

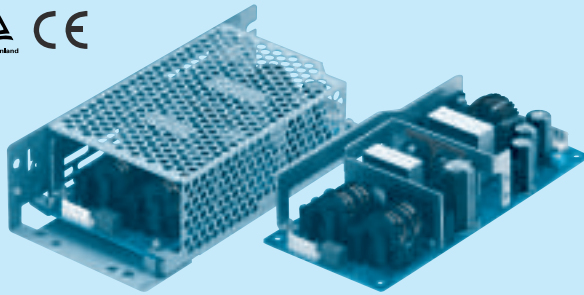
# LFA150F

LF A 150 F - □ - □

① ② ③ ④ ⑤ ⑥



RoHS



Recommended EMI/EMC Filter  
NAC-04-472



High voltage pulse noise type : NAP series  
Low leakage current type : NAM series  
\*The EMI/EMC Filter is recommended to connect with several devices.

- 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
  - H : with the function to be acceptable to output peak current (only 24V)
  - J1 : VH(J.S.T.)connector type
  - R : with Remote ON/OFF
  - R2 : with Remote ON/OFF
  - S : with Chassis
  - SN : with Chassis & cover
  - Y : with Potentiometer
- Please refer to Instruction manual 5.

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

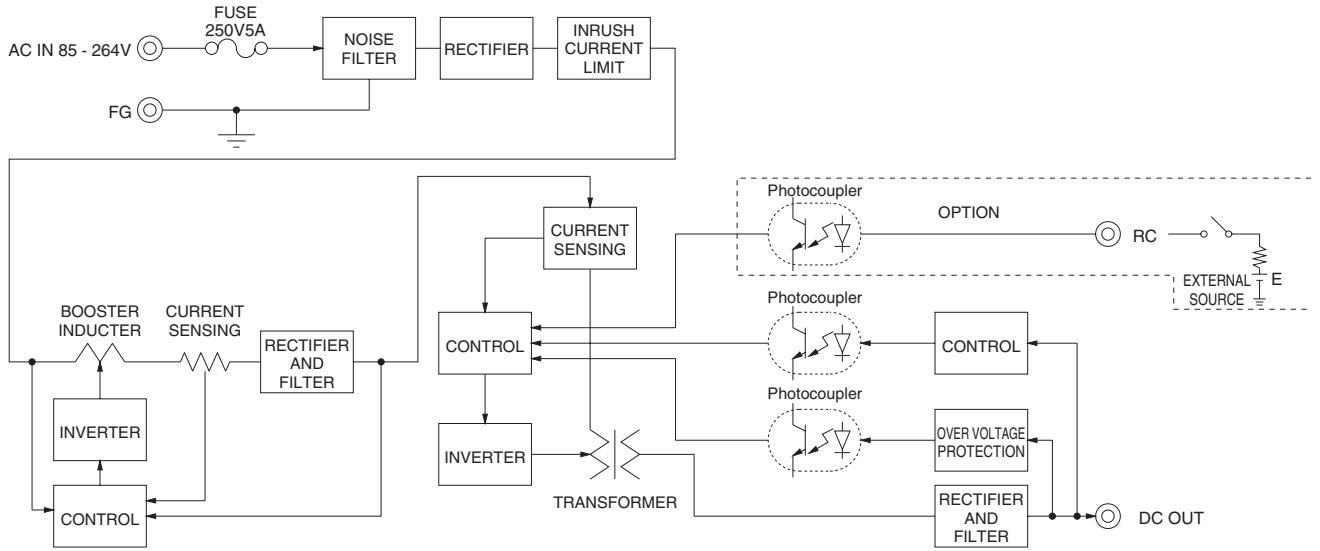
MODEL	LFA150F-3R3-Y	LFA150F-5-Y	LFA150F-12	LFA150F-15	LFA150F-24	LFA150F-24-H	LFA150F-36	LFA150F-48
MAX OUTPUT WATTAGE[W]	*5 99	150	150	150	151.2	151.2 (189.6)	151.2	153.6
DC OUTPUT	*5 3.3V 30A	5V 30A	12V 12.5A	15V 10A	24V 6.3A	24V 6.3 (7.9)A	36V 4.2A	48V 3.2A

## SPECIFICATIONS

	MODEL	LFA150F-3R3-Y	LFA150F-5-Y	LFA150F-12	LFA150F-15	LFA150F-24	LFA150F-24-H	LFA150F-36	LFA150F-48	
INPUT	VOLTAGE[V]	AC85 - 264 1 φ (Refer to Instruction Manual 1.1 and 3.2) *4								
	CURRENT[A]	ACIN 100V	1.4typ (Io=100%)		2.0typ (Io=100%)					
		ACIN 200V	0.7typ (Io=100%)		1.0typ (Io=100%)					
	FREQUENCY[Hz]	50 / 60 (47 - 63)								
	EFFICIENCY[%]	ACIN 100V	80.0typ	82.5typ	82.5typ	84.0typ	85.0typ	85.0typ	85.0typ	85.5typ
		ACIN 200V	82.0typ	85.5typ	85.0typ	86.5typ	87.5typ	87.5typ	87.5typ	88.0typ
	POWER FACTOR (Io=100%)	ACIN 100V	0.98typ							
		ACIN 200V	0.92typ		0.95typ					
INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start) (Ta=25°C)								
	ACIN 200V	30typ (Io=100%) (At cold start) (Ta=25°C)								
LEAKAGE CURRENT[ma]	0.40 / 0.75max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)									
OUTPUT	VOLTAGE[V]	3.3	5	12	15	24	24	36	48	
	CURRENT[A]	*5 30	30	12.5	10	6.3	6.3 (Peak 7.9)	4.2	3.2	
	LINE REGULATION[mV]	*7 20max	20max	48max	60max	96max	96max	144max	192max	
	LOAD REGULATION[mV]	*7 40max	40max	100max	120max	150max	150max	240max	240max	
	RIPPLE[mVp-p]	0 to +40°C *2	80max	80max	120max	120max	120max	240max	150max	150max
		-10 - 0°C *2	140max	140max	160max	160max	160max	320max	200max	200max
	RIPPLE NOISE[mVp-p]	0 to +40°C *2	120max	120max	150max	150max	150max	300max	250max	250max
		-10 - 0°C *2	160max	160max	180max	180max	180max	360max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +40°C	50max	50max	120max	150max	240max	240max	360max	480max
		-10 to +40°C	60max	60max	150max	180max	290max	290max	450max	600max
	DRIFT[mV]	*3 20max	20max	48max	60max	96max	96max	144max	192max	
	START-UP TIME[ms]	350typ (ACIN 100V, Io=100%)								
	HOLD-UP TIME[ms]	20typ (ACIN 100V, Io=100%)								
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	2.85 to 3.63 / 4.50 to 5.50 / Fixed ( "Y" option is available for adjusting output voltage)								
OUTPUT VOLTAGE SETTING[V]	3.30 to 3.40	5.00 to 5.15	11.50 to 12.50	14.40 to 15.60	23.00 to 25.00	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 (works over 101% of peak current at option -H) and recovers automatically								
	OVERVOLTAGE PROTECTION	4.00 to 5.25	5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	27.60 to 33.60	41.40 to 50.40	55.20 to 67.20	
	OPERATING INDICATION	Not provided								
	REMOTE SENSING	Not provided								
	REMOTE ON/OFF	Option (Refer to Instruction Manual)								
ISOLATION	INPUT-OUTPUT-RC	*6 AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)								
	INPUT-FG	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)								
	OUTPUT-RC-FG	*6 AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)								
	OUTPUT-RC	*6 AC100V 1minute, Cutoff current = 25mA, DC100V 10MΩ min (At Room Temperature)								
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE *4	-10 to +70°C, 20 - 90%RH (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max								
	STORAGE TEMP., HUMID. AND ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max								
	VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis								
	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis								
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS	UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN								
	CONDUCTED NOISE	Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B								
	HARMONIC ATTENUATOR	Complies with IEC61000-3-2 (Class A) *8								
OTHERS	CASE SIZE/WEIGHT	75×37.0×160mm [2.95×1.46×6.30 inches] (W×H×D) / 390g max (without chassis and cover)								
	COOLING METHOD	Convection (Refer to Instruction Manual 3.1 and 3.2) *4								

\*1 Specification is changed at option, refer to Instruction Manual.  
 \*2 This is the value that measured on measuring board with capacitor of 22 μF at 150mm from output terminal.  
 \*3 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.  
 \*4 Derating is required.  
 \*5 ( ) means peak current. There is a possibility that an internal device is damaged when the specification is exceeded. Please contact us about the detail.  
 \*6 Applicable when remote control (optional) is added.  
 \*7 Please contact us about dynamic load and input response.  
 \*8 Please contact us about another class.  
 \*9 To meet the specifications. Do not operate over-loaded condition.  
 \*10 Parallel operation is not possible.  
 \*11 Derating is required when operated with chassis and cover.  
 \*12 Sound noise may be generated by power supply in case of pulse load.

## Block diagram

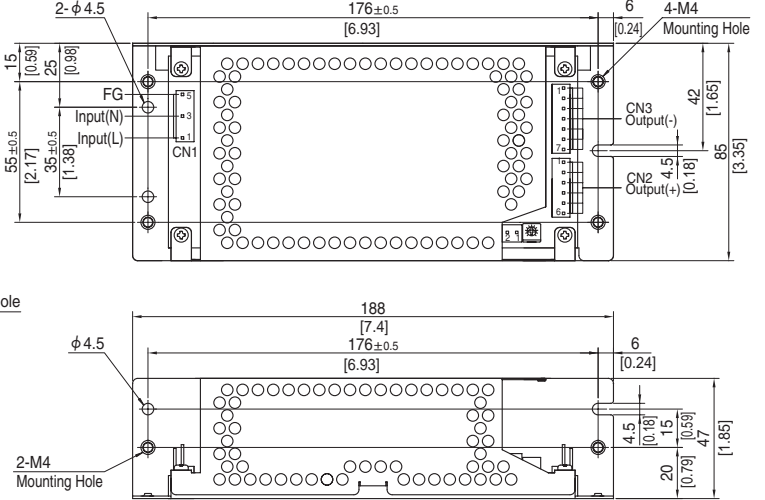
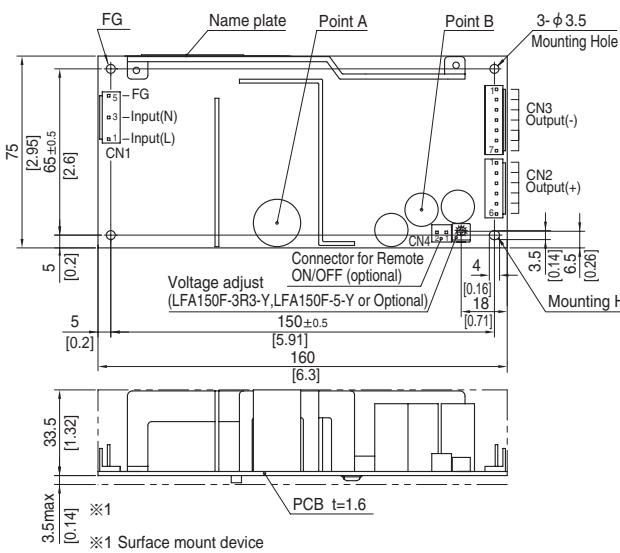


## External view

※ External size of option is different from standard model.

Standard type

Chassis and cover type



- ※ 4 Mounting holes are existing.
- ※ The back side of P.C.B. of the power supply is assembled some SMDs.
- Be attention not to bump against the attached area by vibration.
- ※ Use the spacer of 8mm length or more regarding insulation.
- And do not use press-fitting bush.
- ※ Point A, Point B are thermometry points. Please refer to Instruction Manual 3.

I/O Connector	Mating connector	Terminal
CN1	1-1123724-3	Chain 1123721-1
		Loose 1318912-1
CN2	1-1123723-6	Chain 1123721-1
		Loose 1318912-1
CN3	1-1123723-7	Chain 1123721-1
		Loose 1318912-1

(Mfr:Tyco Electronics)

- ※ I/O Connector is Mfr. Tyco Electronics
- ※ Option:-J1:VH(J.S.T) connector type.

### <PIN CONNECTION>

CN1		CN2		CN3	
Pin No.	Input	Pin No.	Output	Pin No.	Output
1	AC(L)	1 to 6	+V	1 to 7	-V
2					
3	AC(N)				
4					
5	FG				

※ Keep drawing current per pin below 5A for CN2,CN3.

- ※ Tolerance :  $\pm 1$  [ $\pm 0.04$ ]
- ※ Weight : 390g max (without chassis and cover)
- ※ PCB material : CEM3
- ※ Optional chassis and cover material : Electric galvanizing steel board.
- ※ Dimensions in mm, [ ]=inches
- ※ Mounting torque (Mounting hole of chassis) :  $1.5N \cdot m$  (16kgf · cm) max

### Connector type

CN4 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 )