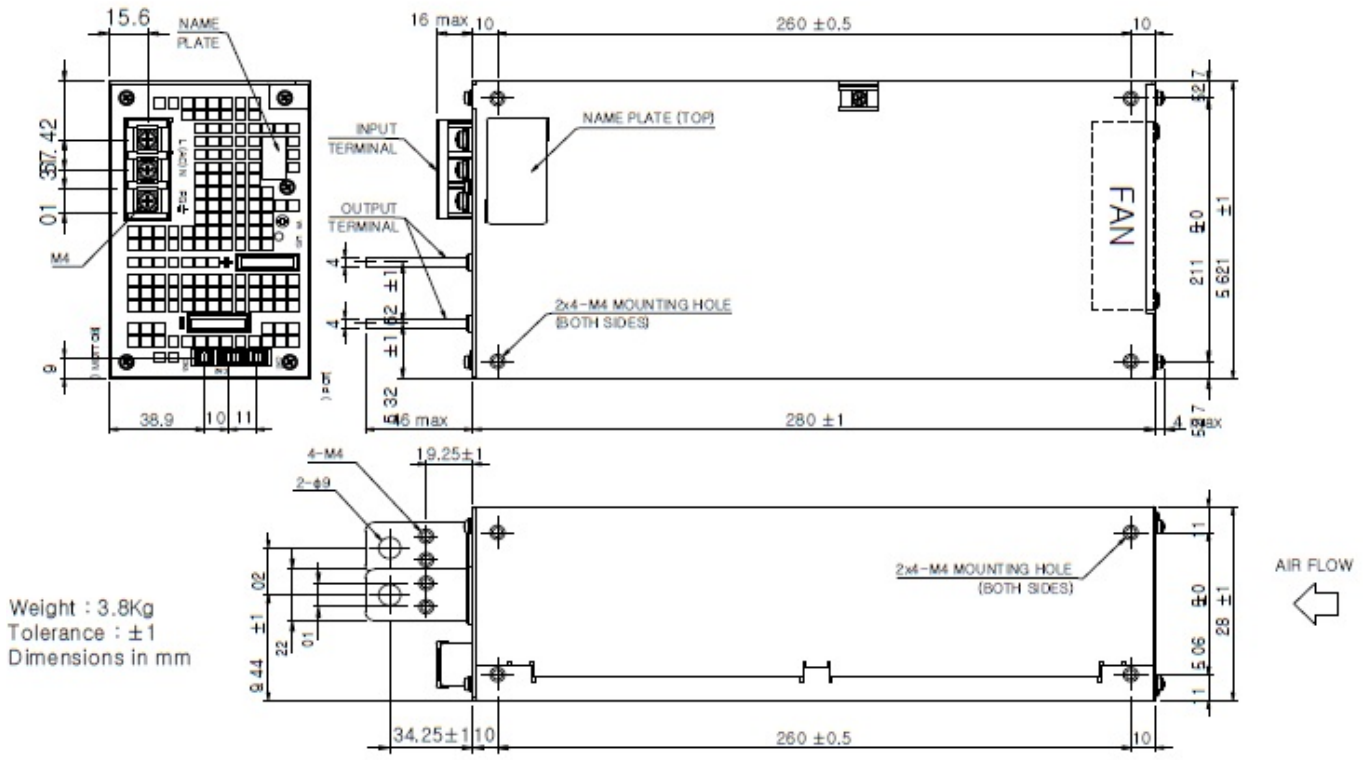
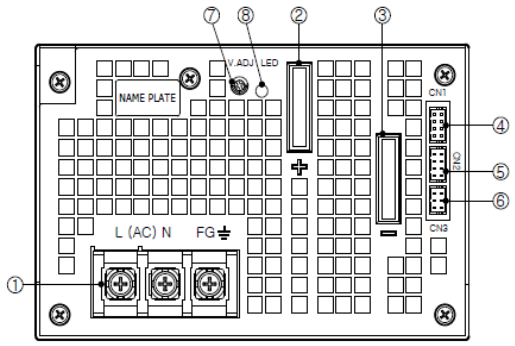
1500 Watt, CSF1500 Series, Fully Enclosed (Single Output)



2. Terminal Connection



① AC Input Terminal Pin No. Assignment (M4 Screw)

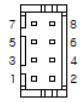
Pin No.	Assignment	Function
1	FG ⏚	Frame Ground : Case Ground
2	N	Neutral Line : AC Input terminal
3	L	Live Line : AC Input terminal (Fuse in l

② +V : + Output Terminal (M8 Bolts, M4 Screw x 2EA)

③ −V : − Output Terminal (M8 Bolts, M4 Screw x 2EA)

④ CN1
⑤ CN2
⑥ CN3
} Control Connector

※ CN1, CN2 Connector Pin No. Assignment

Connector No.	Pin No.	Assignment	Function
 CN1,CN2	1	RCG	Remote ON/OFF Ground
	2	RC2	Remote ON/OFF
	3,5,7	−S	− Remote Sensing
	4	TRIM	Adjustment of Output Voltage
	6	LS	Load Sharing
	8	+S	+ Remote Sensing

※ CN3 Connector Pin No. Assignment

Connector No.	Pin No.	Assignment	Function
CN3	1	POK GND	Power OK Signal Ground
	2	POK	Power OK Signal
	3	RCG	Remote ON/OFF Ground
	4	AUXG	Auxiliary Output Ground
	5	RC1	Remote ON/OFF
	6	AUX	Auxiliary Output (12V/0.1A)

※ Matching connecters and terminals on CN1, CN2 and CN3

Connector		Housing	Terminal	Manufactor
CN1 CN2	YDAW200-8P	YDH200-08	YST200	YEON HO
CN3	YDAW200- 6P	YDH200-06		

⑦ V.ADJ : DC Output voltage adjustment trimmer

⑧ LED : DC Output voltage indication LED

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3-7. RC1, RC2 : Remote ON/OFF Control

o ON/OFF of output voltage can be controlled by connecting RC2 of CN1, CN2 and RC1 of GND, CN3 as shown on Fig. 3-1, 3-2, 3-3
※ RC2 and RCG terminal of Fig. 3-1 is isolated from input, output, FG and AUX terminal
※ Operating current RC2 and RCG is approx. 5mA and should be used under 10mA Max.

o Table 1 shows condition of output voltage and FAN operation resulting from switch control of Fig. 3-1, 3-2, 3-3

o Table 2 shows condition of fixing R in accordance with external voltage when V1 of Fig. 3-1 used

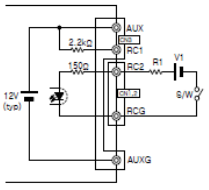

Fig. 3-1 external voltageg used

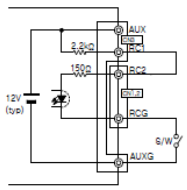

Fig. 3-2 internal voltage used(A)

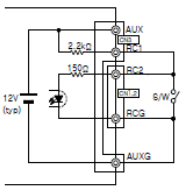

Fig. 3-3 internal voltage used(B)

Table 1. Condition and State of Remote ON/OFF Control

Switch Logic	Fig. 3-1	Fig. 3-2	Fig. 3-3	Output condition	Fan Motor
	Switch Open	Switch Open	Switch Close	ON	Rotate
	Switch Close	Switch Close	Switch Open	OFF	Stop

※ Relay, Transistor, TTL, can be used as well as Switch(Close L :0-0.8V, Open H : 2.4-24V)

Table 2. RI setting based on V1(I=5mA typ.)

V1	5V	12V	24V
R1(0.5W)	620Ω	1.5kΩ	4.7kΩ

3-10. TRIM : Output Voltage Trimming

o Output voltage is adjustable by connecting resistor into TRIM and -S terminal of CN1, CN2 Connector as shown Fig.6

o Adjustable range of output voltage is from 70 to 100%(Typ.) of output voltage based on external resistance

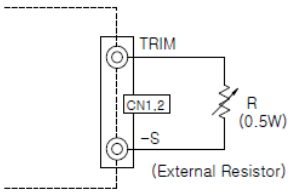

Fig. 6 Output voltage trimming

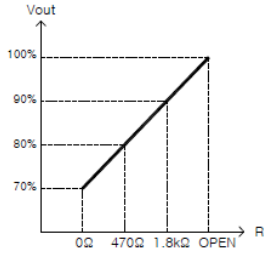

Fig. 7 external resistance and output voltage

3-8. Alarm Signal Output

o This feature displays an error signal on POK and POK terminal if any problem occurs by sencing the operating status of SMPS.

o Output signal between POK and POK(G) terminal based on operational state of SMPS is as shown at Table 3.

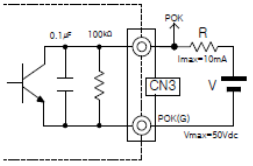

Fig.4 POK internal circuit diagram

Table 2. PG signal based on operational state of SMPS

Operational Status of SMPS	POK signal level
Normal	Low (0.5V max at 10mA)
Output outage(FAN suspended) or under 65% of output voltage (Typ.)	High or Open (50V 10mA max)

3-9. ON/OFF Time Chart

o ON/OFF time characteristic of output voltage is as shown Fig.5

o Remote ON/OFF(RC) signal of Time Chart is RC2, RCG terminal voltage at Fig. 3-1 (External voltage used)

o Alarm Signal(POK) of Time Chart is POK, POK(G) terminal voltage at Fig.4 (POK internal circuit diagram)

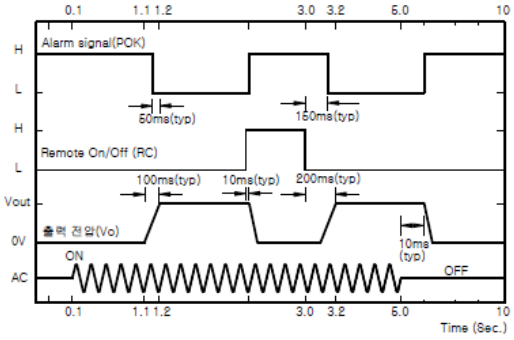

Fig.5 ON/OFF Time Chart of Output voltage

7. Ambient Temperature Derating Curve

o With input voltage at AC100-264V, output derating is as shown on Fig.19 and Table4. depending on mounting method and embient temperature.

o If you set input voltage under AC100V, please refer to 3-1, Fig.1 for output derating.

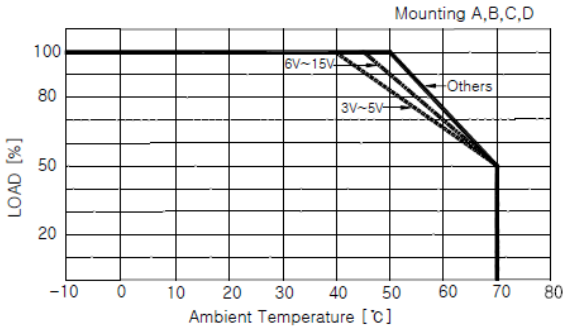

Fig.19 Ambient Temperature derating curve

Table 4. Output derating Table

3V-5V Ta(℃)	6V-15V Ta(℃)	Others Ta(℃)	LOAD (%), Mounting			
			A	B	C	D
-10 ~ +40	-10 ~ +45	-10 ~ +50	100	100	100	100
70	70	70	50	50	50	50

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