





High voltage pulse noise type : NAP series Low leakage current type : NAM series

to connect with several devices.

*The EMI/EMC Filter is recommended

- ①Series name ②Single output ③Output wattage ④Universal input
 - ⑤Output voltage

 - Optional
 C: with Coating
 G: Low leakage current
 - J1: VH(J.S.T.)connector type S: with Chassis
 - SN: with Chassis & cover Y: with Potentiometer

Specification is changed at option, refer to Instruction Manual.

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	LFA10F-3R3-Y	LFA10F-5	LFA10F-12	LFA10F-15	LFA10F-24
MAX OUTPUT WATTAGE[W]	6.6	10	10.8	10.5	12
DC OUTPUT	3.3V 2A	5V 2A	12V 0.9A	15V 0.7A	24V 0.5A

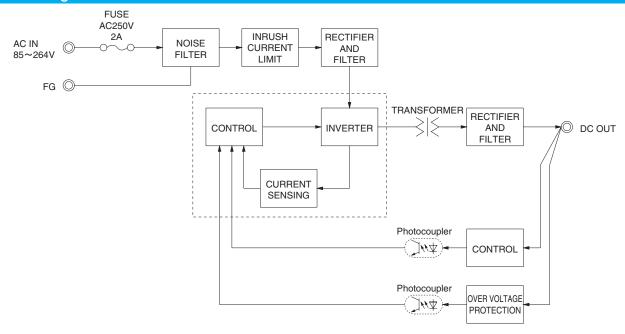
	MODEL		LFA10F-3R3-Y	LFA10F-5	LFA10F-12	LFA10F-15	LFA10F-24		
	VOLTAGE[V]		AC85 - 264 1 φ (Refe	r to Instruction Manual	1.1 and 3.2) *3				
	CURRENT[A]	ACIN 100V	0.18typ (lo=100%)						
	CORNENT[A]	ACIN 200V	0.11typ (Io=100%)						
	FREQUENCY[Hz]		50 / 60 (47 - 440)						
INPUT	EFFICIENCY[%]	ACIN 100V	68.0typ	74.0typ	76.5typ	77.5typ	79.5typ		
		ACIN 200V	68.5typ	76.0typ	79.0typ	80.0typ	83.0typ		
	INDUCH CURRENTIAL	ACIN 100V	15typ (lo=100%)						
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%)						
	LEAKAGE CURRENT[mA]		0.15/0.30max (ACIN	100V / 240V 60Hz, Io=	100%, According to IE	C60950-1 and DEN-AN)		
	VOLTAGE[V]		3.3	5	12	15	24		
	CURRENT[A]		2.0	2.0	0.9	0.7	0.5		
	LINE REGULATION[n	nV] *5	20max	20max	48max	60max	96max		
	LOAD REGULATION[mV] *5	40max	40max	100max	120max	150max		
		0 to +50°C	80max	80max	120max	120max	120max		
	RIPPLE[mVp-p]	-10 - 0℃	140max	140max	160max	160max	160max		
	*1	lo=0 - 35%	190max	160max	240max	240max	280max		
		0 to +50°C	120max	120max	150max	150max	150max		
OUTPUT	RIPPLE NOISE[mVp-p]	-10 - 0℃	160max	160max	180max	180max	180max		
	*1	lo=0 - 35%	240max	240max	300max	300max	320max		
		0 to +50°C	50max	50max	120max	150max	240max		
	TEMPERATURE REGULATION[mV]	-10 to +50°C	60max	60max	150max	180max	290max		
	DRIFT[mV]	*2	20max	20max	48max	60max	96max		
	START-UP TIME[ms] 2		200typ (ACIN 100V, Io=100%) *Start-up time is 700ms typ for less than 1minute of applying input again from turning off the input voltage.						
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)						
	OUTPUT VOLTAGE ADJUSTMENT I	RANGE[V]	2.85 to 3.63	Fixed ("Y" option is	available for adjusting	output voltage between	±10%)		
	OUTPUT VOLTAGE SETTING[V]		3.30 to 3.40	4.90 to 5.30	11.50 to 12.50	14.40 to 15.60	23.00 to 25.00		
	OVERCURRENT PROTE	CTION	Works over 105% of	rating and recovers aut	omatically				
ROTECTION	OVERVOLTAGE PROTE	CTION	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		
IRCUIT AND	OPERATING INDICAT	ION	Not provided						
THERS	REMOTE SENSING		Not provided Not provided						
	REMOTE ON/OFF		Not provided						
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)						
SOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)						
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At Room Temperature)						
	OPERATING TEMP., HUMID. AND	ALTITUDE	-10 to +70°C, 20 - 90%RH (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000 feet) max *3						
NIVIDONIMENT	STORAGE TEMP., HUMID. AND A	ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max						
NVIRONMENT	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis						
			196.1m/s ² (20G), 11ms, once each X, Y and Z axis						
A PP 2/	AGENCY APPROVAL	s	UL60950-1, C-UL (CS	SA60950-1), EN60950-	1, EN50178 Complies	with DEN-AN			
AFETY AND	CONDUCTED NOISE		Complies with FCC-B,	VCCI-B, CISPR-B, EN	55011-B, EN55022-B				
IOISE EGULATIONS	CE MARKING		Low Voltage Directive	, EMC Directive					
IEGULATIONS	HARMONIC ATTENUA	ATOR	Complies with IEC610	000-3-2 (Class A) *6 (N	ot built-in to active filte	er) *4			
OTLIEBO	CASE SIZE/WEIGHT					(without chassis and o	cover)		
OTHERS	COOLING METHOD		•	Instruction Manual 3.1					

This is the value that measured on measuring board with capacitor of 22 $\mu\,F$ at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103). A circuit reducing standby power is built in this unit. Therefore, the internal switch element is intermittent operated, and the Ripple/Ripple Noise specification in load

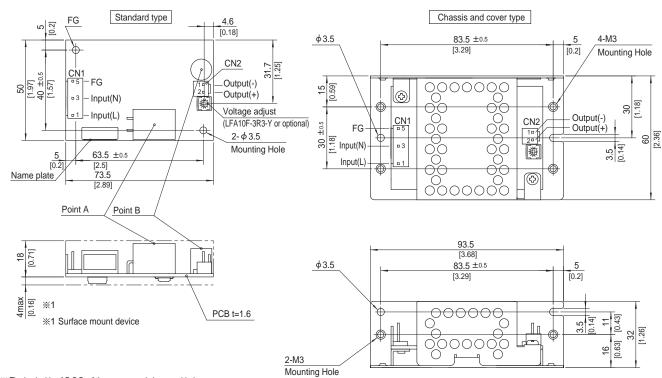
- factor Io=0-35% is different.
- Please refer to the Instruction Manual 1.7.
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.
- Derating is required.
- When two or more units are operating it may not comply with the IEC61000-3-2.
- Please contact us about dynamic load and input response. Please contact us about another class.
- To meet the specifications. Do not operate over-loaded condition.
- Parallel operation is not possible.
- Derating is required when operated with chassis and cover. Sound noise may be generated by power supply in case of pulse

LFA10F | COSEL

Block diagram



External view



- % 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.
- W 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	I/O Connector		I/O Connector Mating connect		Mating connector	Terminal		
0	CN1 1-1123724-3		4 4400700 5	Chain	1123721-1			
CIN	CN1	1-1123724-3	1-1123722-5	Loose	1318912-1			
0	CN2 1-1123723-2		4 4400700 0	Chain	1123721-1			
CIN	CNZ	1-1123723-2	1-1123722-2	Loose	1318912-1			
(Mfr:Type Fleetrenies								

(Mfr:Tyco Electronics)

- ※ I/O Connector is Mfr. Tyco Electronics
- $\ensuremath{\ensuremath{\%}}$ Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 5.

<PIN CONNECTION>

CN1					
Pin No.	Input				
1	AC(L)				
2					
3	AC(N)				
4					
5	FG				

CINZ						
Pin No.	Output					
1	-V					
2	+V					

CND

- ** Tolerance: ±1 [±0.04]
 ** Weight: 55g max (without chassis and cover)
 ** PCB material / thickness: CEM3 / 1.6mm
- ※ Optional chassis and cover material : Electric galvanizing steel board.
- * Dimensions in mm, []=inches
- Mounting torque (Mounting hole of chassis): 0.6N · m (6.3kgf · cm) max

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High voltage pulse noise type : NAP series Low leakage current type : NAM series

*The EMI/EMC Filter is recommended to connect with several devices.

- ①Series name ②Single output ③Output wattage ④Universal input
 - ⑤Output voltage

 - Optional
 C: with Coating
 G: Low leakage current
 - J1: VH(J.S.T.)connector type S: with Chassis
 - SN: with Chassis & cover Y: with Potentiometer

Specification is changed at option, refer to Instruction Manual.

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	LFA15F-3R3-Y	LFA15F-5	LFA15F-12	LFA15F-15	LFA15F-24
MAX OUTPUT WATTAGE[W]	9.9	15	15.6	15	16.8
DC OUTPUT	3.3V 3A	5V 3A	12V 1.3A	15V 1A	24V 0.7A

SPECIFICATIONS

	MODEL		LFA15F-3R3-Y	LFA15F-5	LFA15F-12	LFA15F-15	LFA15F-24			
	VOLTAGE[V]		AC85 - 264 1 φ (Refer to Instruction Manual 1.1 and 3.2) *3							
	ALIDDENITA I	ACIN 100V	0.24typ (Io=100%)							
	CURRENT[A]	ACIN 200V	0.15typ (lo=100%)	0.20typ (lo=100%)						
Ī	FREQUENCY[Hz]		50 / 60 (47 - 440)							
NPUT	EEEIOJENIOVIO/1	ACIN 100V	68.0typ	73.0typ	76.0typ	77.0typ	78.0typ			
	EFFICIENCY[%]	ACIN 200V	69.0typ	76.0typ	78.5typ	80.0typ	81.5typ			
Ī	INDUCUI QUIDDENTIAL	ACIN 100V	15typ (lo=100%) (At	cold start) (Ta=25°C)		,	,			
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (At	30typ (Io=100%) (At cold start) (Ta=25℃)						
	LEAKAGE CURRENT	[mA]	0.15/0.30max (ACIN 100V / 240V 60Hz, lo=100%, According to IEC60950-1 and DEN-AN)							
	VOLTAGE[V]		3.3	5	12	15	24			
	CURRENT[A]		3.0	3.0	1.3	1.0	0.7			
Ī	LINE REGULATION[n	nV] *5	20max	20max	48max	60max	96max			
Ī	LOAD REGULATION	mV] *5	40max	40max	100max	120max	150max			
Ţ		0 to +50°C	80max	80max	120max	120max	120max			
	RIPPLE[mVp-p]	-10 - 0℃	140max	140max	160max	160max	160max			
	*1	lo=0 - 35%	190max	160max	240max	240max	280max			
		0 to +50°C	120max	120max	150max	150max	150max			
DUTPUT	RIPPLE NOISE[mVp-p]	-10 - 0℃	160max	160max	180max	180max	180max			
	٠.	lo=0 - 35%	240max	240max	300max	300max	320max			
	TEMPERATURE REGULATION[mV]	0 to +50°C	50max	50max	120max	150max	240max			
		-10 to +50°C	60max	60max	150max	180max	290max			
	DRIFT[mV] *2		20max	20max	48max	60max	96max			
	START-UP TIME[ms]		200typ (ACIN 100V, Io=100%) *Start-up time is 700ms typ for less than 1 minute of applying input again from turning off the input voltage.							
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT I	RANGE[V]	2.85 to 3.63 Fixed ("Y" option is available for adjusting output voltage between ±10%)							
	OUTPUT VOLTAGE SETT	ING[V]	3.30 to 3.40	4.90 to 5.30	11.50 to 12.50	14.40 to 15.60	23.00 to 25.00			
	OVERCURRENT PROTE	ECTION	Works over 105% of rating and recovers automatically							
ROTECTION	OVERVOLTAGE PROTE	CTION	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			
IRCUIT AND	OPERATING INDICAT	TION	Not provided							
THERS	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Not provided							
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)							
SOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)							
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)							
	OPERATING TEMP., HUMID. AND	ALTITUDE	-10 to +70°C, 20 - 90%RH (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000 feet) max *3							
NVIRONMENT	STORAGE TEMP., HUMID. AND A	ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max							
INVIRONWENT	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT		196.1m/s ² (20G), 11ms, once each X, Y and Z axis							
ACCTV AND	AGENCY APPROVAL	s	UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN							
AFETY AND	CONDUCTED NOISE			· · · · · · · · · · · · · · · · · · ·	N55011-B, EN55022-	В				
REGULATIONS	CE MARKING		Low Voltage Directive							
	HARMONIC ATTENU	ATOR			(Not built-in to active					
OTHERS	CASE SIZE/WEIGHT		50×22×87.5mm [1.	.97×0.87×3.44 inch	es] (W×H×D) / 80g r	nax (without chassis ar	nd cover)			
COOLING METHOD			Convection (Refer to Instruction Manual 3.1 and 3.2) *3							

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). A circuit reducing standby power is built in this unit. Therefore, the internal switch element is intermittent operated, and the Ripple/Ripple Noise specification in load

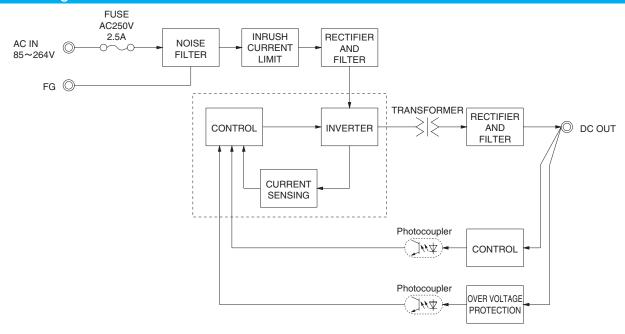
factor Io=0-35% is different.

- Please refer to the Instruction Manual 1.7.
 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.
- Derating is required.
- When two or more units are operating it may not comply with the IEC61000-3-2.

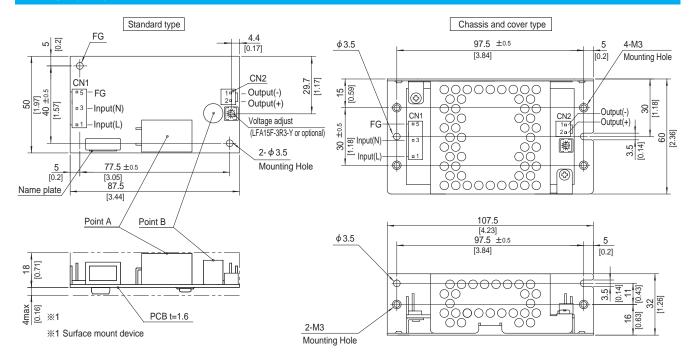
- Please contact us about dynamic load and input response. Please contact us about another class.
- To meet the specifications. Do not operate over-loaded condition.
- Parallel operation is not possible.
- Derating is required when operated with chassis and cover. Sound noise may be generated by power supply in case of pulse

LFA15F | CO\$EL

Block diagram



External view



- $\ensuremath{\mathbb{X}}$ 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.
- W 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/C	Connector	Mating connector	T	erminal	
CN1 1-1123724-3		1-1123722-5	Chain 112372		
CNT	1-1123724-3	1-1123/22-5	Loose	1318912-1	
ONIO	CN2 1-1123723-2 1-112372		Chain	1123721-1	
CNZ	1-1123723-2	1-1123722-2	Loose	1318912-1	

(Mfr:Tyco Electronics)

- ※ I/O Connector is Mfr. Tyco Electronics
- Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 5.

<PIN CONNECTION>

CN1				
Pin No.	Input			
1	AC(L)			
2				
3	AC(N)			
4				
5	FG			

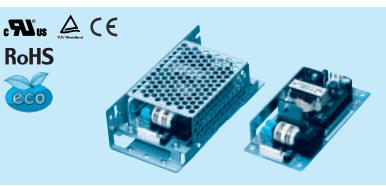
CINZ	CINZ						
Pin No.	Output						
1	-V						
2	+V						

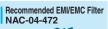
- ※ Tolerance : ±1 [±0.04]
- * Weight : 80g max (without chassis and cover)
- PCB material / thickness : CEM3 / 1.6mm
- * Optional chassis and cover material : Electric galvanizing steel board.
- Mounting torque (Mounting hole of chassis): 0.6N · m (6.3kgf · cm) max

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High voltage pulse noise type : NAP series Low leakage current type : NAM series

*The EMI/EMC Filter is recommended to connect with several devices.

- 2 Single output 3 Output wattage 4 Universal input
 - ⑤Output voltage

①Series name

- Optional
 C: with Coating
 G: Low leakage current
 - J1: VH(J.S.T.)connector type
- S: with Chassis
- SN: with Chassis & cover Y: with Potentiometer

Specification is changed at option, refer to Instruction Manual.

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	LFA30F-3R3-Y	LFA30F-5	LFA30F-12	LFA30F-15	LFA30F-24
MAX OUTPUT WATTAGE[W]	19.8	30.0	30.0	30.0	31.2
DC OUTPUT	3.3V 6A	5V 6A	12V 2.5A	15V 2A	24V 1.3A

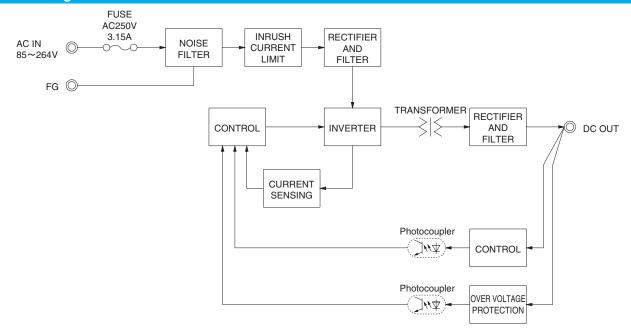
	MODEL		LFA30F-3R3-Y	LFA30F-5	LFA30F-12	LFA30F-15	LFA30F-24		
	VOLTAGE[V]		AC85 - 264 1 φ (Refer to Instruction Manual 1.1 and 3.2) *3						
	CURRENT[A]	ACIN 100V	0.50typ (lo=100%)	0.65typ (lo=100%)					
	CORRENT[A]	ACIN 200V	0.30typ (lo=100%) 0.35typ (lo=100%)						
	FREQUENCY[Hz]		50 / 60 (47 - 440)						
INPUT	EFFICIENCY[%]	ACIN 100V	73typ	76typ	79typ	81typ	82typ		
	EFFICIENCY[%]	ACIN 200V	75typ	79typ	81typ	83typ	84typ		
	INRUSH CURRENTIAL	ACIN 100V	15typ (lo=100%) (At	cold start) (Ta=25°C)					
	INNUSTI CUNNENT[A]	ACIN 200V	31 (30typ (Io=100%) (At cold start) (Ta=25°C)					
	LEAKAGE CURRENT[mA]		0.30 / 0.65max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)						
	VOLTAGE[V]		3.3	5	12	15	24		
	CURRENT[A]		6.0	6.0	2.5	2.0	1.3		
	LINE REGULATION[20max	48max	60max	96max		
	LOAD REGULATION	[mV] *5	40max	40max	100max	120max	150max		
	RIPPLE[mVp-p]	0 to +50°C *1		80max	120max	120max	120max		
	nirrec[iiivp-p]	-10-0℃ *1	140max	140max	160max	160max	160max		
	RIPPLE NOISE[mVp-p]	0 to +50°C *1	120max	120max	150max	150max	150max		
OUTPUT	HIFFEE NOISE[IIIVP-P]	-10-0℃ *1	160max	160max	180max	180max	180max		
	TEMPERATURE REGULATION(mV)	0 to +50℃	50max	50max	120max	150max	240max		
	TEMPERATURE REGULATION[IIIV]	-10 to +50℃	60max	60max	150max	180max	290max		
	DRIFT[mV] *2		20max	20max	48max	60max	96max		
	START-UP TIME[ms]		150typ (ACIN 100V, Io=100%)						
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.63	' '	available for adjusting	 	, '		
	OUTPUT VOLTAGE SET		3.30 to 3.40	4.90 to 5.30	11.50 to 12.50	14.40 to 15.60	23.00 to 25.00		
	OVERCURRENT PROT	ECTION	Works over 105% of rating and recovers automatically						
PROTECTION	OVERVOLTAGE PROTE	ECTION	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		
CIRCUIT AND	OPERATING INDICA	TION	Not provided						
OTHERS	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Not provided						
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)						
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)						
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At Room Temperature)						
	OPERATING TEMP., HUMID.AND		-10 to +70°C, 20 - 90%RH (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max *						
ENVIRONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE	-20 to +75°C, 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	AGENCY APPROVAL		UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN						
NOISE	CONDUCTED NOISE	•	Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B						
REGULATIONS	CE MARKING		Low Voltage Directive, EMC Directive Complies with IEC61000-3-2 (Class A) *6 (Not built-in to active filter) *4						
	HARMONIC ATTENU								
OTHERS	CASE SIZE/WEIGHT				es] (W×H×D) / 130g	max (without chassi	s and cover)		
	COOLING METHOD			Instruction Manual 3.1					

- This is the value that measured on measuring board with capacitor of 22 $\mu\,F$ at 150mm from output terminal.

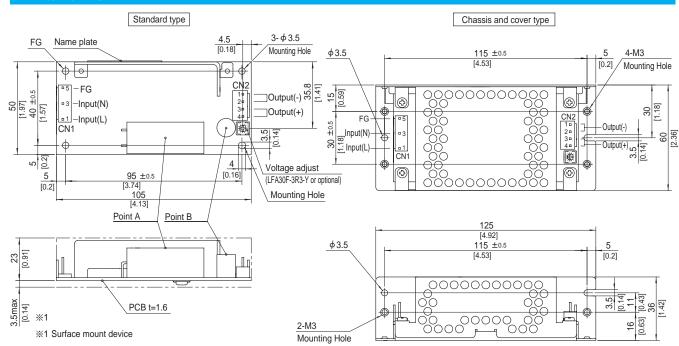
 Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN:
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at $25\ensuremath{^{\circ}}\xspace$, with the input voltage held constant at the rated input/output.
- Derating is required.

- When two or more units are operating it may not comply with the IEC61000-3-2. Please contact us for details.
- Please contact us about dynamic load and input response.
- Please contact us about another class.
- To meet the specifications. Do not operate over-loaded condition.
- Parallel operation is not possible.
- Derating is required when operated with chassis and cover.
- Sound noise may be generated by power supply in case of pulse load.





External view



- % 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.
- W 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/C	Connector	Connector Mating connector		Terminal			
014	4 4400704 0	1-1123722-5	Chain	1123721-1			
CNT	CN1 1-1123724-3	1-1123722-5	Loose	1318912-1			
ONIO	4 4400700 4	4 4400700 4	Chain	1123721-1			
CNZ	1-1123723-4	1-1123722-4	Loose	1318912-1			
(Mfr:Tyco Electronics)							

- ※ I/O Connector is Mfr. Tyco Electronics
- $\ \ \, \mbox{\@ifnextcolor}\mbox{\@ifnextco$

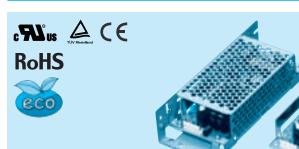
<PIN CONNECTION>

Input
AC(L)
AC(N)
FG

		CIVE	
Input		Pin No.	Output
AC(L)		1, 2	-V
AC(N)		3, 4	+V
EC	l		

CN2

- % Tolerance : ± 1 [± 0.04] % Weight: 130g max (without chassis and cover)
- ※ PCB material / thickness : CEM3 / 1.6mm
- * Optional chassis and cover material : Electric galvanizing steel board.
- * Dimensions in mm, []=inches
- Mounting torque (Mounting hole of chassis): 0.6N · m (6.3kgf · cm) max
- % Keep drawing current per pin below 5A for CN2.





High voltage pulse noise type : NAP series Low leakage current type : NAM series

to connect with several devices.

*The EMI/EMC Filter is recommended

- ①Series name ②Single output ③Output wattage ④Universal input
- ⑤Output voltage
- Optional
 C: with Coating
 G: Low leakage current
 - J1: VH(J.S.T.)connector type
 - S: with Chassis
 - SN: with Chassis & cover Y: with Potentiometer

Specification is changed at option, refer to Instruction Manual.

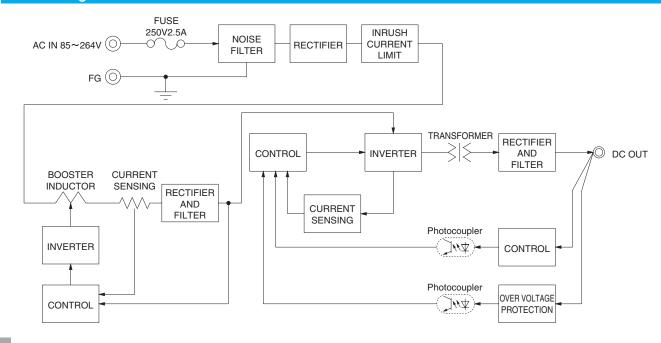
This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care.

MODEL	LFA50F-3R3-Y	LFA50F-5	LFA50F-12	LFA50F-15	LFA50F-24	LFA50F-36	LFA50F-48
MAX OUTPUT WATTAGE[W]	33	50	51.6	52.5	50.4	50.4	52.8
DC OUTPUT	3.3V 10A	5V 10A	12V 4.3A	15V 3.5A	24V 2.1A	36V 1.4A	48V 1.1A

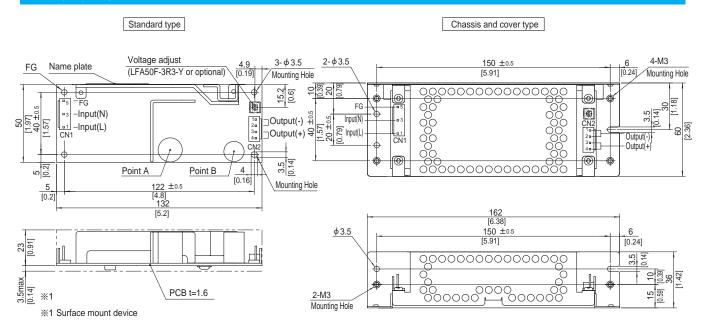
	MODEL		LFA50F-3R3-Y	LFA50F-5	LFA50F-12	LFA50F-15	LFA50F-24	LFA50F-36	LFA50F-48		
	VOLTAGE[V]		AC85 - 264 1 ¢	(Refer to Inst	ruction Manual	1.1 and 3.2) *3					
	OUDDENTIAL	ACIN 100V	0.47typ (Io=100%) 0.67typ (Io=100%)								
	CURRENT[A]	ACIN 200V	0.27typ (lo=100%)	0.36typ (lo=10	00%)						
	FREQUENCY[Hz]	•	50 / 60 (47 - 6	3)							
	EEEIOJENOVIO/ I	ACIN 100V	73.5typ	77.5typ	80.0typ	80.5typ	81.5typ	82.0typ	81.0typ		
INPUT	EFFICIENCY[%]	ACIN 200V	74.0typ	79.0typ	81.5typ	81.5typ	83.0typ	83.5typ	82.5typ		
	DOMES - 1 0 - 0 - 1 0 -	ACIN 100V	0.96typ	0.97typ							
	POWER FACTOR (lo=100%)	ACIN 200V	0.83typ	0.90typ							
	ACIN 100		15typ (lo=100	%) (At cold star	t) (Ta=25°C)						
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100								
	LEAKAGE CURREN	T[mA]				=100%, Accordi	ng to IEC60950	-1 and DEN-AN)		
	VOLTAGE[V]		3.3	5	12	15	24	36	48		
	CURRENT[A]		10.0	10.0	4.3	3.5	2.1	1.4	1.1		
	LINE REGULATION[mV] *4		20max	48max	60max	96max	144max	192max		
	LOAD REGULATION			40max	100max	120max	150max	240max	240max		
			80max	80max	120max	120max	120max	150max	150max		
	RIPPLE[mVp-p]	-10 - 0°C *1		140max	160max	160max	160max	200max	200max		
		0 to +50°C *1	120max	120max	150max	150max	150max	250max	250max		
DUTPUT	RIPPLE NOISE[mVp-p]	-10 - 0°C *1		160max	180max	180max	180max	300max	300max		
		0 to +50℃		50max	120max	150max	240max	360max	480max		
	TEMPERATURE REGULATION[mV]	-10 to +50°C		60max	150max	180max	290max	450max	600max		
	DRIFT[mV]	*2	20max	20max	48max	60max	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	Fixed ("Y" opt	tion is available f	or adjusting out	out voltage betwe	een ±10%)			
	OUTPUT VOLTAGE SET	TING[V]	3.30 to 3.40	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 50.0		
	OVERCURRENT PROT	ECTION	Works over 10	5% of rating ar	nd recovers auto	matically	•	•	•		
PROTECTION	OVERVOLTAGE PROTE	ECTION	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	41.40 to 50.40	55.20 to 67.2		
CIRCUIT AND	OPERATING INDICA	TION	Not provided		1	1		1	1		
OTHERS	REMOTE SENSING		Not provided								
	REMOTE ON/OFF		Not provided								
	INPUT-OUTPUT		AC3,000V 1mi	nute, Cutoff cu	rrent = 10mA, D	C500V 50MΩ r	nin (At Room To	emperature)			
SOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At Room Temperature)								
	OPERATING TEMP., HUMID. AND	ALTITUDE	-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								
NVIRONMENT	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis								
	IMPACT		196.1m/s ² (200	G), 11ms, once	each X, Y and 2	Z axis					
	AGENCY APPROVAL	LS	UL60950-1, C-	UL (CSA60950	-1), EN60950-1	, EN50178 Com	plies with DEN-	-AN			
AFETY AND	CONDUCTED NOISE					5011-B, EN550	22-B				
ICISE REGULATIONS	CE MARKING		Low Voltage D	irective, EMC D	irective						
	HARMONIC ATTENU	JATOR									
	CASE SIZE/WEIGHT		Complies with IEC61000-3-2 (Class A) *5 50×26.5×132mm [1.97×1.04×5.20 inches] (W×H×D) / 165g max (without chassis and cover)								
OTHERS	ONOE GILL, WEIGHT				Convection (Refer to Instruction Manual 3.1 and 3.2) *3						

- This is the value that measured on measuring board with capacitor of 22 $\mu\,F$ at 150mm from output terminal.
 - Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN:
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃, with the input voltage held constant at the rated input/output.
- Derating is required.
 Please contact us about dynamic load and input response.
- Please contact us about another class.
- To meet the specifications. Do not operate over-loaded condition.
- Parallel operation is not possible.
- Derating is required when operated with chassis and cover.
- Sound noise may be generated by power supply in case of pulse load.





External view



- ¾ 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.
- W 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/C	Connector	Connector Mating connector		erminal			
014	11 1-1123724-3 1-1123722-5	Chain	1123721-1				
CN1 1-1123724-3	1-1123722-5	Loose	1318912-1				
ONIO	4 4400700 4	(Chain	1123721-1			
CN2	1-1123723-4	1-1123722-4	Loose	1318912-1			

(Mfr:Tyco Electronics)

- ※ I/O Connector is Mfr. Tyco Electronics
- Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 5.

<PIN CONNECTION>

CN1		CN2	
Pin No.	Input	Pin No.	Output
1	AC(L)	1, 2	-V
2		1, 2	- v
3	AC(N)	2.4	+V
4		3, 4	+ v
5	FG		

- ※ Tolerance: ±1 [±0.04]
- Weight: 165g max (without chassis and cover)
- PCB material / thickness : CEM3 / 1.6mm
- ※ Optional chassis and cover material: Electric galvanizing steel board.
- ※ Dimensions in mm, []=inches
- Mounting torque (Mounting hole of chassis): 0.6N · m (6.3kgf · cm) max

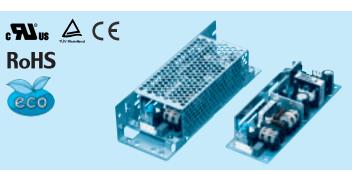
MAX OUTPUT WATTAGE[W]

DC OUTPUT

LFA75F-15

75

15V 5A





High voltage pulse noise type: NAP series Low leakage current type: NAM series

to connect with several devices

*The EMI/EMC Filter is recommended

LFA75F-24

24V 3.2A

76.8

- Series name
- 2 Single output 3 Output wattage 4 Universal input
- ⑤Output voltage
- ⑥Optional

LFA75F-36

36V 2.1A

75.6

- C: with Coating
 G: Low leakage current
- J1: VH(J.S.T.)connector type
- S: with Chassis
- SN: with Chassis & cover Y: with Potentiometer

Specification is changed at option, refer to Instruction Manual.

LFA75F-48

48V 1.6A

76.8

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.

LFA75F-12

12V 6.3A

75.6

LFA75F-3R3-Y LFA75F-5

75

5V 15A

49.5

3.3V 15A

20 0011 0	<u> </u>		0.01 1071	01.07	121 0.071	101 011	Z TT OLEA	1001 Z.I.A	101 11071	
SPECIF	ICATIONS									
	MODEL		LFA75F-3R3-Y	LFA75F-5	LFA75F-12	LFA75F-15	LFA75F-24	LFA75F-36	LFA75F-48	
	VOLTAGE[V]		AC85 - 264 1 ¢	(Refer to Inst	ruction Manual	1.1 and 3.2) *3	•			
	ACIN 100V		0.70typ (Io=100%)	1.00typ (lo=1	00%)	· · · · · · · · · · · · · · · · · · ·				
INPUT	CURRENT[A]	ACIN 200V	0.40typ (lo=100%)	0.50typ (lo=1	00%)					
	FREQUENCY[Hz]		50 / 60 (47 - 6	3)	,					
		ACIN 100V	73.5typ	78.0typ	81.5typ	81.5typ	82.5typ	82.5typ	82.5typ	
	EFFICIENCY[%]	ACIN 200V	75.0typ	80.0typ	83.0typ	83.0typ	84.5typ	84.5typ	84.5typ	
		ACIN 100V	0.96typ	0.97typ	, ,,	, ,,	, ,,	, ,,	, ,,	
	POWER FACTOR (Io=100%)	ACIN 200V	0.83typ	0.90typ						
	ACIN 100V		15typ (lo=100	%) (At cold sta	rt) (Ta=25°C)					
	INRUSH CURRENT[A] ACIN 200V		30typ (lo=100	%) (At cold sta	rt) (Ta=25°C)					
	LEAKAGE CURREN	T[mA]				=100%, Accordi	ng to IEC60950)-1 and DEN-AN)	
	VOLTAGE[V]		3.3	5	12	15	24	36	48	
	CURRENT[A]		15.0	15.0	6.3	5.0	3.2	2.1	1.6	
	LINE REGULATION[mV] *4	20max	20max	48max	60max	96max	144max	192max	
	LOAD REGULATION	[mV] *4	40max	40max	100max	120max	150max	240max	240max	
	DIDDI E(m)/m m1	0 to +50°C *1	80max	80max	120max	120max	120max	150max	150max	
	RIPPLE[mVp-p]	-10 - 0℃ *1	140max	140max	160max	160max	160max	200max	200max	
		0 to +50°C *1	120max	120max	150max	150max	150max	250max	250max	
OUTPUT	RIPPLE NOISE[mVp-p]	-10 - 0℃ *1	160max	160max	180max	180max	180max	300max	300max	
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max	360max	480max	
		-10 to +50℃	60max	60max	150max	180max	290max	450max	600max	
	DRIFT[mV]	*2	20max	20max	48max	60max	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	Fixed ("Y" op	tion is available	for adjusting out	put voltage betw	reen ±10%)		
	OUTPUT VOLTAGE SET	TING[V]	3.30 to 3.40	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 50.0	
	OVERCURRENT PROT	ECTION	Works over 10	5% of rating a	nd recovers aut	tomatically				
PROTECTION	OVERVOLTAGE PROTE	ECTION	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	41.40 to 50.40	55.20 to 67.2	
CIRCUIT AND	OPERATING INDICA	TION	Not provided	Not provided						
OTHERS	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Not provided							
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)							
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)							
	OUTPUT-FG		AC500V 1minu	ite, Cutoff curr	ent = $25mA$, D(0.00000000000000000000000000000000000	n (At Room Ter	nperature)		
	OPERATING TEMP., HUMID. AND	ALTITUDE	-10 to +70°C, 2	20 - 90%RH (N	lon condensing) (Refer to Instru	ction Manual 3.2	2), 3,000m (10,0	000feet) max :	
ENVIRONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE), 9,000m (30,00			<u> </u>	
LIVVINUIVINEIVI	VIBRATION					60minutes each	along X, Y and I	Z axis		
	IMPACT				e each X, Y and		·			
CAFETY AND	AGENCY APPROVAL				, · · · · · · · · · · · · · · · · · · ·	1, EN50178 Con	<u> </u>	-AN		
SAFETY AND NOISE	CONDUCTED NOISE	.				55011-B, EN550	22-B			
REGULATIONS	CE MARKING		Low Voltage D							
	HADMONIC ATTENI	IATOD	Complies with	IEC61000-3-2	(Clace A) *5					

Complies with IEC61000-3-2 (Class A) *5

Convection (Refer to Instruction Manual 3.1 and 3.2) *3

This is the value that measured on measuring board with capacitor of 22 $\mu\,\text{F}$ at 150mm from output terminal.

HARMONIC ATTENUATOR CASE SIZE/WEIGHT

COOLING METHOD

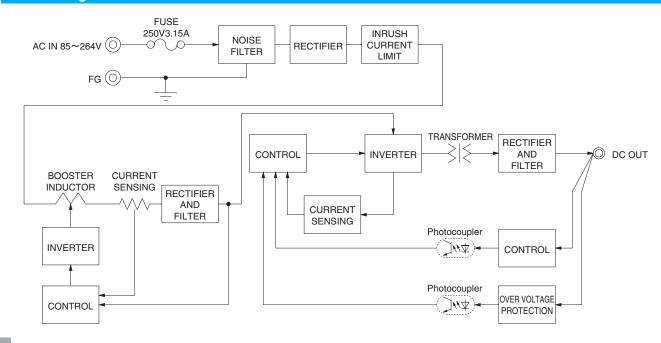
- Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN:
- Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.
- Derating is required.

50×33.5×150mm [1.97×1.32×5.91 inches] (W×H×D) / 230g max (without chassis and cover)

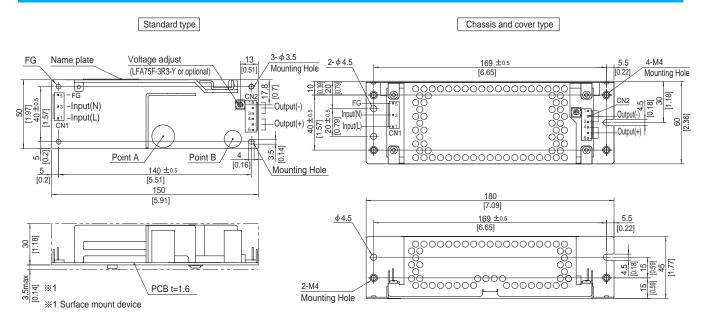
- Please contact us about dynamic load and input response.
- Please contact us about another class.
- To meet the specifications. Do not operate over-loaded condition.
- Parallel operation is not possible.
 - Derating is required when operated with chassis and cover
- Sound noise may be generated by power supply in case of pulse load.

OTHERS





External view



- % 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/C	Connector	Mating connector	To	erminal			
CNIA	1-1123724-3	1-1123722-5	Chain	1123721-1			
CIVI	1-1123/24-3	1-1123/22-5	Loose	1318912-1			
CNO	1-1123723-6	1-1123722-6	Chain	1123721-1			
CN2	1-1123723-6	1-1123722-6	Loose	1318912-1			
(Mfr:Type Fleetrenies)							

- ※ I/O Connector is Mfr. Tyco Electronics
- Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 5.

<PIN CONNECTION>

CN1		
Pin No.	Input	
1	AC(L)	
2		
3	AC(N)	
4		
5	FG	

CN2	
Pin No.	Output
1 to 3	-V
4 to 6	+V

- ※ Tolerance : ±1 [±0.04]
- Weight: 230g max (without chassis and cover)
- ※ PCB material / thickness : CEM3 / 1.6mm
- ※ Optional chassis and cover material: Electric galvanizing steel board.
- ※ Dimensions in mm, []=inches
- Mounting torque (Mounting hole of chassis) :1.5N · m (16kgf · cm) max
- ※ Keep drawing current per pin below 5A for CN2.

LFA

c Sus Livrheinted CE **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
- to output peak current (only 24V)
 J1: VH(J.S.T.)connector type
 R: with Remote ON/OFF
 R2: with Remote ON/OFF

①Series name ②Single output ③Output wattage ④Universal input

⑤Output voltage

- S: with Chassis
- SN: with Chassis & cover

© Optional *1
C: with Coating
G: Low leakage current
H: with the function to be acceptable

Y: with Potentiometer

Please refer to Instruction manual 5

MODEL	LFA100F-3R3-Y	LFA100F-5-Y	LFA100F-12	LFA100F-15	LFA100F-24	LFA100F-24-H	LFA100F-36	LFA100F-48
MAX OUTPUT WATTAGE[W] *5	66	100	102	100.5	103.2	103.2 (129.6)	100.8	100.8
DC OUTPUT *5	3.3V 20A	5V 20A	12V 8.5A	15V 6.7A	24V 4.3A	24V 4.3 (5.4)A	36V 2.8A	48V 2.1A

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

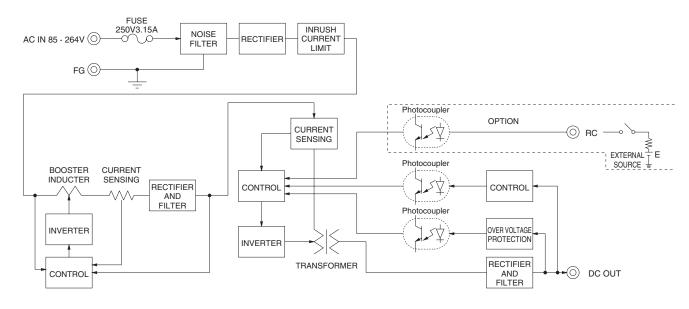
SPECIFICATIONS

so handle the unit with care.

	MODEL		LFA100F-3R3-Y	LFA100F-5-Y	LFA100F-12	LFA100F-15	LFA100F-24	LFA100F-24-H	LFA100F-36	LFA100F-48		
	VOLTAGE[V]		AC85 - 264 1 φ (Refer to Instruction Manual 1.1 and 3.2) *4									
	CUDDENTIAL	ACIN 100V	0.9typ (Io=100%)	0.9typ (lo=100%) 1.3typ (lo=100%)								
	CURRENT[A]	ACIN 200V	0.5typ (lo=100%) 0.7typ (lo=100%)									
	FREQUENCY[Hz]		50 / 60 (47 -	50 / 60 (47 - 63)								
	EFFICIENCY[9/1	ACIN 100V	77.0typ	82.0typ	82.0typ	83.0typ	84.0typ	84.0typ	84.0typ	84.5typ		
INPUT	EFFICIENCY[%]	ACIN 200V	79.0typ	84.0typ	84.5typ	85.5typ	87.0typ	87.0typ	87.0typ	87.0typ		
	POWER FACTOR (Io=100%)		0.98typ	0.99typ								
	POWER FACTOR (IO=100%)	ACIN 200V	0.92typ	0.92typ 0.95typ								
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start) (Ta=25℃)									
	INTIOSTI COTTILENT[A]	ACIN 200V		30typ (Io=100%) (At cold start) (Ta=25°C)								
	LEAKAGE CURREN	T[mA]	0.40 / 0.75m	ax (ACIN 100)	V / 240V 60H	lz, lo=100%,	According to I	EC60950-1 a	nd DEN-AN)			
	VOLTAGE[V]		3.3	5	12	15	24	24	36	48		
	CURRENT[A]	*5		20	8.5	6.7	4.3	4.3 (Peak 5.4)	2.8	2.1		
	LINE REGULATION[20max	48max	60max	96max	96max	144max	192max		
	LOAD REGULATION			40max	100max	120max	150max	150max	240max	240max		
	RIPPLE[mVp-p]	0 to +50℃ *2		80max	120max	120max	120max	240max	150max	150max		
	==[140max	140max	160max	160max	160max	320max	200max	200max		
	RIPPLE NOISE[mVp-p]		120max	120max	150max	150max	150max	300max	250max	250max		
OUTPUT		-10-0℃ *2	160max	160max	180max	180max	180max	360max	300max	300max		
	TEMPERATURE REGULATION[mV]		50max	50max	120max	150max	240max	240max	360max	480max		
			60max	60max	150max	180max	290max	290max	450max	600max		
			20max	20max	48max	60max	96max	96max	144max	192max		
			350typ (ACIN 100V, Io=100%) 20typ (ACIN 100V, Io=100%)									
	HOLD-UP TIME[ms]											
	OUTPUT VOLTAGE ADJUSTMENT			4.50 to 5.50						40.00 50.00		
	OUTPUT VOLTAGE SET			5.00 to 5.15								
	OVERCURRENT PROT			105% of rating 5.75 to 7.00								
PROTECTION	OVERVOLTAGE PROTE				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		
OTHERS	REMOTE SENSING	IION	Not provided									
OTTLETTO	REMOTE ON/OFF		Not provided Option (Refer to Instruction Manual)									
	INPUT-OUTPUT-RC	40				mA DC500V F	50MO min (A	t Doom Tomn	oratura)			
	INPUT-FG	***		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature) AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
ISOLATION	OUTPUT:RC-FG	*6		nute, Cutoff c								
	OUTPUT-RC	*6		nute, Cutoff c								
	OPERATING TEMP.,HUMID.AND	ΔI TITUDF *4		, 20 - 90%RH)feet) max		
	STORAGE TEMP., HUMID.AND								000111 (10,000	noot) max		
ENVIRONMENT	VIBRATION	ALITIODE		0 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max 0 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis								
	IMPACT			0G), 11ms, o				., 2 4/1	-			
SAFETY AND	AGENCY APPROVAL	LS		C-UL (CSA609			78 Complies	with DEN-AN				
NOISE	CONDUCTED NOISE			th FCC-B, VCC								
REGULATIONS				th IEC61000-3		, ,						
	CASE SIZE/WEIGHT			55mm [2.44×			(D) / 280g ma	ax (without ch	assis and cov	er)		
OTHERS	COOLING METHOD			Refer to Instru						,		
	on is shanged at antion, refer		<u> </u>	at the rated input/o		- /		a contact us shout				

- *1 Specification is changed at option, refer to Instruction Manual. This is the value that measured on measuring board with
- capacitor of 22 $\mu\,F$ at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103).
- *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 Derating is required.
- () means peak current. There is a possibility that an internal device is damaged when the specification is exceeded. Please contact us about the detail.
- Applicable when Remote ON/OFF (optional) is added.
- Please contact us about dynamic load and input response.
- *8 Please contact us about another class
- To meet the specifications. Do not operate over-loaded condition.
 - Parallel operation is not possible.
 - Derating is required when operated with chassis and cover.
 - Sound noise may be generated by power supply in case of pulse load.

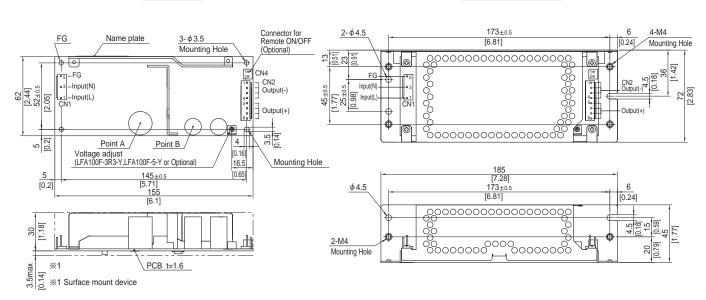




External view

* External size of option is different from standard model.

Standard type Chassis and cover type



- ¾ 4 Mounting holes are existing.
- $\ensuremath{\,\times\,}$ 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/C) Connector	Mating connector	Terminal		
014	1-1123724-3	1-1123722-5	Chain	1123721-1	
CN1	1-1123724-3	1-1123722-5	Loose	1318912-1	
ONIO	1-1123723-8	1-1123722-8	Chain	1123721-1	
CN2	1-1123723-8	1-1123722-8	Loose	1318912-1	

(Mfr:Tyco Electronics)

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

<PIN CONNECTION>

CN1 Pin No. Input AC(L) 3 AC(N) FG

CINZ						
Pin No.	Output					
1 to 4	-V					
5 to 8	+V					

- % Keep drawing current per pin below 5A for CN2.
- % Tolerance : ±1 [±0.04]
- * Weight : 280g 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 · 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 LFA

c Sus Livrheinted CE **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
- to output peak current (only 24V)
 J1: VH(J.S.T.)connector type
 R: with Remote ON/OFF
 R2: with Remote ON/OFF

manual 5.

S: with Chassis

①Series name ②Single output ③Output wattage ④Universal input

⑤Output voltage

SN: with Chassis & cover

© Optional *1
C: with Coating
G: Low leakage current
H: with the function to be acceptable

Y: with Potentiometer Please refer to Instruction

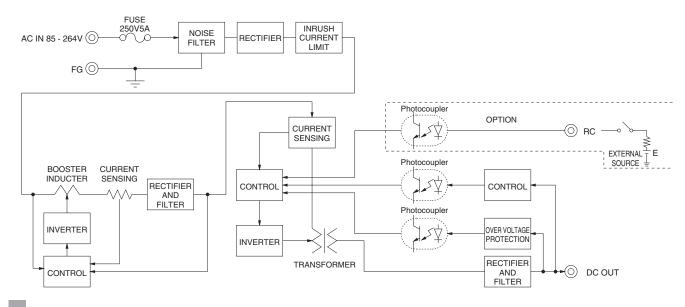
This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care.

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

	MODEL		LFA150F-3R3-Y	LFA150F-5-Y	LFA150F-12	LFA150F-15	LFA150F-24	LFA150F-24-H	LFA150F-36	LFA150F-48		
	VOLTAGE[V]		AC85 - 264 1 ϕ (Refer to Instruction Manual 1.1 and 3.2) *4									
	OUDDENTIAL	ACIN 100V	1.4typ (Io=100%)	.4typ (Io=100%) 2.0typ (Io=100%)								
	CURRENT[A]		0.7typ (Io=100%) 1.0typ (Io=100%)									
	FREQUENCY[Hz]		50 / 60 (47 -	63)								
	EEEIOIENOVIO/1	ACIN 100V	80.0typ	82.5typ	82.5typ	84.0typ	85.0typ	85.0typ	85.0typ	85.5typ		
INPUT	EFFICIENCY[%]	ACIN 200V	82.0typ	85.5typ	85.0typ	86.5typ	87.5typ	87.5typ	87.5typ	88.0typ		
	DOMED FACTOR (L. 4000()	ACIN 100V	0.98typ	0.99typ					•			
	POWER FACTOR (Io=100%)	ACIN 200V	0.92typ	31 31								
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start) (Ta=25℃)									
	INNUSH CONNENT[A]	ACIN 200V	30typ (Io=10	30typ (Io=100%) (At cold start) (Ta=25℃)								
	LEAKAGE CURREN	T[mA]	0.40 / 0.75m	ax (ACIN 100)	V/240V 60H	lz, Io=100%, <i>I</i>	According to I	EC60950-1 a	nd DEN-AN)			
	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℃ *2		80max	120max	120max	120max	240max	150max	150max		
	niPPLE[iiivp-p]	-10-0℃ *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		
OUTPUT	HIPPLE NOISE[IIIVP-P]	-10-0℃ *2	160max	160max	180max	180max	180max	360max	300max	300max		
	TEMPERATURE REGULATION[mV]	0 to +40℃	50max	50max	120max	150max	240max	240max	360max	480max		
	TEMPERATURE REQUESTION[IIV]	-10 to +40℃	60max	60max	150max	180max	290max	290max	450max	600max		
	DRIFT[mV] *3		20max	20max	48max	60max	96max	96max	144max	192max		
	START-UP TIME[ms] 350typ (A		350typ (ACII	50typ (ACIN 100V, Io=100%)								
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%) 2.85 to 3.63 4.50 to 5.50 Fixed ("Y" option is available for adjusting output voltage)									
	OUTPUT VOLTAGE ADJUSTMENT	RANGE[V]										
	OUTPUT VOLTAGE SET								34.50 to 37.50			
	OVERCURRENT PROT	ECTION							recovers auto			
PROTECTION	OVERVOLTAGE PROTE				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 INDICA	TION	Not provided									
OTHERS	REMOTE SENSING		Not provided									
	REMOTE ON/OFF		Option (Refer to Instruction Manual)									
	INPUT-OUTPUT-RC	*6		C3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
ISOLATION	INPUT-FG			AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
	OUTPUT-RC-FG	*6		C500V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At Room Temperature) C100V 1minute, Cutoff current = 25mA, DC100V 10M Ω min (At Room Temperature)								
	OUTPUT-RC	*6				,						
	OPERATING TEMP., HUMID.AND			10 to +70°C, 20 - 90%RH (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max								
ENVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE		0 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis								
-	VIBRATION						s each along 2	X, Y and Z axi	S			
IMPACT				0G), 11ms, o			70.0 !'	DEN ATT				
SAFETY AND	AGENCY APPROVAL			C-UL (CSA609				with DEN-AN				
NOISE	CONDUCTED NOISE			h FCC-B, VCC		<u> </u>	EN55022-B					
REGULATIONS	HARMONIC ATTENU			h IEC61000-3								
OTHERS	CASE SIZE/WEIGHT							ax (without ch	assis and cov	rer)		
	COOLING METHOD			Refer to Instru		3.1 and 3.2) *4		a contact us shout				

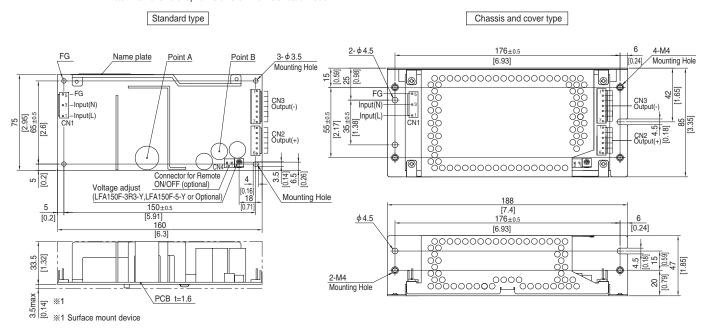
- *1 Specification is changeed at option, refer to Instruction Manual. This is the value that measured on measuring board with
- capacitor of 22 $\mu\,F$ at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103).
- Drift is the change in 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
- Derating is required. () means peak current. There is a possibility that an internal device is damaged when the specification is exceeded. Please contact us about the detail.
- Applicable when remote control (optional) is added.
- Please contact us about dynamic load and input response.
- *8 Please contact us about another class
- To meet the specifications. Do not operate over-loaded condition.
- Parallel operation is not possible.
- Derating is required when operated with chassis and cover.
- Sound noise may be generated by power supply in case of pulse load.





External view

* External size of option is different from standard model.



- % 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		
·NIA	1-1123724-3	1-1123722-5	Chain	1123721-1	
INI	1-1123724-3	1-1123722-5	Loose	1318912-1	
	1-1123723-6	1-1123722-6	Chain	1123721-1	
·INZ	1-1123723-6	1-1123722-6	Loose	1318912-1	
	1-1123723-7	1-1123722-7	Chain	1123721-1	
·IN3	1-1123723-7	1-1123/22-/	Loose	1318912-1	

(Mfr:Tyco Electronics)

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

- PIN CONNECTIONS

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

- % Tolerance : ±1 [±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 $\ensuremath{\,\times\,}$ Mounting torque (Mounting hole of chassis) :1.5N $^{\bullet}$ m (16kgf $^{\bullet}$ cm) max

Connector type

CN4 Option	n (Mfr:J.S.T)
DINI No	Contonto

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 LFA

LFA240F

A 240

c Sus Livrheinted CE **RoHS**



High voltage pulse noise type : NAP series Low leakage current type : NAM series

①Series name

2 Single output 3 Output wattage 4 Universal input

⑤Output voltage

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

T : Vertical terminal block Y: with Potentiometer

Please refer to Instruction manual 5.

MODEL	LFA240F-24	LFA240F-24-H	LFA240F-36	LFA240F-48
MAX OUTPUT WATTAGE[W] *5	240	240 (300)	241.2	240
DC OUTPUT *5	24V 10A	24V 10 (12.5)A	36V 6.7A	48V 5A

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

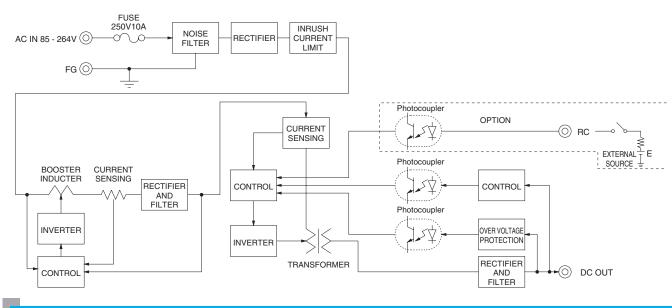
SPECIFICATIONS

so handle the unit with care.

	MODEL		LFA240F-24	LFA240F-24-H	LFA240F-36	LFA240F-48				
	VOLTAGE[V]		AC85 - 264 1 ϕ (Refer to Instruction Manual 1.1 and 3.2) *4							
	ACIN 100V									
	CURRENT[A]	ACIN 200V	2F - 1							
	FREQUENCY[Hz]		50 / 60 (47 - 63)							
	EEEIOJENOVIO/1	ACIN 100V	84.5typ	84.5typ	84.5typ	84.5typ				
IPUT	EFFICIENCY[%]	ACIN 200V	87.5typ	87.5typ	87.5typ	87.5typ				
		ACIN 100V	0.99typ							
	POWER FACTOR (Io=100%)	ACIN 200V	0.95typ							
	INDUCUI CURRENTIAL	ACIN 100V	15 / 30typ (Io=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start)							
	INRUSH CURRENT[A]	ACIN 200V	30 / 30typ (Io=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start)							
	LEAKAGE CURREN	T[mA]		OV / 240V 60Hz, Io=100%,						
	VOLTAGE[V]		24	24	36	48				
	CURRENT[A]	*5	10	10 (Peak12.5)	6.7	5				
	LINE REGULATION[mV] *7	96max	96max	144max	192max				
	LOAD REGULATION	[mV] *7	150max	150max	240max	240max				
	DIDDI ElmVa al	0 to +40℃ *2	120max	240max	150max	150max				
	RIPPLE[mVp-p]	-10-0℃ *2	160max	320max	200max	200max				
	DIDDLE NOIDEL V	0 to +40°C *2	150max	300max	250max	250max				
ООТРОТ	RIPPLE NOISE[mVp-p]	-10-0℃ *2	180max	360max	300max	300max				
		0 to +40°C	240max	240max	360max	480max				
	TEMPERATURE REGULATION[mV]	-10 to +40°C	290max	290max	450max	600max				
	DRIFT[mV] *3		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]	Fixed ("Y" option is available for adjusting output voltage)							
	OUTPUT VOLTAGE SET	TING[V]	23.00 to 25.00	23.00 to 25.00	34.50 to 37.50	46.00 to 50.00				
	OVERCURRENT PROT	ECTION	Works over 105% of ratin	g (works over 101% of pea	k current at option -H) and	recovers automatically				
ROTECTION	OVERVOLTAGE PROTE	ECTION	27.60 to 33.60	27.60 to 33.60	41.40 to 50.40	55.20 to 67.20				
RCUIT AND	OPERATING INDICA	TION	Not provided			•				
THERS	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Option (Refer to Instruction	on Manual)						
	INPUT-OUTPUT-RC	*6	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)							
OLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)							
CLATION	OUTPUT-RC-FG	*6								
	OUTPUT-RC	*6	AC100V 1minute, Cutoff of	current = 25mA, DC100V 10	MΩ min (At Room Temper	ature)				
	OPERATING TEMP., HUMID. AND	ALTITUDE *4		l (Non condensing) (Refer to		000m (10,000feet) max				
IVIRONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE	-20 to +75°C, 20 - 90%RF	l (Non condensing), 9,000n	n (30,000feet) max					
VIRUNINENI	VIBRATION		10 - 55Hz, 19.6m/s ² (2G),	3minutes period, 60minute	s each along X, Y and Z axi	is				
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis							
AFETY AND	AGENCY APPROVAL	LS		950-1), EN60950-1, EN501	· · · · · · · · · · · · · · · · · · ·					
DISE	CONDUCTED NOISE			with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B						
EGULATIONS	HARMONIC ATTENU	JATOR	Complies with IEC61000-	,						
THERS	CASE SIZE/WEIGHT	'	84×46.5×180mm [3.31>	<1.83×7.09 inches] (W×H>	(D) / 550g max (without ch	nassis and cover)				
IHERO	COOLING METHOD		Convection (Refer to Instru	uction Manual 3.1 and 3.2) *4	1					
*1 Specificati	on is changeed at ontion, refer	r to Instructi	on Manual. at the rated input/	output	*8 Please contact us about	another class				

- *1 Specification is changeed at option, refer to Instruction Manual. This is the value that measured on measuring board with
- capacitor of 22 µ F at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103).
- 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
- Derating is required. () means peak current. There is a possibility that an internal device is damaged when the specification is exceeded. Please contact us about the detail.
- Applicable when remote control (optional) is added.
- Please contact us about dynamic load and input response.
- *8 Please contact us about another class
- To meet the specifications. Do not operate over-loaded condition.
- Parallel operation is not possible.
- Derating is required when operated with chassis and cover.
- Sound noise may be generated by power supply in case of pulse load.



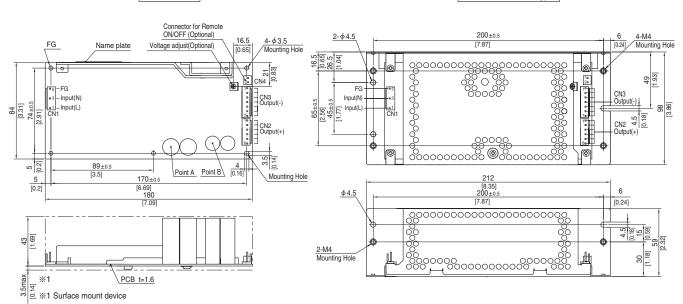


External view

* External size of option is different from standard model.

Standard type

Chassis and cover type



- $\ensuremath{\,\times\,}$ The back side of P.C.B. of the power supply is assembled some
- 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	1-1123722-5	Chain	1123721-1		
	1-1123724-3	1-1123/22-5	Loose	1318912-1		
CN2	1-1123723-6	1-1123722-6	Chain	1123721-1		
		1-1123/22-6	Loose	1318912-1		
ONIO	1-1123723-7	1-1123722-7	Chain	1123721-1		
CN3		1-1123722-7	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)					
2						
3	AC(N)	1 to 6	+V	1 to 7	-V	
4						
5	FG					

- % Keep drawing current per pin below 5A for CN2,CN3.
- % Tolerance : ±1 [±0.04]
- Weight: 550g 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 · 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





High voltage pulse noise type : NAP series Low leakage current type : NAM series

- ①Series name
 ②Single output
 ③Output wattage
 ④Universal input
 ⑤Output voltage
 ⑥Optional *1
 C: with Coating
 G: Low leakage current
 H: with the function to be acceptable
 to output peak current
- H: with the function to be acceptable to output peak current (Only 24V, 30V, 36V and 48V)

 J: EP (Tyce Electronics) connector type (Except 3.3V and 5V)

 J: VH (J.S.T.) connector type (Except 3.3V and 5V)

 R: with Remote ON/OFF

 R2: with Remote ON/OFF

 S2: with Chassis

 SNF: with Chassis & cover & fan (Only 5V, 12V and 24V)

 T1: Holizontal terminal block lease refer to Instruction manual 5

- 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.

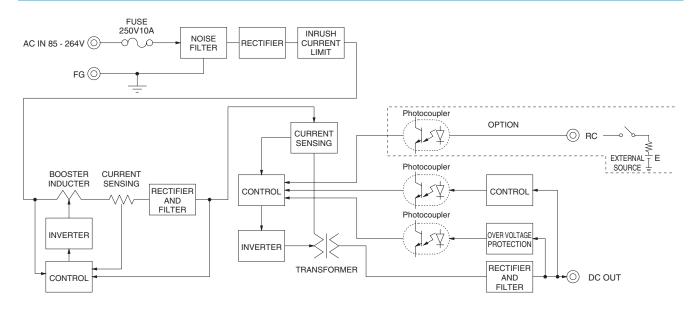
MODEL		LFA300F-3R3-TY	LFA300F-5-TY	LFA300F-12-TY	LFA300F-15-TY	LFA300F-24-TY	LFA300F-24-HTY	LFA300F-30-TY	LFA300F-36-TY	LFA300F-48-TY
MAX OUTPUT WATTAGE[W] *5		198	300	324	330	336	336 (456)	330	338.4	336
DC OUTPUT *5	Convection	3.3V 40A	5V 40A	12V 17A	15V 14A	24V 12.5A	24V 12.5 (19)A	30V 10A	36V 8.4A	48V 6.3A
	Forced air	3.3V 60A	5V 60A	12V 27A	15V 22A	24V 14A	24V 14 (19)A	30V 11A	36V 9.4A	48V 7A

	MODEL		LFA300F-3R3-TY	LFA300F-5-TY	LFA300F-12-TY	LFA300F-15-TY	LFA300F-24-TY	LFA300F-24-HTY	LFA300F-30-TY	LFA300F-36-TY	LFA300F-48-TY		
	VOLTAGE[V]		AC85 - 264 1 φ (Refer to Instruction Manual 1.1 and 3.2) *4										
INPUT	CHDDENITIAL	ACIN 100V	2.7typ (lo=100%) 4.1typ (lo=100%)										
	CURRENT[A] ACIN 200			2.0typ (lo=	100%)								
	FREQUENCY[Hz]	50 / 60 (47 - 63)											
	EFFICIENCY[%]	ACIN 100V	75.0typ	79.0typ	80.0typ	81.5typ	85.0typ	85.0typ	85.5typ	85.5typ	85.5typ		
	EFFICIENCT[%]	ACIN 200V	77.0typ	82.5typ	83.0typ	84.5typ	88.0typ	88.0typ	88.0typ	88.0typ	88.0typ		
	POWER FACTOR (Io=100%)	ACIN 100V	0.98typ	31 31									
	FOWER FACTOR (10=100 /6)	ACIN 200V	0.92typ 0.95typ										
	INRUSH CURRENT[A]	ACIN 100V	15 / 30typ (Io=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start)										
		ACIN 200V					Secondary inr				start)		
	LEAKAGE CURRENT[mA]		0.45 / 0.75max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)										
	VOLTAGE[V]		3.3	5	12	15	24	24	30	36	48		
	CURRENT[A] *5	Convection	40	40	17	14	12.5	12.5 (Peak19)		8.4	6.3		
			60	60	27	22	14	14 (Peak19)		9.4	7		
	LINE REGULATION[20max	20max	48max	60max	96max	96max	144max	144max	192max		
	LOAD REGULATION		40max	40max	100max	120max	150max	150max	240max	240max	240max		
	RIPPLE[mVp-p]	0 to +40℃ *2	80max	80max	120max	120max	120max	240max	150max	150max	150max		
	HIPPEE[IIIVP-P]		140max	140max	160max	160max	160max	320max	200max	200max	200max		
OUTPUT	RIPPLE NOISE[mVp-p]		120max	120max	150max	150max	150max	300max	250max	250max	250max		
	HIFFEE NOISE[IIIVP-P]	-10 - 0℃ *2	160max	160max	180max	180max	180max	360max	300max	300max	300max		
	TEMPERATURE REGULATION[mV]		50max	50max	120max	150max	240max	240max	360max	360max	480max		
		-10 to +40℃	60max	60max	150max	180max	290max	290max	450max	450max	600max		
	DRIFT[mV] *3		20max	20max	48max	60max	96max	96max	144max	144max	192max		
	START-UP TIME[ms]		350typ (ACIN 100V, Io=100%) 20typ (ACIN 100V, Io=100%)										
	HOLD-UP TIME[ms]					1.0.500.50	Ta. aa. a= =a	04.004.07.50		T a a a a a a a a a			
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]						21.60 to 27.50						
	OUTPUT VOLTAGE SETTING[V]		3.30 to 3.40 5.00 to 5.15 12.00 to 12.48 15.00 to 15.60 24.00 to 24.96 24.00 to 24.96 30.00 to 31.20 36.00 to 37.44 48.00 to 49.90 Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically										
	OVERCURRENT PROT												
PROTECTION	OVERVOLTAGE PROTE	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 34.50 to 42.00 41.40 to 50.40 55.20 to 67.2 Not provided											
CIRCUIT AND OTHERS	OPERATING INDICATE REMOTE SENSING	'											
OTTLETTO		Not provided Option (Refer to Instruction Manual)											
	REMOTE ON/OFF INPUT-OUTPUT-RC *6												
	INPUT-FG	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)											
ISOLATION	OUTPUT:RC-FG	AC500V 1minute, Cutoff current = 10ffA, DC500V 50M Ω min (At Room Temperature)											
	OUTPUT-RC	AC100V 1minute, Cutoff current = 25mA, DC100V 10MΩ min (At Room Temperature)											
	OPERATING TEMP., HUMID.AND												
	STORAGE TEMP., HUMID. AND ALTITUDE												
ENVIRONMENT	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	AGENCY APPROVAL	LS	UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN										
NOISE	CONDUCTED NOISE)11-B, EN55		***				
					0-3-2 (Class								
	CASE SIZE/WEIGHT						W×H×D) (w	ithout termi	nal block) /	810g max			
OTHERS +	COOLING METHOD					nual 3.1 and		, /					
			. 55	,	1	404011 1010		,					

- *1 Specification is changeed at option, refer to Instruction Manual.
- *2 This is the value that measured on measuring board with capacitor of 22 $\mu\,F$ at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103).
- *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
- Derating is required. () means peak current. There is a possibility that an internal device is damaged when the specification is exceeded. Please contact us about the detail..
- Applicable when remote control (optional) is added.
- *7 Please contact us about dynamic load and input response.
- *8 Please contact us about another class.
- To meet the specifications. Do not operate over-loaded condition.
 - Parallel operation is not possible.
 - Derating is required when operated with chassis and cover.
 - Sound noise may be generated by power supply in case of pulse load.



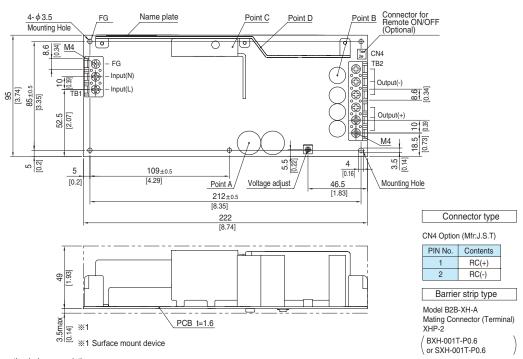




External view

* External size of option is different from standard model.

Standard type



- $\ensuremath{\mathbb{X}}$ 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, Point C, Point D are thermometry points. Please refer to Instruction Manual 3.
- % Keep drawing current per pin below 20A for TB2.

- ※ Tolerance: ±1 [±0.04]
- Weight: 810g max (without chassis and cover)PCB material: CEM3
- ※ Dimensions in mm, []=inches
- * Screw tightening torque : M4 1.6N · m (16.9kgf · cm) max

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