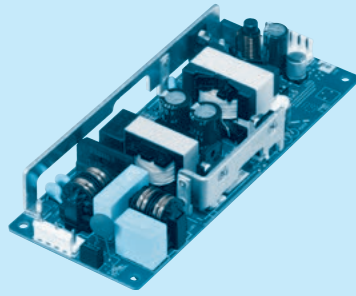


LHA100F

LH A 100 F -□□ -□

① ② ③ ④ ⑤ ⑥

Example recommended EMI/EMC filter
EAC-03-472

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 *1
C : with Coating
G : Low leakage current
J4 : EP(Tyco)connector type
R2 : with Remote ON/OFF
Y : with Potentiometer

For option details, refer to instruction manual 6.

This power supply is manufactured by SMD technology. The stress to PCB like twisting or bending causes the defect of the unit, so handle the unit with care.

* 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	LHA100F-5	LHA100F-12	LHA100F-15	LHA100F-24	LHA100F-36	LHA100F-48
MAX OUTPUT WATTAGE[W]	*2 75	102	100.5	103.2	100.8	100.8
DC OUTPUT	*2 5V15A	12V8.5A	15V6.7A	24V4.3A	36V2.8A	48V2.1A

SPECIFICATIONS

	MODEL	LHA100F-5	LHA100F-12	LHA100F-15	LHA100F-24	LHA100F-36	LHA100F-48	
INPUT	VOLTAGE[VAC]※2		AC85 - 264 1 φ (Refer to “Derating” and Instruction Manual 3)					
	CURRENT[A]	ACIN 100V	1.0typ	1.2typ				
		ACIN 230V	0.5typ	0.6typ				
	FREQUENCY[Hz]		50 / 60 (45 - 66)					
	EFFICIENCY[%]	ACIN 100V	82.0typ	87.0typ	88.0typ	86.5typ	87.0typ	
		ACIN 230V	84.0typ	89.0typ	90.0typ	89.0typ	89.0typ	
	POWER FACTOR (lo=100%)	ACIN 100V	0.97typ	0.97typ				
		ACIN 230V	0.83typ	0.87typ				
	INRUSH CURRENT[A]	ACIN 100V	15typ (lo=100%) Ta=25℃ at cold start					
		ACIN 230V	35typ (lo=100%) Ta=25℃ at cold start					
	LEAKAGE CURRENT[ma]		0.40 / 0.75max (ACIN 100V / 240V 60Hz, lo=100%, According to IEC62368-1)					
OUTPUT	VOLTAGE[V]		5	12	15	24	36	48
	CURRENT[A]※2		15.0	8.5	6.7	4.3	2.8	2.1
	LINE REGULATION[mV]※3		20max	48max	60max	96max	144max	192max
	LOAD REGULATION[mV]※3		40max	100max	120max	150max	240max	240max
	RIPPLE[mVp-p]	0 to +50℃※7	80max	120max	120max	120max	150max	150max
		-10 to 0℃	140max	160max	160max	160max	200max	200max
		※4 lo=0 to 15%	300max	360max	500max	500max	500max	500max
	RIPPLE NOISE[mVp-p]	0 to +50℃※7	120max	150max	150max	150max	250max	250max
		-10 to 0℃	160max	180max	180max	180max	300max	300max
		※4 lo=0 to 15%	360max	400max	600max	600max	600max	600max
	TEMPERATURE REGULATION[mV]	0 to +50℃※7	50max	120max	150max	240max	360max	480max
		-10 to +50℃※7	60max	150max	180max	290max	450max	600max
	DRIFT[mV]※5		20max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		100typ (ACIN 100V, lo=100%)					
	HOLD-UP TIME[ms]		20typ (ACIN 100V, lo=100%)					
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed (*Y)option is available for adjusting output voltage between ±10%)						
OUTPUT VOLTAGE SETTING[V]		4.90 to 5.30	11.50 to 12.50	14.40 to 15.60	23.00 to 25.00	34.50 to 37.50	46.00 to 50.00	
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTECTION		5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	41.40 to 50.40	55.20 to 67.20
	OPERATING INDICATION		Not provided					
	REMOTE SENSING		Not provided					
	REMOTE CONTROL (RC)		Option (Refer to Instruction Manual 6.1)					
ISOLATION	INPUT-OUTPUT-RC※8		AC3,000V 1minute, Cutoff current = 10mA, DC500V 100MΩ min (At Room Temperature)					
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 100MΩ min (At Room Temperature)					
	OUTPUT-RC-FG※8		AC500V 1minute, Cutoff current = 25mA, DC500V 100MΩ min (At Room Temperature)					
	OUTPUT-RC※8		AC100V 1minute, Cutoff current = 25mA, DC100V 10MΩ min (At Room Temperature)					
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE※2		-10 to +70℃, 20 - 90%RH (Non condensing), 3,000m (10,000feet) max					
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max					
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis					
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis					
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS		UL62368-1, c-UL (equivalent to CAN/CSA-C22.2No.62368-1), EN62368-1					
	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR11-B, CISPR32-B, EN55011-B, EN55032-B					
	HARMONIC ATTENUATOR※6		Complies with EN61000-3-2 (Class A)					
OTHERS	CASE SIZE/WEIGHT		62×27×155mm [2.44×1.07×6.10 inches] (W×H×D) / 250g max					
	COOLING METHOD※2		Convection/Forced air (Requires external fan) (Refer to “Derating” and Instruction Manual 3)					

*1 The listed options may affect the published standard specifications. Please contact us for detailed product specifications.

*2 Derating is required.

*3 At low load conditions, the burst mode operation will start. To check load regulation, you will need to measure the characteristics at average mode with instruments.

*4 This is the value that measured on measuring board with capacitor

of 22 μF and 0.1 μF at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN:RM104).

Ripple and ripple noise spec is change at lo=0 to 15% by burst operation.

*5 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.

*6 Please contact us about another class.

*7 5V output product, the maximum temperature of 40°C.

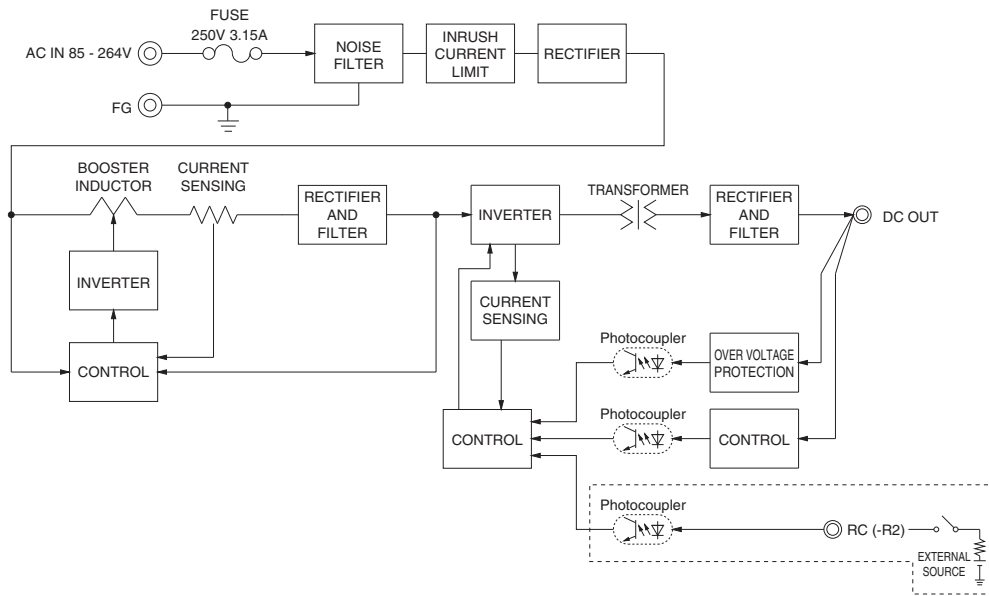
*8 Applicable when Remote ON/OFF (optional) is added.

To meet the specification, do not operate overload condition.

Parallel operation is not possible.

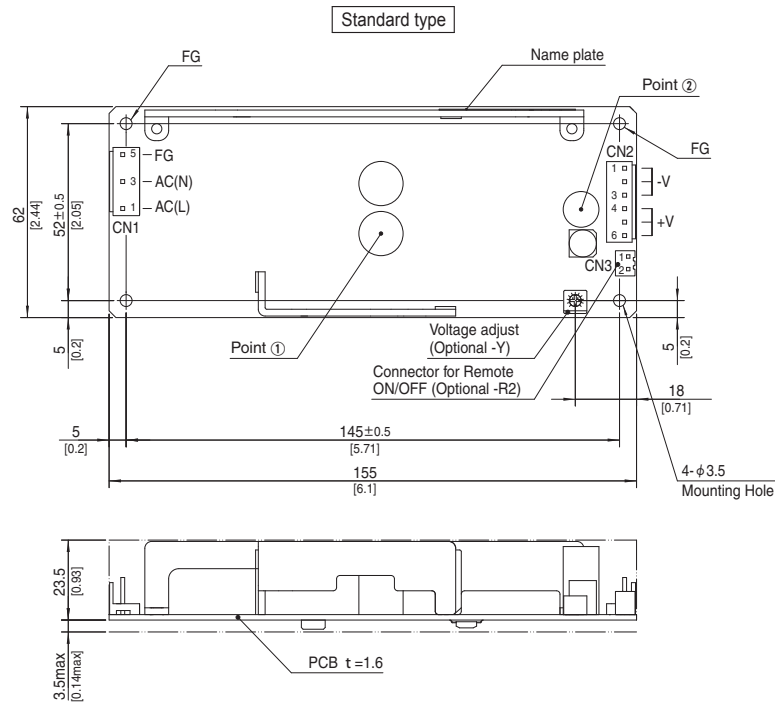
Sound noise may be generated by power supply in case of pulse load.

Block diagram



External view

※ External size of option is different from standard type.



- ※ 4 Mounting holes are existing.
- ※ The back side of PCB of the power supply is assembled some SMDs.
Be careful not to bump against the attached area by vibration.
- ※ Use the spacer of 8mm [0.31] length or more for isolation.
And do not use press-fitting bush.
- ※ Point ①, Point ② are thermometry points. Please refer to Instruction Manual 3.

I/O Connector	Mating connector	Terminal
CN1	B3P5-VH	VHR-5N
		Chain SVH-21T-P1.1
		Loose BVH-21T-P1.1
CN2	B6P-VH	VHR-6N
		Chain SVH-21T-P1.1
		Loose BVH-21T-P1.1

(Mfr: J.S.T.)

- ※ I/O Connector is Mfr.J.S.T.
- ※ Option:-J4:EP (Tyco Electronics) connector type.

CN1		CN2	
Pin No.	Input	Pin No.	Output
1	AC(L)	1 to 3	-V
2		4 to 6	+V
3	AC(N)		
4			
5	FG		

※ Keep drawing current per pin below 5A for CN2.

- ※ Tolerance : ± 1 [± 0.04]
- ※ Weight : 250g max
- ※ PCB material : FR4
- ※ Dimensions in mm, []=inches

Connector type

CN3 Option (Mfr:J.S.T.)

PIN No.	Contents
1	RC(+)
2	RC(-)

Barrier strip type

Model B2B-XH-A
Mating Connector (Terminal)
XHP-2
(BXH-001T-P0.6
or SXH-001T-P0.6)