

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.

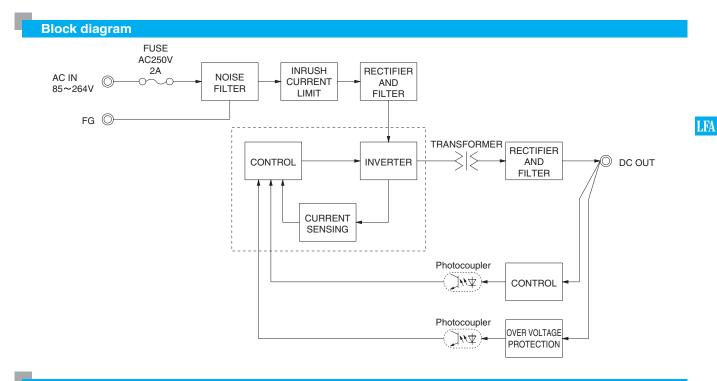
MODEL	LFA10F-3R3-Y	LFA10F-5	LFA10F-12	LFA10F-15	LFA10F-24
MAX OUTPUT WATTAGE[W]	6.6	10	10.8	10.5	12
DC OUTPUT	3.3V 2A	5V 2A	12V 0.9A	15V 0.7A	24V 0.5A

SPECIFICATIONS

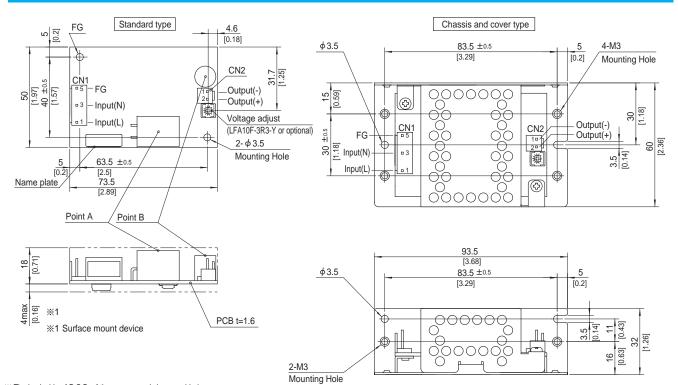
LFA

	MODEL		LFA10F-3R3-Y	LFA10F-5	LFA10F-12	LFA10F-15	LFA10F-24		
	VOLTAGE[V]		AC85 - 264 1 ¢ (Refe	er to Instruction Manu	al 1.1 and 3.2) *3				
		ACIN 100V	0.18typ (lo=100%)	0.26typ (lo=100%)					
	CURRENT[A]	ACIN 200V	0.11typ (lo=100%) 0.16typ (lo=100%)						
	FREQUENCY[Hz]		50 / 60 (47 - 440)						
IPUT		ACIN 100V	68.0typ	74.0typ	76.5typ	77.5typ	79.5typ		
	EFFICIENCY[%]	ACIN 200V	68.5typ	76.0typ	79.0typ	80.0typ	83.0typ		
		ACIN 100V	15typ (lo=100%)						
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%)						
	LEAKAGE CURRENT[mA]		0.15/0.30max (ACIN	100V / 240V 60Hz, Id	=100%, According to	IEC60950-1 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	nV1 *5	20max	20max	48max	60max	96max		
	LOAD REGULATION		40max	40max	100max	120max	150max		
			80max	80max	120max	120max	120max		
	RIPPLE[mVp-p]	-	140max	140max	160max	160max	160max		
	*1	-	190max	160max	240max	240max	280max		
			120max	120max	150max	150max	150max		
UTPUT	RIPPLE NOISE[mVp-p]	-10 - 0°C		160max	180max	180max	180max		
001101	*1	lo=0 - 35%		240max	300max	300max	320max		
		0 to +50℃		50max	120max	150max	240max		
	TEMPERATURE REGULATION[mV]	-10 to +50℃		60max	150max	180max	290max		
	DRIFT[mV] *2		20max	20max	48max	60max	96max		
	START-UP TIME[ms]					applying input again from tur			
	HOLD-UP TIME[ms]			, ,	s typ for less triair finitute of	appiying input again nonn tui	ning on the input voltage.		
C	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		20typ (ACIN 100V, Ic 2.85 to 3.63		available for adjustin	g output voltage betwe	200 1100/)		
	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			rating and recovers a		17.05 1.01.00	07.001.00.00		
ROTECTION	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		
RCUIT AND	OPERATING INDICAT	ION	Not provided						
THERS	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Not provided						
	INPUT-OUTPUT		, , ,		,	(At Room Temperature	/		
OLATION	INPUT-FG				,	(At Room Temperature	e)		
	OUTPUT-FG				DC500V 50M Ω min (A				
	OPERATING TEMP., HUMID.AND		,	,	0/ (n Manual 3.2), 3,000n	n (10,000 feet) max *3		
NVIRONMENT	STORAGE TEMP., HUMID. AND A	ALTITUDE			g), 9,000m (30,000 fee	,			
	VIBRATION				, 60minutes each alon	g X, Y and Z axis			
	IMPACT			ms, once each X, Y an					
AFETY AND	AGENCY APPROVAL		, ,	<i>,,</i>)-1, EN50178 Complie				
OISE	CONDUCTED NOISE				N55011-B, EN55022-E	8			
EGULATIONS	CE MARKING		Low Voltage Directiv						
	HARMONIC ATTENU	ATOR			Not built-in to active f				
THERS	CASE SIZE/WEIGHT		50×22×73.5mm [1.	.97×0.87×2.89 inche	s] (W×H×D) / 55g m	iax (without chassis ar	nd cover)		
THENS	COOLING METHOD		Convection (Refer to	Instruction Manual 3.	1 and 3.2) *3				
capacito Measure (Equival A circuit Therefor	te value that measured on meas r of 22 µ F at 150mm from outpu- id by 20MHz oscilloscope or R ent to KEISOKU-GIKEN: RM10 reducing standby power is bu re, the internal switch element i, and the Ripple/Ripple Noise	ut terminal. tipple-Noise (3). (It in this uni is intermitte	Please n meter *2 Drift is t a half-ho t. constant nt *3 Derating	=0-35% is different. efer to the Instruction Manual he change in DC output for ar uur warm-up at 25°C, with the t at the rated input/output. is required. o or more units are operating	eight hour period after *6 input voltage held * *	6 Please contact us about a To meet the specifications. Do Parallel operation is not p Derating is required when op	ynamic load and input respon nother class. not operate over-loaded condition.		





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/O Connector		Mating connector	T	erminal
CNIA	1-1123724-3	1-1123722-5	Chain	1123721-1
CINT	1-1123724-3	1-1123722-5	Loose	1318912-1
CNID	1-1123723-2	1-1123722-2	Chain	1123721-1
CINZ	1-1123723-2	1-1123722-2	Loose	1318912-1
		(Mfr:Ty	co Electronics)	

<PIN CONNECTION>

CN1		CN2		
Pin No.	Input	Pin No.	Output	× T
1	AC(L)	1	-V	× V
2			-v	Ж Р
3	AC(N)	0		× C
4		2	+V	% D % M
5	FG			· * W

Tolerance : ±1 [±0.04]

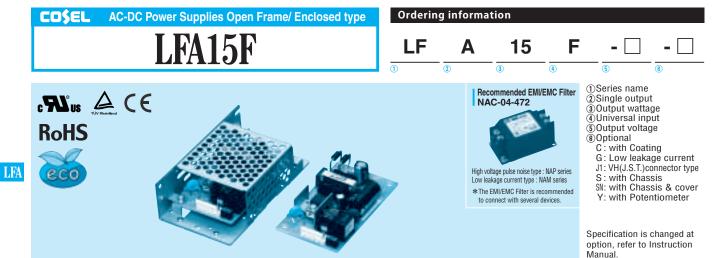
- Weight : 55g max (without chassis and cover)
- PCB material / thickness : CEM3 / 1.6mm

% 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

% I/O Connector is Mfr. Tyco Electronics

% Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 5.



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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-24 LFA15F-5 LFA15F-12 LFA15F-15 VOLTAGE[V] AC85 - 264 1 ¢ (Refer to Instruction Manual 1.1 and 3.2) *3 **ACIN 100V** 0.24typ (lo=100%) 0.35typ (lo=100%) CURRENT[A] ACIN 200V 0.15typ (lo=100%) 0.20typ (lo=100%) FREQUENCY[Hz] 50 / 60 (47 - 440) INPUT 76.0typ 78.0typ **ACIN 100V** 68.0typ 73.0typ 77.0typ EFFICIENCY[%] 78.5typ 80.0typ ACIN 200V 69.0typ 81.5typ 76.0tvp ACIN 100V 15typ (Io=100%) (At cold start) (Ta=25℃ INRUSH CURRENT[A] ACIN 200V 30typ (Io=100%) (At cold start) (Ta=25°C) LEAKAGE CURRENT[mA] 0.15/0.30max (ACIN 100V / 240V 60Hz, Io=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 LINE REGULATION[mV] 20max 20max 48max 60max 96max LOAD REGULATION[mV] 40max 100max 40max 120max 150max 80max 80max 120max 120max 120max 0 to +50°C RIPPLE[mVp-p] -10 - 0°C 140max 140max 160max 160max 160max lo=0 - 35% 190max 160max 240max 240max 280max 0 to +50℃ 120max 120max 150max 150max 150max RIPPLE NOISE[mVp-p] OUTPUT -10 - 0°C 160max 160max 180max 180max 180max lo=0 - 35% 240max 240max 300max 300max 320max 0 to +50℃ 240max 50max 50max 120max 150max TEMPERATURE REGULATION/mV1 -10 to +50°C 60max 290max 60max 150max 180max DRIFT[mV] 20max 20max 48max 60max 96max START-UP TIME[ms] 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 RANGE[V] 2.85 to 3.63 Fixed ("Y" option is available for adjusting output voltage between $\pm 10\%$) **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 PROTECTION Works over 105% of rating and recovers automatically PROTECTION 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 **OPERATING INDICATION** CIRCUIT AND 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) AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature) ISOLATION INPUT-FG AC500V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At Room Temperature) OUTPUT-FG 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 STORAGE TEMP., HUMID. AND ALTITUDE -20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max ENVIRONMENT VIBRATION 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis 196.1m/s² (20G), 11ms, once each X, Y and Z axis IMPACT AGENCY APPROVALS UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN SAFETY AND CONDUCTED NOISE Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B NOISE **CE MARKING** Low Voltage Directive, EMC Directive REGULATIONS Complies with IEC61000-3-2 (Class A) *6 (Not built-in to active filter) *4 HARMONIC ATTENUATOR CASE SIZE/WEIGHT 50×22×87.5mm [1.97×0.87×3.44 inches] (W×H×D) / 80g max (without chassis and cover) OTHERS COOLING METHOD Convection (Refer to Instruction Manual 3.1 and 3.2) *3 This is the value that measured on measuring board with factor Io=0-35% is different. Please contact us for details. capacitor of 22 µ F at 150mm from output terminal Please refer to the Instruction Manual 1.7. Please contact us about dynamic load and input response. Measured by 20MHz oscilloscope or Ripple-Noise meter Drift is the change in DC output for an eight hour period after Please contact us about another class *2 *6 (Equivalent to KEISOKU-GIKEN: RM103). a half-hour warm-up at 25°C, with the input voltage held To meet the specifications. Do not operate over-loaded condition

constant at the rated input/output.

When two or more units are operating it may not comply with

Derating is required.

the IEC61000-3-2.

*3

Parallel operation is not possible.

load

Derating is required when operated with chassis and cover.

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

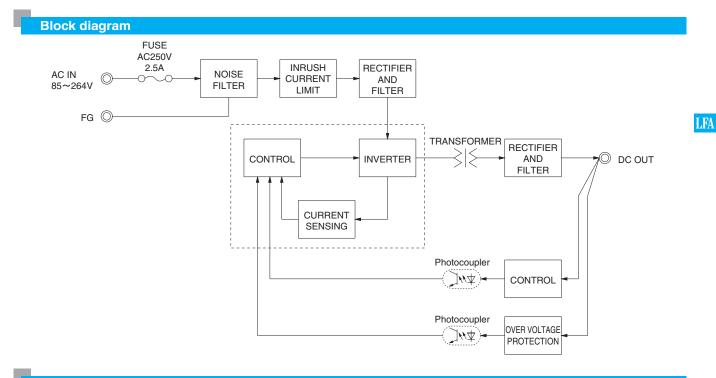
LFA-4

A circuit reducing standby power is built in this unit.

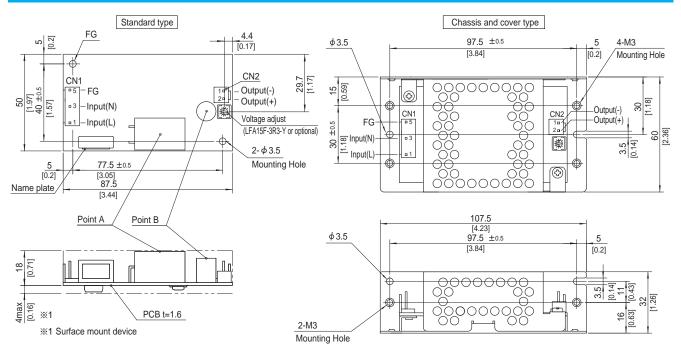
Therefore, the internal switch element is intermittent

operated, and the Ripple/Ripple Noise specification in load





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/O Connector		Mating connector	Terminal	
CNIA	1-1123724-3	1-1123722-5	Chain	1123721-1
CINT	1-1123724-3	1-1123722-5	Loose	1318912-1
CNID	1-1123723-2	1-1123722-2	Chain	1123721-1
CNZ	1-1123723-2	1-1123722-2	Loose	1318912-1
			(Mfr·Tv	co Electronics)

<PIN CONNECTION>

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

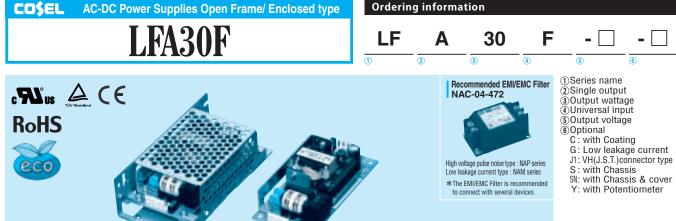
% Tolerance : ±1 [±0.04]

- Weight : 80g max (without chassis and cover)
- * PCB material / thickness : CEM3 / 1.6mm
- * Optional chassis and cover material : Electric galvanizing steel board. * Dimensions in mm, []=inches

% Mounting torque (Mounting hole of chassis) : 0.6N • m (6.3kgf • cm) max

% I/O Connector is Mfr. Tyco Electronics

* Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 5.



Specification is changed at option, refer to Instruction Manual.

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MODEL			LFA30F-3R3-Y	LFA30F-5	LFA30F-12	LFA30F-15	LFA30F-24			
MAX OUTP	UT WATTAGE[W]		19.8	30.0	30.0	30.0	31.2			
DC OUTPUT	Г		3.3V 6A	5V 6A	12V 2.5A	15V 2A	24V 1.3A			
SPECIF	ICATIONS									
	MODEL		LFA30F-3R3-Y	LFA30F-5	LFA30F-12	LFA30F-15	LFA30F-24			
	VOLTAGE[V]		AC85 - 264 1 ¢ (Ref	AC85 - 264 1 ϕ (Refer to Instruction Manual 1.1 and 3.2) *3						
	CURRENT[A]		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)	4						
NPUT		ACIN 100V	73typ	76typ	79typ	81typ	82typ			
	EFFICIENCY[%]	ACIN 200V	75typ	79typ	81typ	83typ	84typ			
		ACIN 100V	15typ (Io=100%) (A	t cold start) (Ta=25	C)	•				
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (A	t cold start) (Ta=25	C)					
	LEAKAGE CURREN	T[mA]	0.30 / 0.65max (ACI	N 100V / 240V 60	Hz, Io=100%, Accordi	ng 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	mV] *5	20max	20max	48max	60max	96max			
	LOAD REGULATION		40max	40max	100max	120max	150max			
		0 to +50°C *1	80max	80max	120max	120max	120max			
	RIPPLE[mVp-p]	-10-0°C *1	140max	140max	160max	160max	160max			
		0 to +50℃ *1	120max	120max	150max	150max	150max			
OUTPUT	RIPPLE NOISE[mVp-p]	-10-0°C *1	160max	160max	180max	180max	180max			
		0 to +50℃	50max	50max	120max	150max	240max			
	TEMPERATURE REGULATION[mV]	-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	Fixed ("Y" option	is available for adjusti	ng output voltage betwe	en ±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			
	OVERCURRENT PROT	ECTION	Works over 105% of	f rating and recove	rs 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 = 10	mA, DC500V 50MΩ ι	nin (At Room Tempera	ature)			
SOLATION	INPUT-FG		AC2,000V 1minute,	Cutoff current = 10	mA, DC500V 50MΩ ι	nin (At Room Tempera	ature)			
	OUTPUT-FG		AC500V 1minute, Cu	utoff current = 25m	A, DC500V 50MΩ mi	n (At Room Temperati	ure)			
	OPERATING TEMP., HUMID.AND	ALTITUDE	-10 to +70°C, 20 - 90	0%RH (Non conde	nsing) (Refer to Instru	ction Manual 3.2), 3,00	0m (10,000feet) max			
	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75℃, 20 - 90	0%RH (Non conde	nsing), 9,000m (30,00	Dofeet) max				
INVIRONMENT	VIBRATION				riod, 60minutes each	,				
	IMPACT		196.1m/s² (20G), 11	· · ·						
	AGENCY APPROVAI	LS			950-1, EN50178 Com	plies with DEN-AN				
SAFETY AND	CONDUCTED NOISE			<i>,</i> .	3, EN55011-B, EN550					
NOISE REGULATIONS	CE MARKING		Low Voltage Directiv		,,					
TEGULATIONS	HARMONIC ATTENU	JATOR		,	(Not built-in to active	filter) *4				
	CASE SIZE/WEIGHT					30g max (without chas	sis and cover)			
OTHERS	COOLING METHOD		Convection (Refer to	•	,	<u> </u>	- /			

This is the value that measured on measuring board with capacitor of 22 $\mu\,F$ at 150mm *1 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 *2 $25\ensuremath{^\circ}\e$ *3 Derating is required.

Please contact us not details. Please contact us about dynamic load and input response. Please contact us about another class. *6 To meet the specifications. Do not operate over-loaded condition.

* * Parallel operation is not possible.

Please contact us for details.

*4

*5

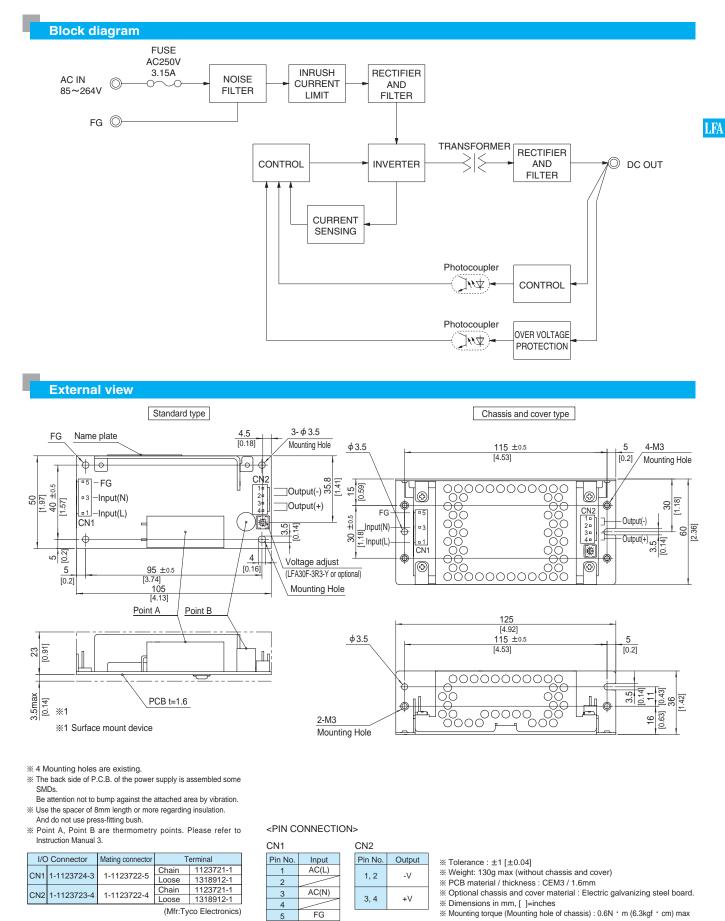
Derating is required when operated with chassis and cover. *

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

When two or more units are operating it may not comply with the IEC61000-3-2.

LFA

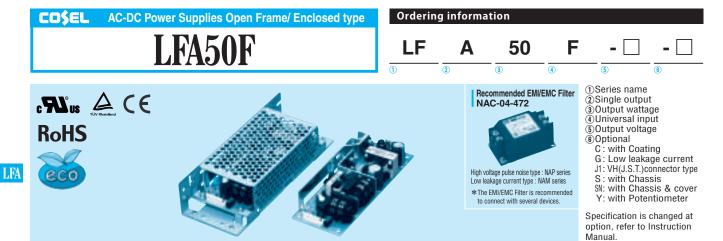




% I/O Connector is Mfr. Tyco Electronics

% Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 5.

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



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

SPECIFICATIONS

	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				
		ACIN 100V	0.47typ (lo=100%)	0.67typ (lo=10	0%)					
	CURRENT[A]	ACIN 200V	0.27typ (lo=100%) 0.36typ (lo=100%)							
	FREQUENCY[Hz]		50 / 60 (47 - 63)							
		ACIN 100V	73.5typ	77.5typ	80.0typ	80.5typ	81.5typ	82.0typ	81.0typ	
NPUT	EFFICIENCY[%]	ACIN 200V	74.0typ	79.0typ	81.5typ	81.5typ	83.0typ	83.5typ	82.5typ	
		ACIN 100V	0.96typ	0.97typ						
	POWER FACTOR (lo=100%)	ACIN 200V	0.83typ	0.90typ						
		ACIN 100V	15typ (lo=100	%) (At cold star	t) (Ta=25℃)					
	INRUSH CURRENT[A]	ACIN 200V	21 (%) (At cold star	/ /					
	LEAKAGE CURREN			, ,	, , ,	=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	mV1 *4	20max	20max	48max	60max	96max	144max	192max	
	LOAD REGULATION		40max	40max	100max	120max	150max	240max	240max	
		0 to +50°C *1	80max	80max	120max	120max	120max	150max	150max	
	RIPPLE[mVp-p]		140max	140max	160max	160max	160max	200max	200max	
		0 to +50°C *1	120max	120max	150max	150max	150max	250max	250max	
UTPUT	RIPPLE NOISE[mVp-p]	-10-0°C *1	160max	160max	180max	180max	180max	300max	300max	
[0 to +50℃	50max	50max	120max	150max	240max	360max	480max	
	TEMPERATURE REGULATION[mV]	-10 to +50°C	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" option is available for adjusting output voltage between ±10%)							
	OUTPUT VOLTAGE SET		3.30 to 3.40	4.90 to 5.30			23.00 to 25.00	34.50 to 37.50	46.00 to 50.0	
	OVERCURRENT PROT		Works over 10	5% of rating ar	nd recovers auto					
ROTECTION			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	
IRCUIT AND			Not provided							
THERS	REMOTE SENSING	-	Not provided							
	REMOTE ON/OFF		Not provided							
	INPUT-OUTPUT		-	nute. Cutoff cui	rrent = 10mA. D	C500V 50MΩ n	nin (At Room Te	emperature)		
SOLATION	INPUT-FG		AC2.000V 1mi	nute. Cutoff cui	rrent = 10mA. D	C500V 50MΩ n	nin (At Room Te	emperature)		
	OUTPUT-FG		,	,	,	500V 50MΩ mi	`	1 /		
	OPERATING TEMP., HUMID.AND) ALTITUDE	-10 to +70℃, 2	20 - 90%RH (N	on condensing)	(Refer to Instruc	tion Manual 3.2), 3,000m (10,0	00feet) max *	
	STORAGE TEMP., HUMID.AND	ALTITUDE				, 9,000m (30,00		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	
NVIRONMENT	VIBRATION			· ·	•,	Ominutes each a	,	Z axis		
	IMPACT		196.1m/s ² (20	G). 11ms. once	each X, Y and Z	Z axis	0			
	AGENCY APPROVAI	LS	UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN							
AFETY AND	CONDUCTED NOISE					5011-B, EN5502	•			
OISE	CE MARKING		Low Voltage D	irective, EMC D	irective	,				
EGULATIONS	HARMONIC ATTENU	JATOR		IEC61000-3-2						
	CASE SIZE/WEIGHT					(W×H×D) / 16	5g max (withou	It chassis and c	over)	
DTHERS	COOLING METHOD						<u> </u>		,	
			Convection (Refer to Instruction Manual 3.1 and 3.2) *3 ng board with capacitor of 22 µF at 150mm *3 Derating is required.							

from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103).

25°C, with the input voltage held constant at the rated input/output.

Drift is the change in DC output for an eight hour period after a half-hour warm-up at

*5 Please contact us about another class. *

To meet the specifications. Do not operate over-loaded condition.

* Parallel operation is not possible.

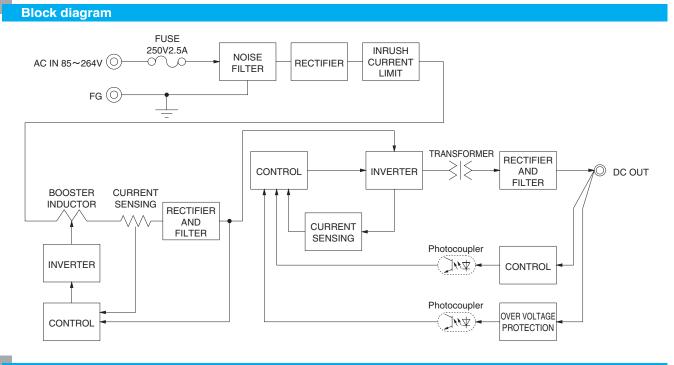
* Derating is required when operated with chassis and cover.

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

*2



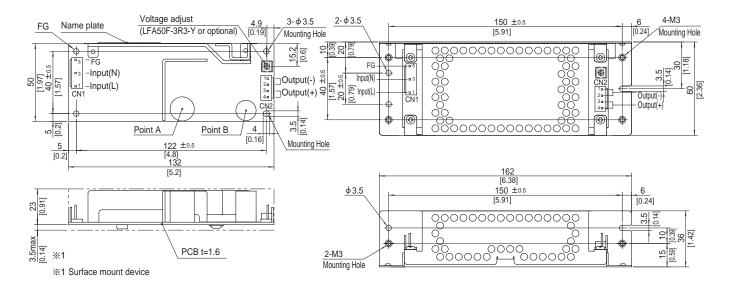
LFA



External view

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	T	erminal
014	4 4400704 0	4 4400700 5	Chain	1123721-1
CINI	1-1123724-3	1-1123722-5	Loose	1318912-1
010	1-1123723-4	1-1123722-4	Chain	1123721-1
CNZ	1-1123723-4	1-1123722-4	Loose	1318912-1
		(Mfr:Ty	co Electronics)	

<PIN CONNECTION>

CN1		CN2		
Pin No.	Input	Pin No.	Output	% Tolerance : ±1 [±0
1	AC(L)	1.2	-V	※ Weight : 165g max
2		1, 2	- V	% PCB material / thicl
3	AC(N)	3.4	+V	※ Optional chassis ar
4	\sim	3, 4	τv	※ Dimensions in mm, ※ Mounting torgue (Mo
5	FG			

0.041

x (without chassis and cover)

kness : CEM3 / 1.6mm

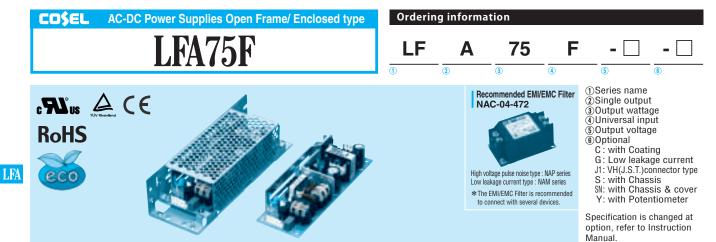
and cover material : Electric galvanizing steel board. , []=inches

ounting hole of chassis) : 0.6N · m (6.3kgf · cm) max

※ I/O Connector is Mfr. Tyco Electronics

% Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 5.

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



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	LFA75F-3R3-Y	LFA75F-5	LFA75F-12	LFA75F-15	LFA75F-24	LFA75F-36	LFA75F-48
MAX OUTPUT WATTAGE[W]	49.5	75	75.6	75	76.8	75.6	76.8
DC OUTPUT	3.3V 15A	5V 15A	12V 6.3A	15V 5A	24V 3.2A	36V 2.1A	48V 1.6A

SPECIFICATIONS

	MODEL		LFA75F-3R3-Y	LFA75F-5	LFA75F-12	LFA75F-15	LFA75F-24	LFA75F-36	LFA75F-48	
	VOLTAGE[V]		AC85 - 264 1¢	(Refer to Insti	ruction Manual	1.1 and 3.2) *3				
		ACIN 100V	0.70typ (lo=100%)	1.00typ (lo=10	0%)					
	CURRENT[A]	ACIN 200V	0.40typ (lo=100%)	0.50typ (lo=10	0%)					
	FREQUENCY[Hz]		50 / 60 (47 - 6	3)						
		ACIN 100V	73.5typ	78.0typ	81.5typ	81.5typ	82.5typ	82.5typ	82.5typ	
NPUT	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 (lo=100%)	ACIN 200V	0.83typ	0.90typ						
		ACIN 100V	15typ (lo=100%) (At cold start) (Ta=25°C)							
	INRUSH CURRENT[A]	ACIN 200V	30typ (Io=100%) (At cold start) (Ta=25°C)							
	LEAKAGE CURREN		0.40 / 0.75max (ACIN 100V / 240V 60Hz, Io=100%, According 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		40max	40max	100max	120max	150max	240max	240max	
		0 to +50°C *1	80max	80max	120max	120max	120max	150max	150max	
	RIPPLE[mVp-p]	-10-0°C *1	140max	140max	160max	160max	160max	200max	200max	
		0 to +50°C *1	120max	120max	150max	150max	150max	250max	250max	
	RIPPLE NOISE[mVp-p]	-10-0°C *1	160max	160max	180max	180max	180max	300max	300max	
		0 to +50℃	50max	50max	120max	150max	240max	360max	480max	
	TEMPERATURE REGULATION[mV]	-10 to +50℃	60max	60max	150max	180max	290max	450max	600max	
	DRIFT[mV]	*2	20max	20max	48max	60max	96max	144max	192max	
	START-UP TIME[ms]					oumax	9011187	144111aX	19211188	
	HOLD-UP TIME[ms]		350typ (ACIN 100V, Io=100%) 20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.63 Fixed ("Y" option is available for adjusting output voltage between ±10%)							
			3.30 to 3.40	4.90 to 5.30	1	14.40 to 15.60		34.50 to 37.50	46.00 to 50.0	
	OUTPUT VOLTAGE SET						23.00 10 25.00	34.50 10 37.50	40.00 10 50.0	
	OVERCURRENT PROT				d recovers auto		07 C0 to 00 C0	41 40 to 50 40	EE 00 to 07.0	
ROTECTION	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	41.40 to 50.40	55.20 to 67.2	
IRCUIT AND	OPERATING INDICA	TION	Not provided							
IIIEno	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Not provided			05001/50040	· (4) D T			
	INPUT-OUTPUT		,	,	,	C500V 50MΩ n	· ·	1 /		
SOLATION	INPUT-FG		,	,	,	C500V 50MΩ n	(1 /		
	OUTPUT-FG			,	,	500V 50MΩ mi	1	/		
	OPERATING TEMP., HUMID.AND					(Refer to Instruc), 3,000m (10,0	00feet) max *	
NVIRONMENT	STORAGE TEMP.,HUMID.AND	ALTITUDE		,	• /	, 9,000m (30,00	,			
	VIBRATION		,	();	1 /	Ominutes each a	along X, Y and Z	Z axis		
	IMPACT			,, ,	each X, Y and Z					
AFETY AND	AGENCY APPROVAL	-				, EN50178 Com		AN		
OISE	CONDUCTED NOISE			,	, ,	5011-B, EN5502	22-B			
EGULATIONS	CE MARKING			irective, EMC D						
-	HARMONIC ATTENU			IEC61000-3-2						
THERS	CASE SIZE/WEIGHT						Og max (withou	ut chassis and c	over)	
JIHERS 1			50×33.5×150mm [1.97×1.32×5.91 inches] (W×H×D) / 230g max (without chassis and cover) Convection (Refer to Instruction Manual 3.1 and 3.2) *3							
THERS	COOLING METHOD		CONVECTION (RE	eter to instructio	ili ivialiual 3.1 ali	u 3.2) 🔊				

Inits 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).

*5 Please contact us about another class.

To meet the specifications. Do not operate over-loaded condition.
 Parallel operation is not possible.

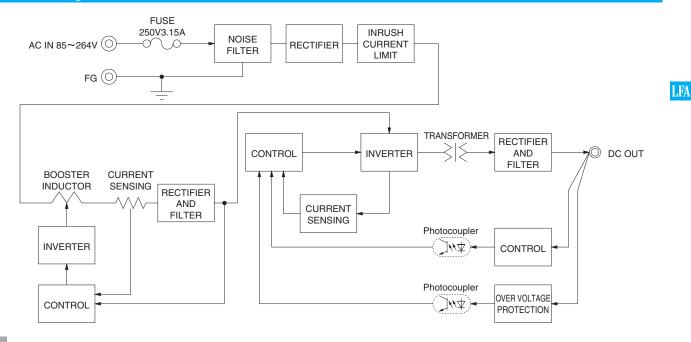
Drift is the change in DC output for an eight hour period after a half-hour warm-up at * 25°C, with the input voltage held constant at the rated input/output. *

Derating is required when operated with chassis and cover.
 Sound noise may be generated by power supply in case of pulse load.

*2



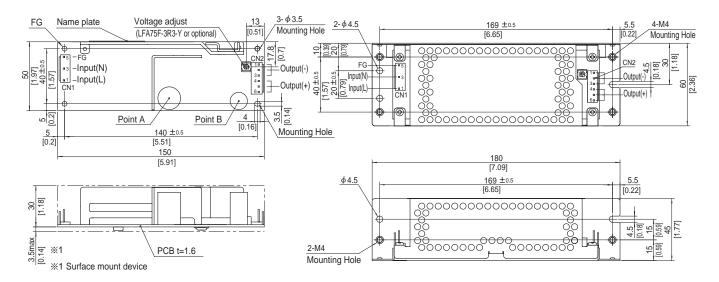
Block diagram



External view

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.
- 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		
0.14	4 4400704 0	1-1123722-5	Chain	1123721-1		
CINI	CN1 1-1123724-3	1-1123722-5	Loose	1318912-1		
CNID	1-1123723-6	1-1123722-6	Chain	1123721-1		
CINZ	1-1123723-0	1-1123/22-0	Loose	1318912-1		
(Mfr:Tyco Electronics						

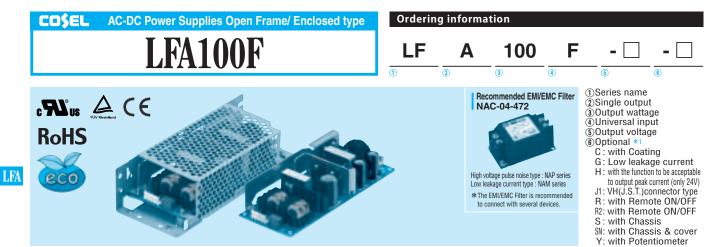
<PIN CONNECTION>

CN1		CN2		
Pin No.	Input	Pin No.	Output	% Tolerance : ±1 [±0.04]
1	AC(L)	4 4 - 0		Weight : 230g max (without chassis and cover)
2		1 to 3	-V	% PCB material / thickness : CEM3 / 1.6mm
3	AC(N)	44-0		* Optional chassis and cover material : Electric galvanizing steel board.
4		4 to 6	+V	※ Dimensions in mm, []=inches
5	FG			※ Mounting torque (Mounting hole of chassis) :1.5N • m (16kgf • cm) max

% I/O Connector is Mfr. Tyco Electronics

% Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 5.

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



Please refer to Instruction

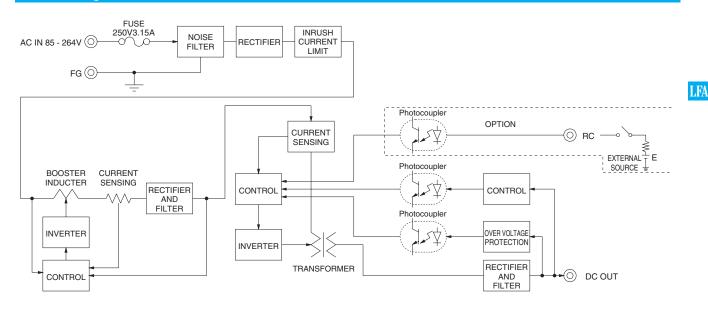
pulse load.

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

	unit with care.						1		manual 5.	
MODEL				LFA100F-5-Y				1	LFA100F-36	
	JT 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
SPECIFI	ICATIONS									
	MODEL		LFA100F-3R3-Y	LFA100F-5-Y	LFA100F-12	LFA100F-15	LFA100F-24	LFA100F-24-H	LFA100F-36	LFA100F-
	VOLTAGE[V]		AC85 - 264	Ιφ (Refer to I	nstruction Ma	nual 1.1 and	3.2) *4			
	CURRENT[A]	ACIN 100V	0.9typ (Io=100%)	1.3typ (lo=1	00%)					
	CONNENT[A]	ACIN 200V	0.5typ (lo=100%) 0.7typ (lo=100%)							
	FREQUENCY[Hz]		50 / 60 (47 -	63)						
	EFFICIENCY[%]	ACIN 100V		82.0typ	82.0typ	83.0typ	84.0typ	84.0typ	84.0typ	84.5typ
VPUT		ACIN 200V	79.0typ	84.0typ	84.5typ	85.5typ	87.0typ	87.0typ	87.0typ	87.0typ
	POWER FACTOR (lo=100%)	ACIN 100V	0.98typ	0.99typ						
		ACIN 200V		0.95typ						
	INRUSH CURRENT[A]			0%) (At cold	, ,	,				
		ACIN 200V		0%) (At cold	/ (,				
	LEAKAGE CURREN	T[mA]		<u>``</u>				IEC60950-1 a	,	
-	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	<u> </u>	40max	40max	100max	120max	150max	150max	240max	240max
	RIPPLE[mVp-p]	0 to +50℃ *2		80max	120max	120max	120max	240max	150max	150max
		-10-0°C *2		140max	160max	160max	160max	320max	200max	200max
		0 to +50℃ *2		120max	150max	150max	150max	300max	250max	250max
UTPUT		-10-0°C *2		160max	180max	180max	180max	360max	300max	300max
	TEMPERATURE REGULATION[mV]		50max	50max	120max	150max	240max	240max	360max	480max
		-10 to +50℃		60max	150max	180max	290max	290max	450max	600max
	DRIFT[mV]	*3		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%) 2.85 to 3.63 4.50 to 5.50 Fixed ("Y" option is available for adjusting output voltage)							
	OUTPUT VOLTAGE ADJUSTMENT									40.00 . 50
	OUTPUT VOLTAGE SET								34.50 to 37.50	
	OVERCURRENT PROT							,	recovers auto	
ROTECTION	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.
THERS		TION	Not provided							
THENS	REMOTE SENSING		Not provided Option (Refer to Instruction Manual)							
	REMOTE ON/OFF	*6			,		OMO min (A	t Room Temp	aratura)	
	INPUT-FG	<u></u> 10								
SOLATION	OUTPUT·RC-FG	*6	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature) AC500V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At Room Temperature)							
-	OUTPUT-RC	*6						Room Temper		
	OPERATING TEMP., HUMID.AND			,		,	```	I	000m (10,000	(feet) may
	STORAGE TEMP.,HUMID.AND			, 20 - 90%RH		e / (, · · ·	000111 (10,000	
NVIRONMENT	VIBRATION	ALINODE						X, Y and Z axi	is	
	IMPACT			20G), 11ms, o			5 caon along		15	
AFETY AND	AGENCY APPROVAL	S		C-UL (CSA60)			78 Complies	with DEN-AN		
OISE	CONDUCTED NOISE		,	th FCC-B, VCC	, ·	,	1			
EGULATIONS	HARMONIC ATTENU			th IEC61000-3						
	CASE SIZE/WEIGHT						(D) / 280a m	ax (without ch	assis and cov	er)
THERS	COOLING METHOD			Refer to Instru						/
*2 This is the capacitor of	on is changed at option, refer e value that measured on n of 22 µF at 150mm from outpu I by 20MHz oscilloscope of	neasuring I ut terminal.	n Manual. board with *4 *5	at the rated input/o Derating is require () means peak cu	output. d. ırrent. There is a p	,	*8 Plea: * To r nternal cond	se contact us about neet the specifica lition. Ilel operation is not	tions. Do not op	erate over-loa
(Equivalen	t to KEISOKU-GIKEN: RM103) change in DC output for an e).		contact us about th Applicable when R	ne detail.		* Dera	ting is required whe	en operated with cha enerated by power	

*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 *6 Applicable when Remote ON/OFF (optional) is added. *7 Please contact us about dynamic load and input response.

Block diagram

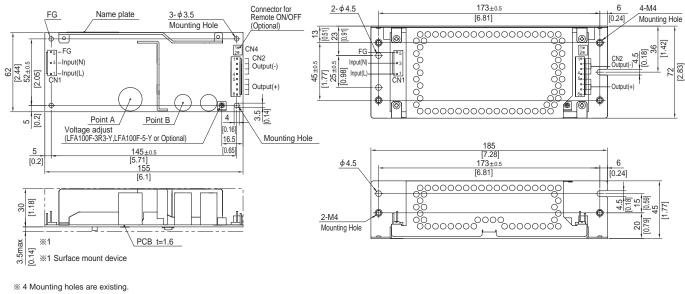


External view

※ External size of option is different from standard model.

Standard type

Chassis and cover type



% 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	T	erminal					

		Connector	maing connector		erriniai	
~	1 1-1123724-3		1-1123722-5	Chain	1123721-1	
CIV	11	1-1123724-3	1-1123722-5	Loose	1318912-1	
		1-1123723-8	1-1123722-8	Chain	1123721-1	
CIV	12	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 CN2 Pin No. Pin No. Output Input AC(L) 1 1 to 4 -V 2 3 AC(N) 5 to 8 +V 4 FG 5

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

% Tolerance : ±1 [±0.04]

% Weight : 280g max (without chassis and cover)

* PCB material : CEM3

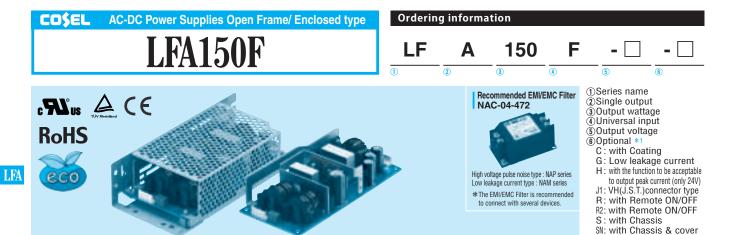
* Optional chassis and cover material : Electric galvanizing steel board.

※ 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.	PIN No. Contents								
1	1 RC(+)								
2	2 RC(-)								
Barrie	r strip type								
Model B2B Mating Cor XHP-2	-XH-A nnector (Term	inal)							
(BXH-0011	Г-Р0.6								

or SXH-001T-P0.6



	his power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, b handle the unit with care.						ne unit,	Y: with Pot Please refer to manual 5.	entiometer Instruction	
MODEL			LFA150F-3R3-Y	LFA150F-5-Y	LFA150F-12	LFA150F-15	LFA150F-24	LFA150F-24-H	LFA150F-36	LFA150F-4
ΜΑΧ Ουτρι	JT WATTAGE[W]	*5	99	150	150	150	151.2	151.2 (189.6)	151.2	153.6
DC OUTPUT	Г	*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
SPECIF	ICATIONS									
	MODEL		LFA150F-3R3-Y	LFA150F-5-Y	LFA150F-12	LFA150F-15	LFA150F-24	LFA150F-24-H	LFA150F-36	LFA150F-4
	VOLTAGE[V]		AC85 - 264 1	Ιφ (Refer to I	nstruction Ma	nual 1.1 and	3.2) *4			
	CURRENT[A]	ACIN 100V	1.4typ (Io=100%)	2.0typ (Io=1	00%)					
	ACIN 200V		0.7typ (Io=100%)	1.0typ (Io=1	00%)					
	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
NPUT		ACIN 200V	82.0typ	85.5typ	85.0typ	86.5typ	87.5typ	87.5typ	87.5typ	88.0typ
	POWER FACTOR (lo=100%)	ACIN 100V	0.98typ	0.99typ						
	FOWER FACTOR (ID=100%)	ACIN 200V	0.92typ	0.95typ						
	INRUSH CURRENT[A]	ACIN 100V	15typ (lo=10	0%) (At cold	start) (Ta=25°	C)				
		ACIN 200V	30typ (lo=10	0%) (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	IEC60950-1 ai	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
		0 to +40℃ *2	80max	80max	120max	120max	120max	240max	150max	150max
	RIPPLE[mVp-p]	-10-0°C *2	140max	140max	160max	160max	160max	320max	200max	200max
		0 to +40℃*2	120max	120max	150max	150max	150max	300max	250max	250max
OUTPUT	RIPPLE NOISE[mVp-p]	-10-0°C *2	160max	160max	180max	180max	180max	360max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +40℃	50max	50max	120max	150max	240max	240max	360max	480max
		-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 (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" o	ption is availat	ole for adjustin	ig output volta	ge)	
	OUTPUT VOLTAGE SET	TING[V]						23.00 to 25.00		46.00 to 50.0
	OVERCURRENT PROT	ECTION	Works over ⁻	105% of ratin	g (works over	101% of pea	k current at o	ption -H) and	recovers auto	matically
ROTECTION	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	27.60 to 33.60	41.40 to 50.40	55.20 to 67.2
CIRCUIT AND	OPERATING INDICA	TION	Not provided			·	·			
OTHERS	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Option (Refe	r to Instructio	n Manual)					
	INPUT-OUTPUT-RC	*6	AC3,000V 1r	ninute, Cutoff	current = 10	nA, DC500V §	$50M\Omega$ min (A	t Room Temp	erature)	
	INPUT-FG		AC2,000V 1r	ninute, Cutoff	current = 10	nA, DC500V 5	$50M\Omega$ min (A	t Room Temp	erature)	
SOLATION	OUTPUT·RC-FG	*6	AC500V 1mi	nute, Cutoff c	urrent = 25m	A, DC500V 50	MΩ min (At F	Room Temper	ature)	
	OUTPUT-RC	*6	AC100V 1mi	nute, Cutoff c	urrent = 25m	A, DC100V 10	MΩ min (At F	Room Temper	ature)	
	OPERATING TEMP., HUMID.AND	ALTITUDE *4	-10 to +70℃	, 20 - 90%RH	(Non conder	sing) (Refer to	o Instruction N	/lanual 3.2), 3,	000m (10,000)feet) max
	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75℃	, 20 - 90%RH	(Non conder	sing), 9,000m	n (30,000feet)	max		
NVIRONMENT	VIBRATION							X, Y and Z axi	S	
	IMPACT			20G), 11ms, o						
AFETY AND	AGENCY APPROVAL	LS				950-1, EN501	78 Complies	with DEN-AN		
IOISE	CONDUCTED NOISE					, EN55011-B,				
REGULATIONS	HARMONIC ATTENU		-	th IEC61000-3	,	, ,				
	CASE SIZE/WEIGHT						<d) 390g="" ma<="" td=""><td>ax (without ch</td><td>assis and cov</td><td>er)</td></d)>	ax (without ch	assis and cov	er)
OTHERS	COOLING METHOD					3.1 and 3.2) *4				
*2 This is th capacitor of	on is changeed at option, refe le value that measured on r of 22 µ F at 150mm from outpu l by 20MHz oscilloscope o	measuring t ut terminal.	on Manual. board with *4 *5	at the rated input/o Derating is require () means peak cu	output. d. urrent. There is a p	ossibility that an ir ation is exceeded.	*8 Pleas * To m nternal cond	se contact us about neet the specifica ition. Ilel operation is not	tions. Do not op	erate over-loa

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

Applicable when remote control (optional) is added. *7 Please contact us about dynamic load and input response.

contact us about the detail.

*6

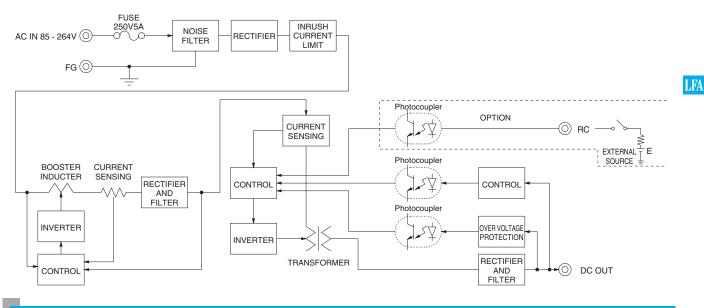
*

* Derating is required when operated with chassis and cover.

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

Chassis and cover type

Block diagram



External view

% External size of option is different from standard model.

Standard type

176±0.4 6 4-M4 <u>2-φ4.5</u> FG Name plate $3 - \phi 3.5$ Point A Point B [0.24] Mounting Hole [6,93] Mounting Hole 15 [0.59] [0.98] -10) 0 0 0 42 - FG FG ŏ ₽ CN3 Output(-) CN3 Output(-) 70 ■3 –Input(N) Input(N) 00000 75 [2.95] 65±0.5 [2.6] <u>∎1</u>–Input(L) CN1 _Input(L) . 1 55±0.5 [2.17] ŏ CN1 35±0 1.381 3.351 0 CN2 10 Output(+) 0 CN2 Output(+) ¢ 2 9 **巻 R** ً⊘ ା Connector for Remote ON/OFF (optional) 3.5 6.5 0.26 5 [0.2] 4 Voltage adjust <u>ON/OFF (optional)</u> (LFA150F-3R3-Y,LFA150F-5-Y or Optional) [0.16] _**18** Mounting Hole 188 150±0.5 [0.7 5 [7.4] 176±0.5 [0.2 [5.91] φ4.5 160 [0.24] [6.93] [6.3] ЭC 4.5 [0.18] 15 [0.59] 47 33.5 [1.32] 00 [1.85] <u>2-M</u>4 0.79] 20 Mounting Hole 3.5max [0.14] PCB t=1.6 l<u>₹</u> %1 %1 Surface mount device

% 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/C	Connector	Mating connector	Т	erminal
014	4 4400704 0	1-1123722-5	Chain	1123721-1
CINT	1-1123724-3	1-1123722-5	Loose	1318912-1
010	1-1123723-6	4 4400700 0	Chain	1123721-1
CINZ	1-1123723-6	1-1123722-6	Loose	1318912-1
010	4 4400700 7	4 4400700 7	Chain	1123721-1
CN3	1-1123723-7	1-1123722-7	Loose	1318912-1
			(N 46m T)	(an Electronica)

(Mfr:Tyco Electronics)

※ I/O Connector is Mfr. Tyco Electronics

% Option:-J1:VH(J.S.T) connector type.

<PIN CONNECTION>



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

- % 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

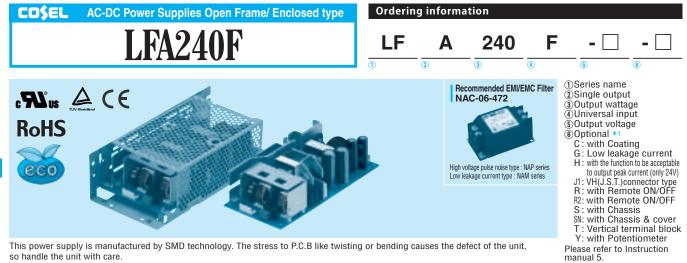
※ Mounting torque (Mounting hole of chassis) :1.5N • m (16kgf • cm) max

Connector type



Barrier strip type

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



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	

SPECIFICATIONS

LFA

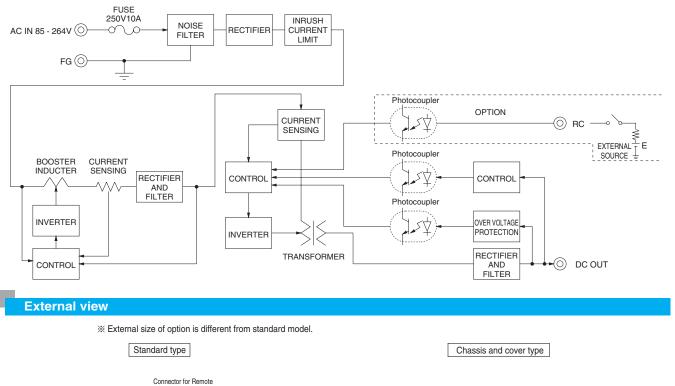
	MODEL		LFA240F-24	LFA240F-24-H	LFA240F-36	LFA240F-48				
	VOLTAGE[V]		AC85 - 264 1 ¢ (Refer to I	nstruction Manual 1.1 and 3	.2) *4	1				
		ACIN 100V	3.3typ (Io=100%)		7					
	CURRENT[A]		1.7typ (Io=100%)							
	FREQUENCY[Hz]		50 / 60 (47 - 63)							
		ACIN 100V	84.5typ	84.5typ	84.5typ	84.5typ				
NPUT	EFFICIENCY[%]		87.5typ	87.5typ	87.5typ	87.5typ				
IFUI		ACIN 200V	51	07.5typ	07.5typ	07.Jtyp				
	POWER FACTOR (lo=100%)	ACIN 100V ACIN 200V	0.99typ							
			0.95typ	15 / 30typ (Io=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start)						
	INRUSH CURRENT[A]	ACIN 100V	15 / 30typ (10=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start) 30 / 30typ (1o=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start)							
		ACIN 200V								
	LEAKAGE CURREN	[[mA]			According to IEC60950-1 a					
	VOLTAGE[V]		24	24	36	48				
	CURRENT[A]	*5		10 (Peak12.5)	6.7	5				
	LINE REGULATION		96max	96max	144max	192max				
	LOAD REGULATION			150max	240max	240max				
ουτρυτ	RIPPLE[mVp-p]		120max	240max	150max	150max				
	nierec[iiivp-b]	-10-0°C *2	160max	320max	200max	200max				
		0 to +40°C *2	150max	300max	250max	250max				
	RIPPLE NOISE[mVp-p]	-10-0°C *2	180max	360max	300max	300max				
		0 to +40℃	240max	240max	360max	480max				
	TEMPERATURE REGULATION[mV]	-10 to +40℃	290max	290max	450max	600max				
	DRIFT[mV]	*3		96max	144max	192max				
F	START-UP TIME[ms]		350typ (ACIN 100V, Io=10							
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100	/						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]			ble for adjusting output volta	ade)					
	OUTPUT VOLTAGE SETTING[V]		23.00 to 25.00 23.00 to 25.00 34.50 to 37.50 46.00 to 50.00							
	OVERCURRENT PROT		Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically							
			27.60 to 33.60	27.60 to 33.60	41.40 to 50.40	55.20 to 67.20				
ROTECTION				27.60 10 33.60	41.40 10 50.40	55.20 10 67.20				
THERS		TION	Not provided							
Incho	REMOTE SENSING		Not provided	8.4						
	REMOTE ON/OFF		Option (Refer to Instruction Manual) AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)							
	INPUT-OUTPUT·RC	*6	, ,	,	· · · · ·	/				
SOLATION	INPUT-FG				50MΩ min (At Room Temp	,				
	OUTPUT·RC-FG		AC500V 1 minute, Cutoff current = 25mA, DC500V 50M Ω min (At Room Temperature)							
	OUTPUT-RC	*6			OMΩ min (At Room Tempe					
	OPERATING TEMP., HUMID.AND	ALTITUDE *4	-10 to +70℃, 20 - 90%RF	I (Non condensing) (Refer	to Instruction Manual 3.2), 3	,000m (10,000feet) max				
NVIRONMENT	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 ² (2G),	3minutes period, 60minut	es each along X, Y and Z ax	is				
	IMPACT		196.1m/s2 (20G), 11ms, c	once each X, Y and Z axis						
AFETY AND	AGENCY APPROVAI	S	UL60950-1, C-UL (CSA60	950-1), EN60950-1, EN50 ⁻	178 Complies with DEN-AN					
OISE	CONDUCTED NOISE		Complies with FCC-B, VC	CI-B, CISPR-B, EN55011-B	, EN55022-B					
EGULATIONS	HARMONIC ATTENU	ATOR	TOR Complies with IEC61000-3-2 (Class A) *8							
	CASE SIZE/WEIGHT		84×46.5×180mm [3.31>	<1.83×7.09 inches] (W×H	×D) / 550g max (without cl	hassis and cover)				
THERS	COOLING METHOD		· · · · ·	uction Manual 3.1 and 3.2) *	/ • (,				
*2 This is th capacitor of Measured (Equivalen	on is changeed at option, refer e value that measured on r of 22 µF at 150mm from outpu I by 20MHz oscilloscope o tt to KEISOKU-GIKEN: RM103) change in DC output for an e	neasuring t it terminal. r Ripple-No	on Manual. ooard with *4 Derating is required *5 () means peak c device is damage contact us about t	output. ed. urrent. There is a possibility that an d when the specification is exceeded.	*8 Please contact us about * To meet the specific: condition. Please * Parallel operation is not * Derating is required wh	ations. Do not operate over-load				

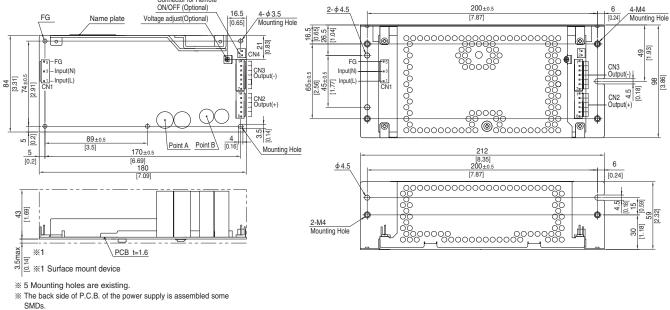
pulse load.

S 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 *7 Please contact us about dynamic load and input response.

LFA

Block diagram





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.

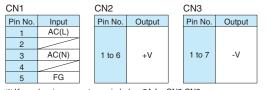
	I/C	Connector	Mating connector	Terminal			
	CN1	1-1123724-3	1-1123722-5	Chain	1123721-1		
		1-1123/24-3	1-1123/22-5	Loose	1318912-1		
	CN2	1-1123723-6	1-1123722-6	Chain	1123721-1		
		1-1123/23-6	1-1123/22-6	Loose	1318912-1		
	CN3	1-1123723-7	1-1123722-7	Chain	1123721-1		
			1-1123/22-7	Loose	1318912-1		

(Mfr:Tyco Electronics)

% I/O Connector is Mfr. Tyco Electronics

% Option:-J1:VH(J.S.T) connector type.

<PIN CONNECTION>



% 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(+)

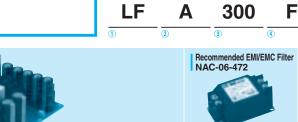
Dorrior strip tupo							
2							
	HC(+)						

Barrier strip type

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

Ordering information COSEL AC-DC Power Supplies Open Frame/ Enclosed type





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

pulse load.

3

4

F - 🗌

5

(1) Series name
(2) Single output
(3) Output wattage
(4) Universal input
(5) Output voltage
(6) Optional *1
(7) C: with Coating
(7) C: With Chassis
(7) C: With C

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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 WATT	MAX OUTPUT WATTAGE[W] *5		300	324	330	336	336 (456)	330	338.4	336
	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
DC OUTPUT *5	Forced air	3.3V 60A	5V 60A	12V 27A	15V 22A	24V 14A	24V 14 (19)A	30V 11A	36V 9.4A	48V 7A

SPECIFICATIONS

RoHS

eco

LFA

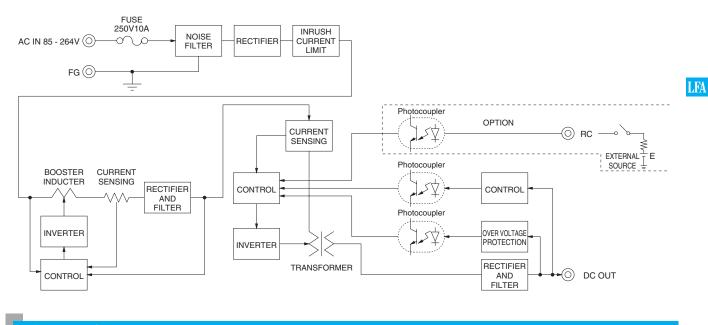
	MODEL			LFA300F-5-TY			LFA300F-24-TY		LFA300F-30-1Y	LFA300F-36-1Y	LFA300F-48-TY		
	VOLTAGE[V]		AC85 - 264	1φ (Refer	to Instructio	n Manual 1.	1 and 3.2) *	4					
	CURRENT[A]	ACIN 100V	2.7typ (lo=100%) 4.1typ (lo=100%)										
	CORRENT[A]	ACIN 200V	1.14yp (lo=100%) 2.0typ (lo=100%)										
	FREQUENCY[Hz]	50 / 60 (47	- 63)			-			_				
		ACIN 100V	75.0typ	79.0typ	80.0typ	81.5typ	85.0typ	85.0typ	85.5typ	85.5typ	85.5typ		
NPUT	EFFICIENCY[%]	ACIN 200V	77.0typ	82.5typ	83.0typ	84.5typ	88.0typ	88.0typ	88.0typ	88.0typ	88.0typ		
		ACIN 100V	0.98typ	0.99typ		•			•		•		
	POWER FACTOR (lo=100%)	ACIN 200V	0.92typ	0.95typ									
		ACIN 100V	15 / 30typ (Io=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start)										
	INRUSH CURRENT[A]	ACIN 200V											
	LEAKAGE CURREN	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		
		Convection	40	40	17	14	12.5	12.5 (Peak19)	10	8.4	6.3		
	CURRENT[A] *5	Forced air	60	60	27	22	14	14 (Peak19)	11	9.4	7		
	LINE REGULATION[m]		20max	20max	48max	60max	96max	96max	144max	144max	192max		
	LOAD REGULATION		40max	40max	100max	120max	150max	150max	240max	240max	240max		
		0 to +40°C *2	80max	80max	120max	120max	120max	240max	150max	150max	150max		
	RIPPLE[mVp-p]	-10-0°C *2	140max	140max	160max	160max	160max	320max	200max	200max	200max		
		0 to +40°C *2		120max	150max	150max	150max	300max	250max	250max	250max		
OUTPUT	RIPPLE NOISE[mVp-p]	-10-0°C *2	160max	160max	180max	180max	180max	360max	300max	300max	300max		
		0 to +40℃		50max	120max	150max	240max	240max	360max	360max	480max		
	TEMPERATURE REGULATION[mV]	-10 to +40℃		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%)										
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)										
	OUTPUT VOLTAGE ADJUSTMEN	T RANGE[V]	2.85 to 3.63 4.50 to 5.50 10.80 to 13.20 13.50 to 16.50 21.60 to 27.50 21.60 to 27.50 27.00 to 33.00 32.40 to 39.60 39.60 to 52.80										
	OUTPUT VOLTAGE SETTING[V]				12.00 to 12.48								
	OVERCURRENT PROT	Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically											
ROTECTION			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										
IRCUIT AND			Not provided										
THERS	REMOTE SENSING		Not provided										
	REMOTE ON/OFF	Option (Refer to Instruction Manual)											
	INPUT-OUTPUT-RC	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)											
	INPUT-FG	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)											
SOLATION	OUTPUT·RC-FG	AC500V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At Room Temperature)											
	OUTPUT-RC	AC100V 1 minute, Cutoff current = 25mA, DC100V 10M Ω min (At Room Temperature)											
	OPERATING TEMP., HUMID.AND												
	STORAGE TEMP., HUMID.AND	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max											
NVIRONMENT	VIBRATION	-	10 - 55Hz, 19.6m/s ² (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											
AFETY AND	AGENCY APPROVA	UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN											
OISE	CONDUCTED NOISI		Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B										
EGULATIONS			Complies with IEC61000-3-2 (Class A) *8										
	CASE SIZE/WEIGHT		95×52.5×222mm [3.74×2.07×8.74 inches] (W×H×D) (without terminal block) / 810g max										
OTHERS	COOLING METHOD	Convection / Forced air (Refer to Instruction Manual 3.1 and 3.2) *4											
*2 This is the capacitor Measure	ion is changeed at option, refe e value that measured on i of 22 µF at 150mm from outp d by 20MHz oscilloscope o nt to KEISOKU-GIKEN: RM103 e change in DC output for an e	r to Instructi measuring t ut terminal. r Ripple-No).	g board with *4 Derating is required. * To meet the specifications. Do not operate over-loade I. *5 () means peak current. There is a possibility that an internal condition.										

*3 Drift is the change in DC output for an eight hour period after a *7 Please contact us about dynamic load and input response. half-hour warm-up at 25°C, with the input voltage held constant

LFA-18



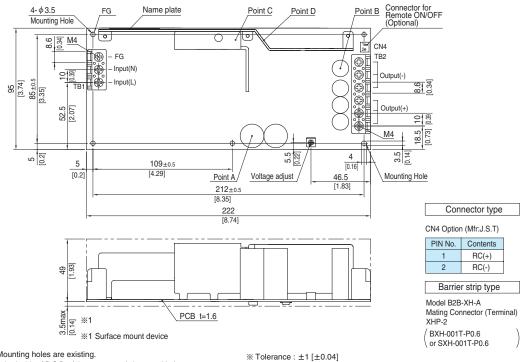
Block diagram



External view



Standard type



% 5 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, Point C, Point D are thermometry points. Please refer to Instruction Manual 3.
- % Keep drawing current per pin below 20A for TB2.
- 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