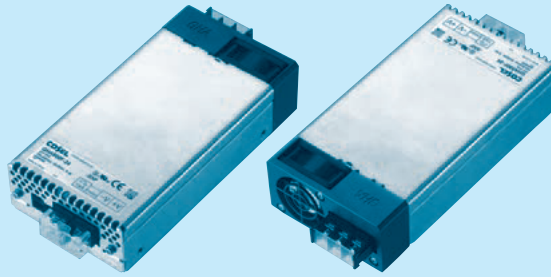


GHA500F-SNF

GH A 500 F -□□ -SNF□
 ① ② ③ ④ ⑤ ⑥



Example recommended EMI/EMC filter
EAC-10-472



High voltage pulse noise type : EAP series
 Low leakage current type : EAM series
 * A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

- ① Series name
- ② Single output
- ③ Output wattage
- ④ Universal input
- ⑤ Output voltage
- ⑥ Optional *6
- J1 : CN501
- PH(J.S.T.)connector type
- P : Pallarell Operation

Refer to the instruction manual 5.1.

*Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

MODEL	GHA500F-12-SNF	GHA500F-15-SNF	GHA500F-24-SNF	GHA500F-30-SNF	GHA500F-48-SNF	GHA500F-56-SNF	
MAX OUTPUT WATTAGE[W]	450	501	504	501	504	504	
DC OUTPUT	Forced air +50°C	12V 37.5A	15V 33.4A	24V 21.0A	30V 16.7A	48V 10.5A	56V 9.0A

SPECIFICATIONS

	MODEL	GHA500F-12-SNF	GHA500F-15-SNF	GHA500F-24-SNF	GHA500F-30-SNF	GHA500F-48-SNF	GHA500F-56-SNF		
INPUT	VOLTAGE[V]	AC90 - 264 1 φ (output derating is required at AC90V -115V *3)							
	CURRENT[A]	ACIN 120V	4.8typ	5.4typ					
		ACIN 230V	2.6typ	2.9typ					
	FREQUENCY[Hz]	50 / 60 (47 - 63)							
	EFFICIENCY[%]	ACIN 120V	87typ	89typ	89typ	89typ	89typ	89typ	
		ACIN 230V	89typ	91typ	91typ	91typ	91typ	91typ	
	POWER FACTOR (Io=100%)	ACIN 120V	0.95typ						
		ACIN 230V	0.90typ						
INRUSH CURRENT[A]	ACIN 120V	20typ (Io=100%) (At cold start) (Ta=25°C)							
	ACIN 230V	40typ (Io=100%) (At cold start) (Ta=25°C)							
LEAKAGE CURRENT[mA]	0.125/0.250max (ACIN 120V/240V 60Hz,Io=100%, According to IEC60601-1)								
OUTPUT	VOLTAGE[V]	12	15	24	30	48	56		
	CURRENT[A]	Forced air	37.5	33.4	21.0	16.7	10.5	9.0	
	LINE REGULATION[mV]	*4	48max	60max	96max	120max	192max	192max	
	LOAD REGULATION[mV]	*4	100max	120max	150max	180max	240max	240max	
	RIPPLE[mVp-p]	*1	0 to +50°C	240max	240max	240max	300max	300max	400max
		-20 - 0°C	320max	320max	320max	400max	400max	500max	
	RIPPLE NOISE[mVp-p]*1	0 to +50°C	300max	300max	300max	480max	480max	500max	
		-20 - 0°C	360max	360max	360max	500max	500max	580max	
	TEMPERATURE REGULATION[mV]	0 to +50°C	120max	150max	240max	300max	480max	480max	
		-20 to +50°C	150max	180max	290max	360max	600max	600max	
	DRIFT[mV]	*2	48max	60max	96max	120max	192max	192max	
	START-UP TIME[ms]	500typ (ACIN 120V, Io=100%)							
	HOLD-UP TIME[ms]	16typ (ACIN 120V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	10.80 to 13.20							
OUTPUT VOLTAGE SETTING[V]	12.00 to 12.48								
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically *7							
	OVERVOLTAGE PROTECTION[V]	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	34.50 to 42.00	55.20 to 67.20	60.00 to 69.00		
	AUX1	12V 0.5A							
	AUX2	5V 1A							
	REMOTE ON/OFF	Possible, AUX2 is available							
	PowerGood	Open corrector							
	ISOLATION	INPUT-OUTPUT · RC · AUX	AC4,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) 2MOPP						
INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) 1MOPP							
OUTPUT · RC · AUX-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)							
OUTPUT-RC · AUX		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTIITUDE	-20 to +70°C, 20 - 90%RH (Non condensing), 3,000m (10,000feet) max *3							
	STORAGE TEMP.,HUMID.AND ALTIITUDE	-30 to +80°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max							
	VIBRATION	10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
SAFETY AND NOISE REGULATIONS	IMPACT	196.1m/s ² (20G), 11ms, once each X, Y and Z axis							
	AGENCY APPROVALS	UL60950-1, ANSI/AAMI ES60601-1, C-UL(CSA60950-1, CAN/CSA60601-1), EN60950-1, EN60601-1 3rd							
	CONDUCTED NOISE	Complies with FCC-B, VCCI-B, CISPR11-B, CISPR22-B, EN55011-B, EN55022-B							
OTHERS	HARMONIC ATTENUATOR	Complies with IEC61000-3-2 (class A) *5							
	CASE SIZE/WEIGHT	85.2 × 41 × 165.3mm [3.35 × 1.61 × 6.5 inches] (W × H × D) / 660g max							
	COOLING METHOD	Forced air							

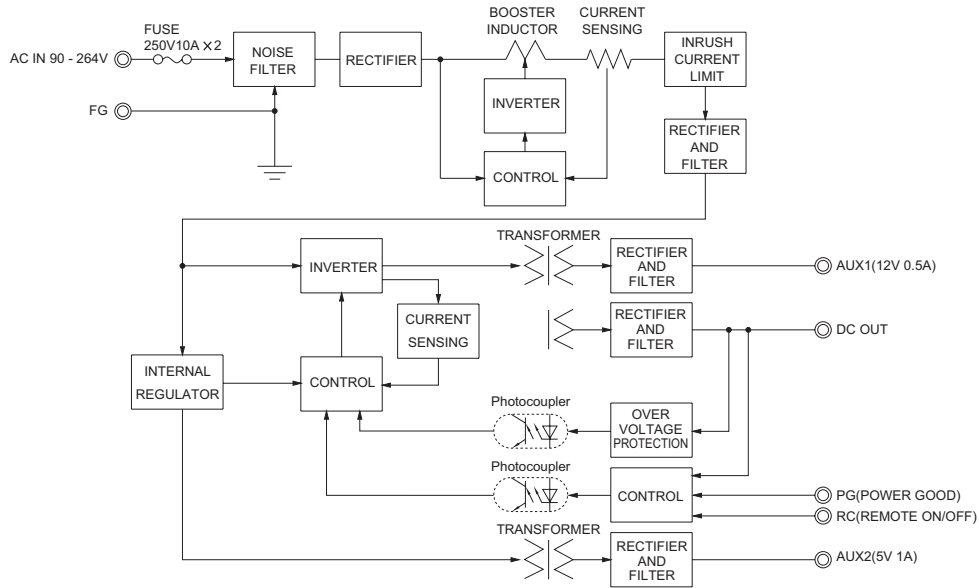
*1 This is the value that measured on measuring board with capacitor of 22 μF at 150mm from output terminal.
 Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103).
 *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.
 *3 Derating is required.
 *4 Please contact us about dynamic load and input response.
 *5 Please contact us about another class.

*6 Specification is changed at option, refer to Instruction Manual.
 *7 When output current more than rated, output will shut down after 5 seconds or more. Recycle input after 3 minutes to reset the protection.
 * To meet the specifications. Do not operate over-loaded condition.
 * Sound noise may be generated by power supply in case of pulse load.
 * Parallel operation is available with -P option. Refer to 5.1on the instruction manual.

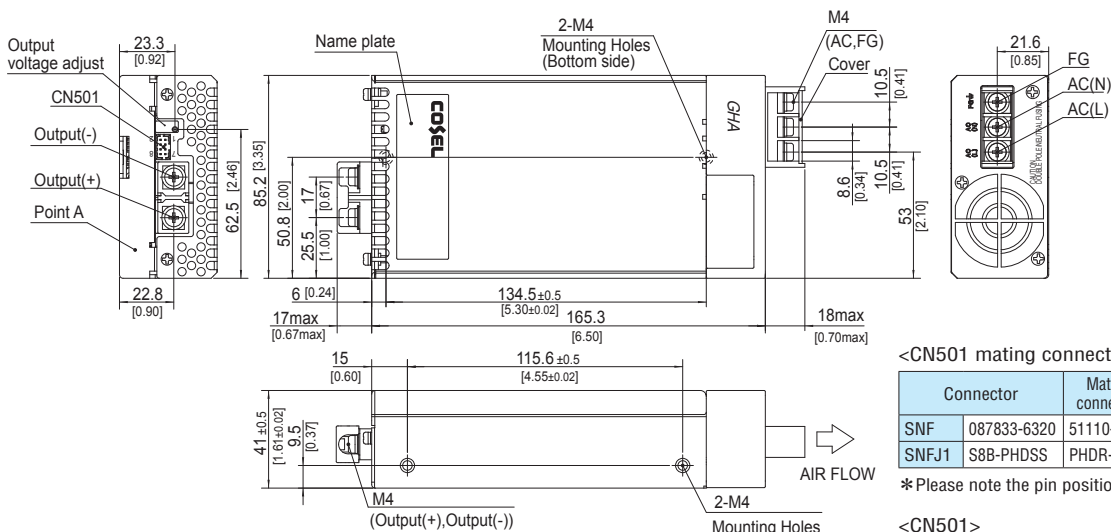
Features

- Full packaged design united with GHA's features, and additional robustness..
- High efficiency 91% typ (Input voltage 230V,Output voltage 24V)
- 50% minimized size compares with previous products.
- Optical for 1U applications
- Medical and Industrial safety approvals
- Low leakage current
- Conformal coating
- Single remote ON/OFF control for DC output, AUX1 and Fan.
- Isolated dual AUX (AUX1 12V 0.5A, AUX2 5V 1A)

Block diagram



External view



<CN501 mating connector and terminal>

Connector	Mating connector	Terminal	Mfr	
SNF	087833-6320	51110-0851	50394-8051	Molex *
SNFJ1	S8B-PHDS	PHDR-08VS	SPHR-002T-P0.5	J.S.T.

* Please note the pin position No.1 is different from Molex.

<CN501>

Pin No.	Function
1	AUX1 : AUX1 (12V0.5A)
2	AUX1G: AUX1 (GND)
3	RC : REMOTE ON/OFF
4	RCG : REMOTE ON/OFF (GND)
5	PG : Power good
6	PGG : Power good (GND)
7	AUX2 : AUX2 (5V1A)
8	AUX2G: AUX2 (GND)

- ※ Tolerance $\pm 1 [\pm 0.04]$
- ※ Weight : 660g max
- ※ Upper PCB Material/thickness : FR-4/1.6mm
- ※ Lower PCB Material/thickness : AL/1.5mm
- ※ Chassis Material/thickness : Aluminum/1.5mm
- ※ Cover Material/thickness : Aluminum/1.2mm
- ※ Fan cover Material : PBT
- ※ Mounting torque : 1.5N · m (14.7kgf · cm) max
- ※ Screw tightening torque M4 : 1.6N · m (16.9kgf · cm) max
- ※ Dimensions in mm, [] =inches

