

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

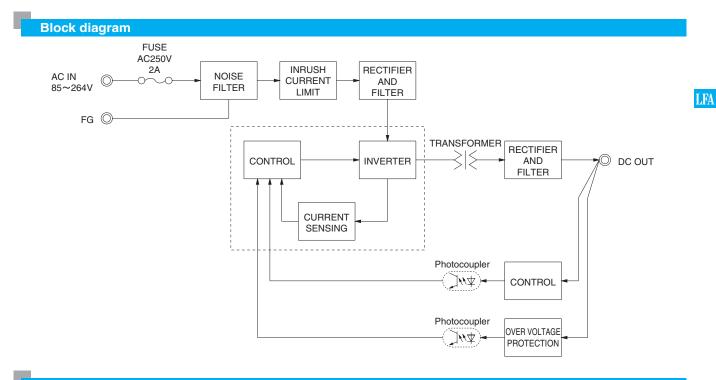
SPECIFICATIONS

LFA

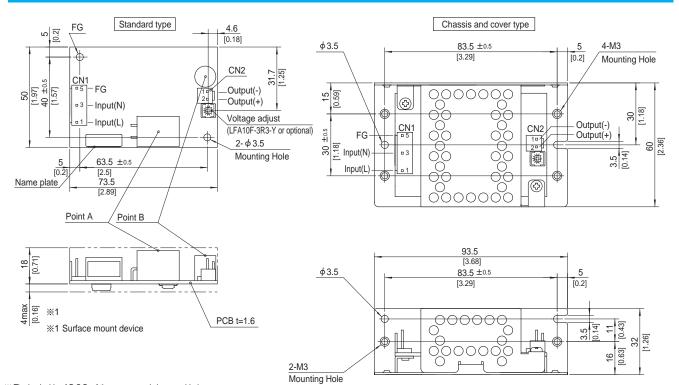
	MODEL		LFA10F-3R3-Y	LFA10F-5	LFA10F-12	LFA10F-15	LFA10F-24		
	VOLTAGE[V]		AC85 - 264 1 ¢ (Refe	er to Instruction Manu	al 1.1 and 3.2) *3				
		ACIN 100V	0.18typ (lo=100%)	0.26typ (lo=100%)					
	CURRENT[A]	ACIN 200V	0.11typ (lo=100%) 0.16typ (lo=100%)						
	FREQUENCY[Hz]		50 / 60 (47 - 440)						
IPUT		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%)			1 31	1 21		
	INRUSH CURRENT[A]		30typ (lo=100%)						
	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]		2.0	2.0	0.9	0.7	0.5		
	LINE REGULATION[m	יען *5	20max	20max	48max	60max	96max		
	LOAD REGULATION	-	40max	40max	100max	120max	150max		
		0 to +50°C		80max	120max	120max	120max		
	RIPPLE[mVp-p]	-10 - 0°C		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		
011 01	*1		240max	240max	300max	300max	320max		
			50max	50max	120max	150max	240max		
	TEMPERATURE REGULATION[mV]	-10 to +50℃		60max	150max	180max	240max 290max		
	DRIFT[mV]	*2	20max	20max	48max	60max	96max		
	START-UP TIME[ms]	<u>۳۲</u>			s typ for less than 1 minute of				
H			20typ (ACIN 1000, 10=100 20typ (ACIN 1000, 10=100	<i>i i</i>	s typ for less triair fifilitute of	appiying input again nom tu	ning on the input voltage.		
	HOLD-UP TIME[ms]		2.85 to 3.63	/	available for adjusting		2000 L 100/)		
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]				available for adjusting		· · · ·		
	OUTPUT VOLTAGE SETTING[V] OVERCURRENT PROTECTION		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		
				rating and recovers a		47.05 1.04.00	07.00 1.00.00		
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						
INERS	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Not provided AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)						
	INPUT-OUTPUT		, ,		· · · · · · · · · · · · · · · · · · ·		/		
OLATION	INPUT-FG		, ,		, DC500V 50MΩ min (9)		
	OUTPUT-FG				0C500V 50MΩ min (Ai				
	OPERATING TEMP., HUMID. AND		,	(0/ (<i>,,,,</i>	n (10,000 feet) max *3		
VIRONMENT	STORAGE TEMP., HUMID. AND A	LTITUDE	,		g), 9,000m (30,000 feet	,			
	VIBRATION		,		, 60minutes each alon	g X, Y and Z axis			
	IMPACT			ms, once each X, Y an					
FETY AND	AGENCY APPROVAL	s	, (<i>,</i> ,)-1, EN50178 Complies				
DISE	CONDUCTED NOISE				N55011-B, EN55022-B				
EGULATIONS	CE MARKING		Low Voltage Directive	1					
	HARMONIC ATTENU	ATOR		000-3-2 (Not built-in t	,				
THERS	CASE SIZE/WEIGHT				s] (W×H×D) / 55g m	ax (without chassis ar	nd cover)		
	COOLING METHOD		Convection (Refer to	Instruction Manual 3.	1 and 3.2) *3				
capacito Measure (Equival A circuit Therefor	e value that measured on meas r of 22 µ F at 150mm from outpu ed by 20MHz oscilloscope or R ent to KEISOKU-GIKEN: RM10 reducing standby power is bu re, the internal switch element J, and the Ripple/Ripple Noise	it terminal. tipple-Noise 3). ilt in this uni is intermitter	Please meter *2 Drift is the abalance of the second	=0-35% is different. efer to the Instruction Manual he change in DC output for an uur warm-up at 25°C, with the : at the rated input/output. is required. o or more units are operating	eight hour period after *5 input voltage held * *	To meet the specifications. Do Parallel operation is not p Derating is required when op	ynamic load and input response not operate over-loaded condition.		

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. % 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		1-1123722-5	Loose	1318912-1					
CNID	1-1123723-2	1-1123722-2	Chain	1123721-1					
CINZ	1-1123723-2	1-1123722-2	Loose	1318912-1					
	(Mfr:Tyco Electronics)								

<PIN CONNECTION>

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

Tolerance : ±1 [±0.04]

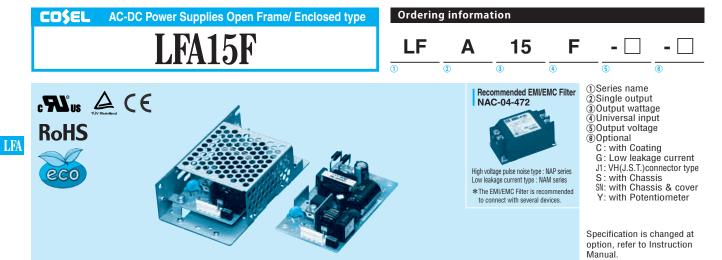
- Weight : 55g max (without chassis and cover)
- PCB material / thickness : CEM3 / 1.6mm

% 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.



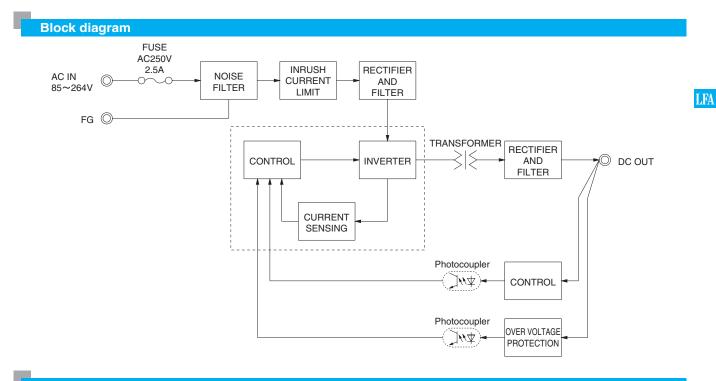
MODEL	LFA15F-3R3-Y	LFA15F-5	LFA15F-12	LFA15F-15	LFA15F-24
MAX OUTPUT WATTAGE[W]	9.9	15	15.6	15	16.8
DC OUTPUT	3.3V 3A	5V 3A	12V 1.3A	15V 1A	24V 0.7A

SPECIFICATIONS

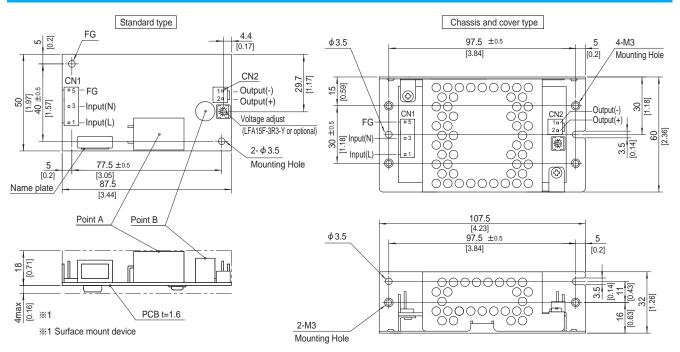
	MODEL		LFA15F-3R3-Y	LFA15F-5	LFA15F-12	LFA15F-15	LFA15F-24		
	VOLTAGE[V]		AC85 - 264 1 ¢ (Ref	er to Instruction Manu	al 1.1 and 3.2) *3				
		ACIN 100V	0.24typ (lo=100%)	0.35typ (lo=100%)					
	CURRENT[A]	ACIN 200V	0.15typ (lo=100%)	0.20typ (lo=100%)					
	FREQUENCY[Hz]		50 / 60 (47 - 440)						
PUT		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		
		ACIN 100V	15typ (lo=100%) (At	cold start) (Ta=25℃)					
	INRUSH CURRENT[A]	ACIN 200V		cold start) (Ta=25°C)					
	LEAKAGE CURRENT	[mA]	21 () (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] *5			20max	48max	60max	96max		
	LOAD REGULATION		40max	40max	100max	120max	150max		
		0 to +50℃		80max	120max	120max	120max		
	RIPPLE[mVp-p]	-10 - 0°C		140max	160max	160max	160max		
	*1	lo=0 - 35%		160max	240max	240max	280max		
		0 to +50℃	120max	120max	150max	150max	150max		
UTPUT	RIPPLE NOISE[mVp-p]	-10 - 0°C	160max	160max	180max	180max	180max		
011-01	*1	lo=0 - 35%		240max	300max	300max	320max		
		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]	<u>۳</u> ۷				applying input again from tur			
H	HOLD-UP TIME[ms]		20typ (ACIN 1000, 10=100		s typ for less than finitute of	appiying input again nom tu	ning on the input voltage.		
			2.85 to 3.63		a available for adjustin	g output voltage betwe	100/		
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V] 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					
	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						
ROTECTION	OPERATING INDICAT			5.75 10 7.00	13.00 10 10.00	17.25 10 21.00	27.00 10 33.00		
HERS			Not provided						
TILING	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Not provided			(At D T	-)		
						(At Room Temperature			
OLATION	INPUT-FG					(At Room Temperature	e)		
	OUTPUT-FG				0C500V 50MΩ min (A		(10,000 ())		
	OPERATING TEMP.,HUMID.AND	-			÷, (n Manual 3.2), 3,000m	i (iu,uuu teet) max 🔹		
VIRONMENT	STORAGE TEMP., HUMID. AND A	ALITIODE			ig), 9,000m (30,000 fee	,			
	VIBRATION		,		, 60minutes each alon	ig X, Y and Z axis			
				ms, once each X, Y an					
FETY AND	AGENCY APPROVAL	S		<i>,</i> .	D-1, EN50178 Complie				
DISE	CONDUCTED NOISE				N55011-B, EN55022-E	3			
GULATIONS	CE MARKING		Low Voltage Directiv						
	HARMONIC ATTENU	ATOR	· ·	000-3-2 (Not built-in	· · · · · ·				
THERS	CASE SIZE/WEIGHT					nax (without chassis ar	nd cover)		
	COOLING METHOD		,	Instruction Manual 3.	1 and 3.2) *3				
capacito Measure (Equival A circuit	ne value that measured on meas r of 22 µ F at 150mm from outputed by 20MHz oscilloscope or R ent to KEISOKU-GIKEN: RM10 r reducing standby power is but	ut terminal. tipple-Noise 3). ilt in this uni	Please r meter *2 Drift is t a half-hu it. constan	=0-35% is different. efer to the Instruction Manual he change in DC output for ar our warm-up at 25°C, with the t at the rated input/output.	eight hour period after *: input voltage held * *	To meet the specifications. Do Parallel operation is not p	ynamic load and input respons not operate over-loaded condition. ossible.		
	re, the internal switch element d, and the Ripple/Ripple Noise			ı is required. vo or more units are operatinç	it may not comply with *		perated with chassis and cover. ated by power supply in case of		

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	Т	erminal				
CNIA	N1 1-1123724-3	1-1123722-5	Chain	1123721-1				
CINT		1-1123722-5	Loose	1318912-1				
CNID	1-1123723-2	1-1123722-2	Chain	1123721-1				
CN2	1-1123723-2		Loose	1318912-1				
	(Mfr:Tyco Electronics)							

<PIN CONNECTION>

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

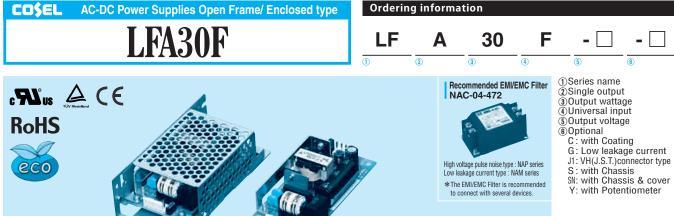
% Tolerance : ±1 [±0.04]

- 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.

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 OUTPL	JT 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			
SPECIFICATIONS										
	MODEL		LFA30F-3R3-Y	LFA30F-5	LFA30F-12	LFA30F-15	LFA30F-24			
VOLTAGE[V] AC85 - 264 1 φ (Ref			AC85 - 264 1 ¢ (Ref	er to Instruction Man	ual 1.1 and 3.2) *3					
		ACIN 100V	0.50typ (lo=100%)	0.65typ (lo=100%)						

	VOLTAGE[V]		AC85 - 264 1 φ (Ref	er to Instruction Man	ual 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		ACIN 100V	73typ	76typ	79typ	81typ	82typ		
	EFFICIENCY[%]	ACIN 200V	75typ	79typ	81typ	83typ	84typ		
		ACIN 100V	15typ (Io=100%) (At	cold start) (Ta=25°C)	1				
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (At cold start) (Ta=25°C)						
	LEAKAGE CURRENT[mA]		0.30 / 0.65max (ACI	N 100V / 240V 60Hz,	Io=100%, According	to IEC60950-1 and D	EN-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	[mV] *5	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°C *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,	lo=100%)					
-	HOLD-UP TIME[ms]		20typ (ACIN 100V, Id	p=100%)					
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.63	Fixed ("Y" option is	available for adjusting	output voltage betweer	1 ±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		
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	A, DC500V 50M Ω mir	(At Room Temperatu	ıre)		
ISOLATION	INPUT-FG		AC2,000V 1minute,	Cutoff current = 10mA	A, DC500V 50M Ω mir	(At Room Temperatu	ıre)		
	OUTPUT-FG				DC500V 50MΩ min (
	OPERATING TEMP., HUMID.AND	ALTITUDE					n (10,000feet) max *3		
ENVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE			ng), 9,000m (30,000f				
ENVIRONMENT	VIBRATION			<u> </u>	d, 60minutes each alo	ng X, Y and Z axis			
	IMPACT			ms, once each X, Y a					
	AGENCY APPROVA	S	UL60950-1, C-UL (C	SA60950-1), EN6095	0-1, EN50178 Compli	es with DEN-AN			
SAFETY AND NOISE	CONDUCTED NOISE			, , ,	N55011-B, EN55022-	В			
REGULATIONS	CE MARKING		Low Voltage Directiv						
	HARMONIC ATTENU			000-3-2 (Not built-in					
OTHERS	CASE SIZE/WEIGHT		50×26.5×105mm [1.97×1.04×4.13 inch	es] (W×H×D) / 130g	max (without chassis	s and cover)		
	COOLING METHOD		Convection (Refer to	Instruction Manual 3.1	l and 3.2) *3				
from ou	utput terminal.		g board with capacitor of 2 Noise meter (Equivalent to	-	Please contact us for deta		mply with the IEC61000-3-2.		

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

*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at To meet the specifications. Do not operate over-loaded condition.

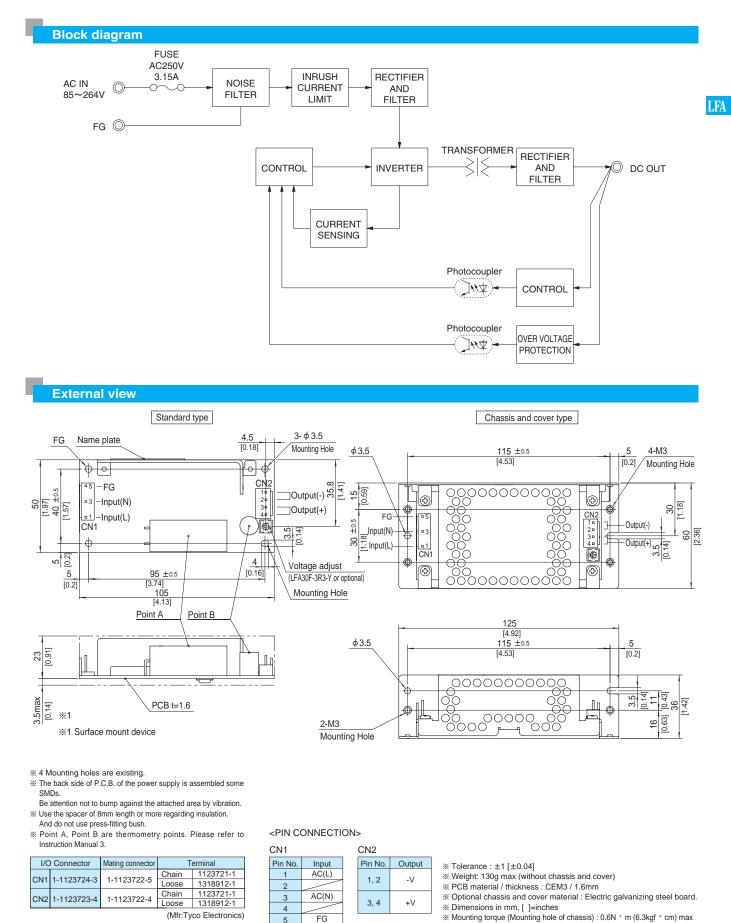
* Parallel operation is not possible. *

25°C, with the input voltage held constant at the rated input/output. Derating is required. *3

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

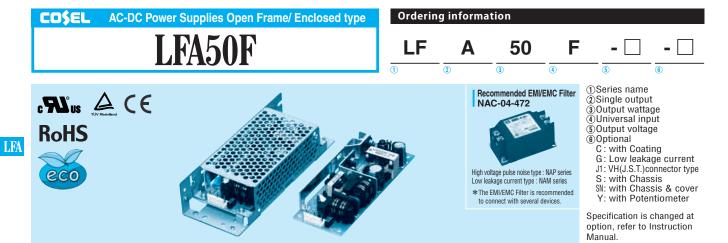




% I/O Connector is Mfr. Tyco Electronics

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

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



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=1	00%)					
	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							
	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		30typ (lo=100%) (At cold start) (Ta=25°C)						
	LEAKAGE CURRENT[mA]					=100%, Accordi	ng to IEC60950	-1 and DEN-AN)	1	
	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[mV] *4		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	
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	
D	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			oomax	oomax	1 T T T T T T T T T T T T T T T T T T T	rozinax	
		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		14.40 to 15.60		34.50 to 37.50	46.00 to 50.0	
	OVERCURRENT PROT		Works over 10	5% of rating a	nd recovers auto	-	1		1	
ROTECTION	OVERVOLTAGE PROTI	ECTION	4.00 to 5.25	5.75 to 7.00	13.80 to 16.80		27.60 to 33.60	41.40 to 50.40	55.20 to 67.2	
IRCUIT AND	OPERATING INDICA	TION	Not provided				1		1	
THERS	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Not provided							
	INPUT-OUTPUT			nute. Cutoff cu	rrent = 10mA. D	C500V 50MΩ r	nin (At Room T	emperature)		
SOLATION	INPUT-FG					C500V 50MΩ r		, ,		
	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	2), 3,000m (10,0	00feet) max *	
	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75℃, 2	20 - 90%RH (N	on condensing)	, 9,000m (30,00	Ofeet) max		,	
NVIRONMENT	VIBRATION					Ominutes each a		Z axis		
	IMPACT		196.1m/s ² (20	G), 11ms, once	each X, Y and I	Z axis	•			
	AGENCY APPROVA	LS				, EN50178 Com	plies with DEN-	-AN		
AFETY AND	CONDUCTED NOISE		Complies with	FCC-B, VCCI-B	, CISPR-B, EN5	5011-B, EN5502	22-B			
OISE EGULATIONS	CE MARKING		Low Voltage D	irective, EMC E	Directive	· · · · · · · · · · · · · · · · · · ·				
EGULATIONS	HARMONIC ATTENU	JATOR	Complies with	IEC61000-3-2						
	CASE SIZE/WEIGHT				4×5.20 inches]	(W×H×D) / 16	5g max (withou	ut chassis and c	over)	
DTHERS	CASE SIZE/WEIGHT		50×26.5×132mm [1.97×1.04×5.20 inches] (W×H×D) / 165g max (without chassis and cover) Convection (Refer to Instruction Manual 3.1 and 3.2) *3						,	
JIIIEIIO										

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

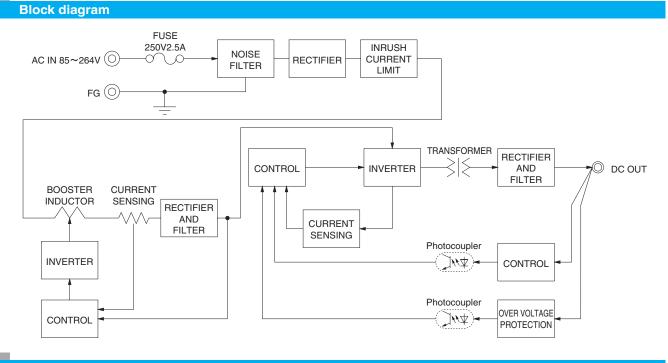
BM103). Drift is the change in DC output for an eight hour period after a half-hour warm-up at *2 25°C, with the input voltage held constant at the rated input/output.

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.



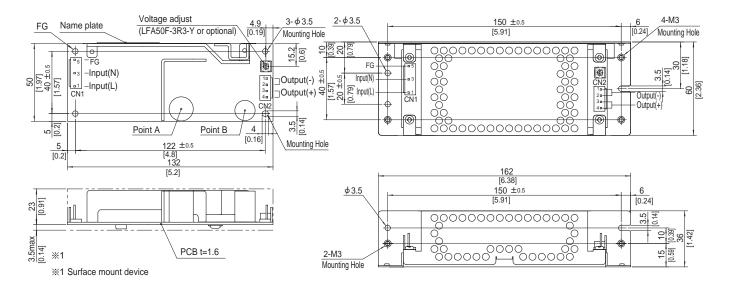
LFA



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	1-1123722-5	Chain	1123721-1		
CN1	1-1123724-3	1-1123722-5	Loose	1318912-1		
010	1-1123723-4	1-1123722-4	Chain	1123721-1		
CN2			Loose	1318912-1		
(Mfr:Tvco Electronics)						

<PIN CONNECTION>

CN1		CN2		
Pin No.	Input	Pin No.	Output	% Tolerance : ±1 [±
1	AC(L)	1.0	-V	※ Weight : 165g max
2		1, 2	-v	% PCB material / thic
3	AC(N)	3. 4	+V	※ Optional chassis a
4		3, 4	+v	※ Dimensions in mm ※ Mounting torque (Median Content of the second se
5	FG			· · · · · · · · · · · · · · · · · · ·

±0.041

x (without chassis and cover) ckness : CEM3 / 1.6mm

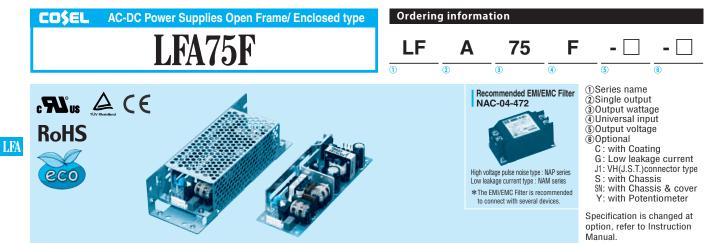
and cover material : Electric galvanizing steel board. n, []=inches

lounting 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.



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 Instr	uction 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 - 63)							
		ACIN 100V	73.5typ	78.0typ	81.5typ	81.5typ	82.5typ	82.5typ	82.5typ	
NPUT	EFFICIENCY[%]	ACIN 200V		80.0typ	83.0typ	83.0typ	84.5typ	84.5typ	84.5typ	
		ACIN 100V	0.96typ	0.97typ						
	POWER FACTOR (Io=100%)		0.83typ	0.90typ						
		ACIN 100V								
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=1009	%) (At cold star	t) (Ta=25℃)					
	LEAKAGE CURREN	T[mA]	0.40 / 0.75max	(ACIN 100V / 2	240V 60Hz, Io=	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	
		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℃ *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]		350typ (ACIN 1							
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGEIVI		2.85 to 3.63 Fixed ("Y" option is available for adjusting output voltage between ±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		Works over 10	5% of rating an	d recovers auto	matically	1	I	1	
ROTECTION	OVERVOLTAGE PROTE	ECTION	4.00 to 5.25	5.75 to 7.00	13.80 to 16.80		27.60 to 33.60	41.40 to 50.40	55.20 to 67.2	
IRCUIT AND	OPERATING INDICA	TION	Not provided			1		1	1	
THERS	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Not provided							
	INPUT-OUTPUT		AC3,000V 1mii	nute, Cutoff cur	rent = 10mA, D	C500V 50MΩ n	nin (At Room Te	emperature)		
SOLATION	INPUT-FG		AC2,000V 1mii	nute, Cutoff cur	rent = 10mA, D	C500V 50MΩ n	nin (At Room Te	emperature)		
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25 mA, DC500V 50M Ω min (At Room Temperature)							
	OPERATING TEMP., HUMID.AND	ALTITUDE	-10 to +70℃, 2	0 - 90%RH (No	on condensing)	(Refer to Instruc	tion Manual 3.2), 3,000m (10,0	00feet) max *	
	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75℃, 2	0 - 90%RH (No	on condensing)	, 9,000m (30,00	Ofeet) max	··		
NVIRONMENT	VIBRATION		10 - 55Hz, 19.6	6m/s² (2G), 3mi	inutes period, 6	Ominutes each a	long X, Y and Z	Z axis		
	IMPACT		196.1m/s² (200	G), 11ms, once	each X, Y and Z	Z axis				
	AGENCY APPROVA	LS	UL60950-1, C-	UL (CSA60950	-1), EN60950-1	, EN50178 Com	plies with DEN-	AN		
AFETY AND	CONDUCTED NOISE		Complies with	FCC-B, VCCI-B	CISPR-B, EN5	5011-B, EN5502	22-B			
OISE EGULATIONS	CE MARKING		Low Voltage D	irective, EMC D	irective					
LOULATIONS	HARMONIC ATTENU	JATOR	Complies with	IEC61000-3-2						
	CASE SIZE/WEIGHT				2×5.91 inches]	(W×H×D) / 23	Og max (withou	It chassis and c	over)	
OTHERS	COOLING METHOD		Convection (Re	efer to Instructio	n Manual 3.1 an	d 3.2) *3	· ·			

*1 This is the value that measured on measuring board with capacitor of 22 µF at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103).

to KEISOKU-GIKEN: * Please contact us about dynamic load and input response. To meet the specifications. Do not operate over-loaded condition. * Parallel operation is not possible.

Parallel operation is not possible.
 Derating is required when operated with chassis and cover.

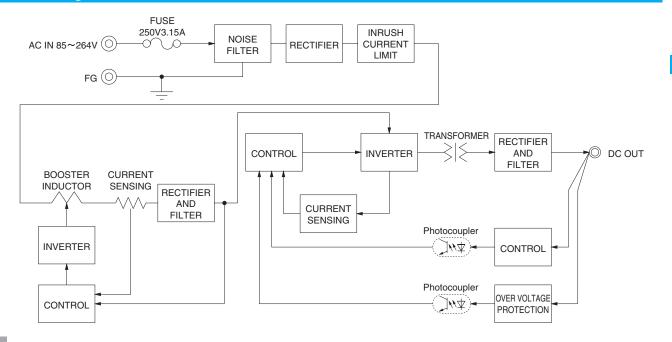
*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.

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



LFA

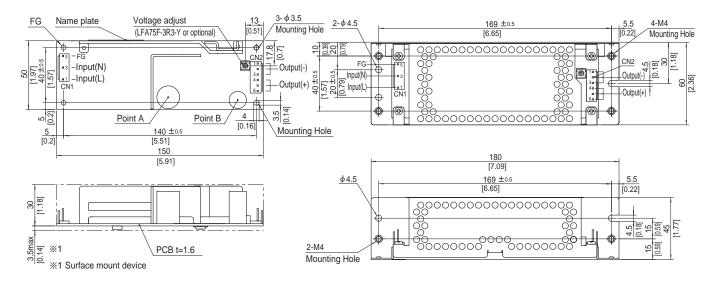
Block diagram



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.
- % 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	1-1123724-3	1-1123722-5	Chain	1123721-1		
CINI		1-1123722-5	Loose	1318912-1		
CN2	1-1123723-6	1-1123722-6	Chain	1123721-1		
			Loose	1318912-1		
(Mfr:Tyco Electronics)						

<PIN CONNECTION>

CN1			CN2		
Pin No.	Input		Pin No.	Output	% Tolerance : ±1 [±0.04]
1	AC(L)]	1 40 2	-V	※ Weight : 230g max (without chassis and c
2			1 to 3	-v	* PCB material / thickness : CEM3 / 1.6mm
3	AC(N)		4 to 6	+V	* Optional chassis and cover material : Elec
4			4 10 6	+V	Mounting torque (Mounting hole of chassis) :
5	FG				* would und to que (would und to be of chassis).

% I/O Connector is Mfr. Tyco Electronics

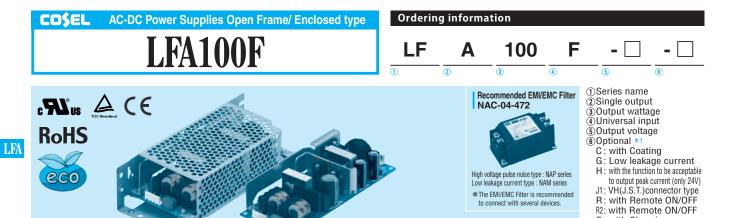
% Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 5.

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

- cover)

ectric galvanizing steel board.

:1.5N * m (16kgf * cm) max



MODEL	unit with care.							1 541005 04 11		
				LFA100F-5-Y		LFA100F-15				
	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-4
	VOLTAGE[V]				Instruction Ma					
		ACIN 100V		1.3typ (lo=1						
	CURRENT[A]	ACIN 200V		0.7typ (lo=1	,					
	FREQUENCY[Hz]		50 / 60 (47 -	63)	,					
		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
		ACIN 100V	0.98typ	0.99typ						
	POWER FACTOR (Io=100%)	ACIN 200V	0.92typ	0.95typ						
		ACIN 100V	15typ (lo=10	0%) (At cold	start) (Ta=25°	C)				
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=10	00%) (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	20	20	8.5	6.7	4.3	4.3 (Peak 5.4)	2.8	2.1
ουτρυτ	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 +50°C *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 +50°C *2	120max	120max	150max	150max	150max	300max	250max	250max
	RIPPLE NOISE[mVp-p]	-10-0°C *2	160max	160max	180max	180max	180max	360max	300max	300max
		0 to +50℃	50max	50max	120max	150max	240max	240max	360max	480max
	TEMPERATURE REGULATION[mV]	-10 to +50℃	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	g output volta	ge)	
	OUTPUT VOLTAGE SET	TING[V]	3.30 to 3.40	5.00 to 5.15	11.50 to 12.50	14.40 to 15.60	23.00 to 25.00	23.00 to 25.00	34.50 to 37.50	46.00 to 50.0
	OVERCURRENT PROT	ECTION			g (works over					
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	27.60 to 33.60	41.40 to 50.40	55.20 to 67.2
IRCUIT AND	OPERATING INDICA	TION	Not provided	1		r.				
DTHERS	REMOTE SENSING		Not provided	1						
	REMOTE ON/OFF		Option (Refe	r to Instructio	on Manual)					
	INPUT-OUTPUT-RC	*6	AC3,000V 11	ninute, Cutoff	f current = 10r	nA, DC500V 5	$50M\Omega$ min (A	t Room Temp	erature)	
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)							
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	I (Non conden	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	I (Non conden	sing), 9,000m	n (30,000feet)	max		
NVIRONMENT	VIBRATION		10 - 55Hz, 1	9.6m/s² (2G),	3minutes per	iod, 60minute	s each along	X, Y and Z axi	S	
	IMPACT		196.1m/s² (2	20G), 11ms, o	nce each X, Y	and Z axis				
AFETY AND	AGENCY APPROVAI	S			950-1), EN60		78 Complies	with DEN-AN		
IOISE	CONDUCTED NOISE		Complies wi	th FCC-B, VCC	CI-B, CISPR-B	, EN55011-B,	EN55022-B			
REGULATIONS	HARMONIC ATTENU	ATOR		th IEC61000-3						
	CASE SIZE/WEIGHT				<1.32×6.10 in	ches] (W×H×	(D) / 280g ma	ax (without ch	assis and cov	er)
DTHERS	COOLING METHOD				uction Manual		, .			
*1 Specificati	on is changed at option, refer e value that measured on n			at the rated input/o Derating is require			* To m cond	neet the specifica	tions. Do not op	erate over-load

device is damaged when the specification is exceeded. Please

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

contact us about the detail.

*6

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

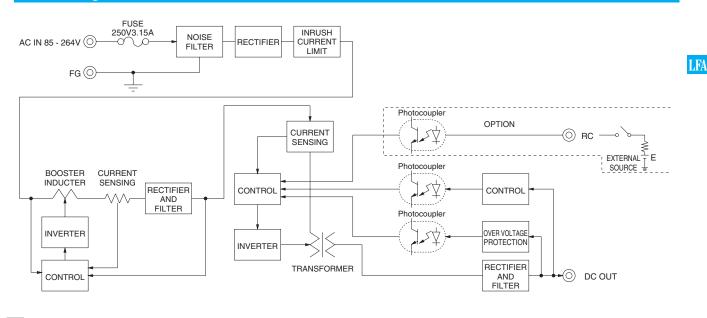
Sound noise may be generated by power supply in case of pulse load.

Derating is required when operated with chassis and cover.

*

S: with Chassis SN: with Chassis & cover Y: with Potentiometer Please refer to Instruction

Block diagram

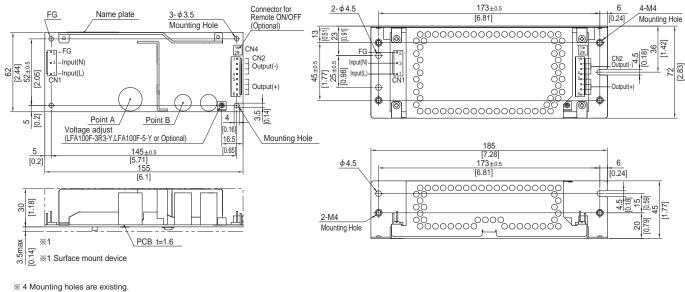


External view

% 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	Terminal						
	1-1123724-3	1-1123722-5	Chain	1123721-1					
CIN	1-1123724-3	1-1123722-5	Loose	1318912-1					
CNI	2 1-1123723-8	1-1123722-8	Chain	1123721-1					
CINZ	1-1123723-8		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

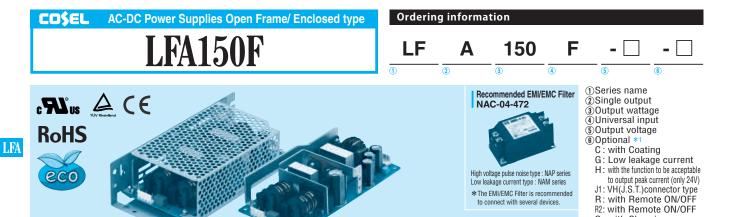
※ Optional chassis and cover material : Electric galvanizing steel board.

※ Dimensions in mm, []=inches

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

Con	Connector type						
CN4 Option (Mfr:J.S.T)							
PIN No. Contents							
1	RC(+)						
2	2 RC(-)						
Barrie	r strip type						

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



S: with Chassis SN: with Chassis & cover Y: with Potentiometer Please refer to Instruction

manual 5.

Derating is required when operated with chassis and cover.

Sound noise may be generated by power supply in case of

*

*

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, so handle the unit with care.

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 OUTPL	JT 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	
SPECIFI	CATIONS										
	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 I	nstruction Ma	nual 1.1 and	3.2) *4				
		ACIN 100V	1.4typ (Io=100%)	1.4typ (lo=100%) 2.0typ (lo=100%)							
	CURRENT[A]	ACIN 200V	0.7typ (Io=100%)	0.7typ (lo=100%) 1.0typ (lo=100%)							
	FREQUENCY[Hz]		50 / 60 (47 -	63)							
		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	
		ACIN 100V	0.98typ	0.99typ	•			•	•	h	
	POWER FACTOR (Io=100%)	ACIN 200V	0.92typ	0.95typ							
		ACIN 100V	15typ (lo=10	0%) (At cold :	start) (Ta=25°	2)					
	INRUSH CURRENT[A]	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	EC60950-1 ar	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		40max	40max	100max	120max	150max	150max	240max	240max	
		0 to +40°C *2		80max	120max	120max	120max	240max	150max	150max	
	RIPPLE[mVp-p]	-10-0°C *2		140max	160max	160max	160max	320max	200max	200max	
OUTPUT		0 to +40°C *2		120max	150max	150max	150max	300max	250max	250max	
	RIPPLE NOISE[mVp-p]	-10-0°C *2	160max	160max	180max	180max	180max	360max	300max	300max	
			50max	50max	120max	150max	240max	240max	360max	480max	
	TEMPERATURE REGULATION[mV]	-10 to +40°C		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		2.85 to 3.63 4.50 to 5.50 Fixed ("Y" option is available for adjusting output voltage)								
	OUTPUT VOLTAGE SET		3.30 to 3.40 5.00 to 5.15 11.50 to 12.50 14.40 to 15.60 23.00 to 25.00 23.00 to 25.00 34.50 to 37.50 46.00 to 50.00								
	OVERCURRENT PROT							ption -H) and			
PROTECTION	OVERVOLTAGE PROTE							27.60 to 33.60			
	OPERATING INDICA		Not provided		10.00 10 10.00	17.20 to 21.00	27.00 10 00.00	27.00 10 00.00	41.40 10 00.40	00.20 10 07.20	
OTHERS	REMOTE SENSING		Not provided							-	
	REMOTE ON/OFF		Option (Refer to Instruction Manual)								
	INPUT-OUTPUT-RC	*6			/		SOMO min (At	t Room Temp	erature)		
	INPUT-FG										
ISOLATION	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 Tempera	/	-	
	OPERATING TEMPHUMID.AND							lanual 3.2), 3,0	,	lfeet) may	
	STORAGE TEMP., HUMID.AND			,	`	0/ (n (30,000feet)	,, ,	000111 (10,000	neel) max	
ENVIRONMENT	VIBRATION	ALITIODE				• • •	· · · · · · · · · · · · · · · · · · ·	X, Y and Z axi	6		
	IMPACT			· /·		-	s each along a		5		
					0G), 11ms, once each X, Y and Z axis C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN						
SAFETY AND NOISE	CONDUCTED NOISE				CI-B, CISPR-B						
REGULATIONS	HARMONIC ATTENU		-	h IEC61000-3	,	, LN00011-B,	LN00022-D				
							(D) / 300a math	av (without ab	accic and only	ar)	
OTHERS	CASE SIZE/WEIGHT COOLING METHOD				ction Manual		, .	ax (without ch	assis allu cov	51)	
*1 Specificati	on is changeed at option, refer	r to Instructi	,	at the rated input/o		5. i aliu 3.2) **		neet the specifica	tions Do not on	arata over-loado	
	e value that measured on n			Derating is require			* IO m condi		tions. Do not op	mate uver-luaded	
capacitor of	of 22 µ F at 150mm from outpu	ut terminal.	*5	() means peak cu	urrent. There is a p	ossibility that an ir	nternal * Paral	lel operation is not	possible.		

device is damaged when the specification is exceeded. Please

Applicable when remote control (optional) is added.

Please contact us about dynamic load and input response.

contact us about the detail.

*6

*7

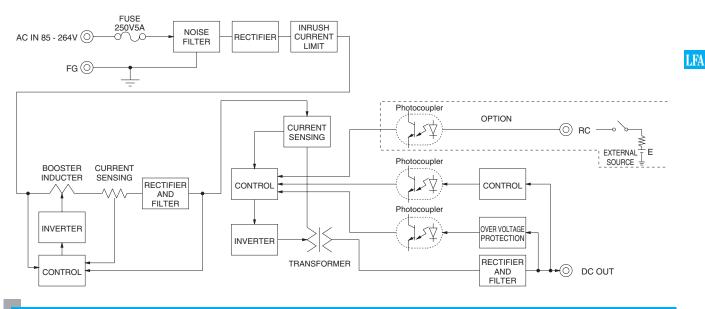
Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103). *3 Drift is the change in DC output for an eight hour period after a

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

LFA-14

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 6 160 [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.

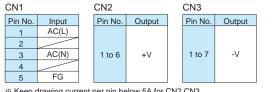
I/C	Connector	Mating connector	Terminal			
CNIA	1-1123724-3	1-1123722-5	Chain	1123721-1		
CINT	1-1123724-3	1-1123/22-5	Loose	1318912-1		
0.10	1-1123723-6	4 4400700 0	Chain	1123721-1		
CINZ		1-1123722-6	Loose	1318912-1		
0.10	4 4400700 7	4 4400700 7	Chain	1123721-1		
CN3	1-1123723-7	1-1123722-7	Loose	1318912-1		
(Mfr:Type Electronice)						

(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.

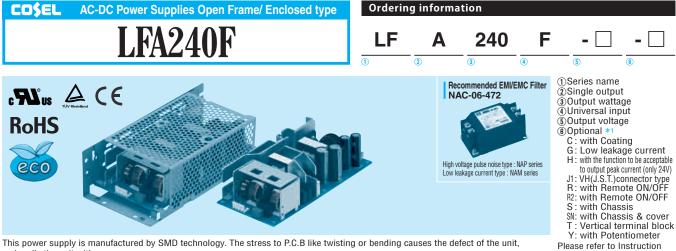
% Dimensions in mm, []=inches

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



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

manual 5.

SPECIFICATIONS

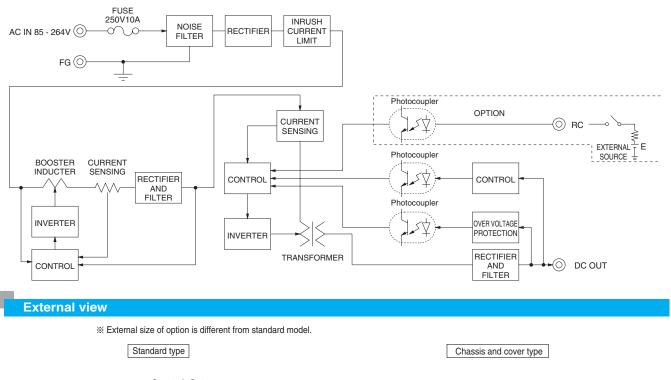
LFA

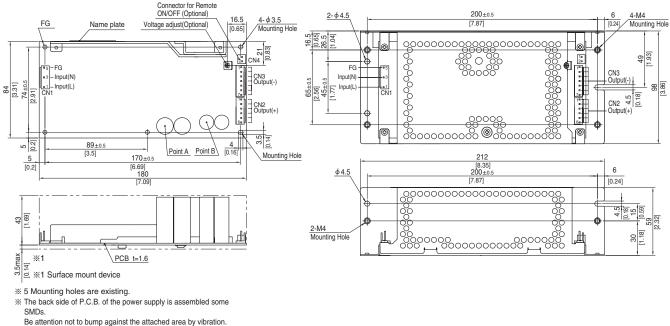
	MODEL		LFA240F-24	LFA240F-24-H	LFA240F-36	LFA240F-48					
	VOLTAGE[V]		AC85 - 264 1 ϕ (Refer to Instruction Manual 1.1 and 3.2) *4								
		ACIN 100V									
	CURRENT[A]	ACIN 200V									
	FREQUENCY[Hz]		50 / 60 (47 - 63)								
		ACIN 100V	84.5typ 84.5typ 84.5typ 84.5typ								
VPUT	EFFICIENCY[%]	ACIN 200V	87.5typ	87.5typ	87.5typ	87.5typ					
INFUT		ACIN 100V	0.99typ								
	POWER FACTOR (lo=100%)	ACIN 200V	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		30 / 30typ (lo=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start) 0.40 / 0.75max (ACIN 100V / 240V 60Hz, lo=100%, According to IEC60950-1 and DEN-AN)								
	VOLTAGE[V]	.[]	24 24 36 48								
	CURRENT[A]	*5	10	10 (Peak12.5) 6.7		5					
	LINE REGULATION		96max	96max	144max	192max					
	LOAD REGULATION	-	150max	150max	240max	240max					
		0 to +40°C *2	120max	240max	150max	150max					
	RIPPLE[mVp-p]	-10-0°C *2		320max	200max	200max					
		0 to +40°C *2	150max	250max	250max						
UTPUT	RIPPLE NOISE[mVp-p]	-10-0°C *2	180max			300max					
011 01			240max	240max	360max	480max					
	TEMPERATURE REGULATION[mV]		290max	450max	600max						
	DRIFT[mV] *3			290max 96max	144max	192max					
	START-UP TIME[ms]		350typ (ACIN 100V, Io=100%)								
	HOLD-UP TIME[ms]		20typ (ACIN 100V, 10=100%)								
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed ("Y" option is available for adjusting output voltage)								
	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 PROTECTION		Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically								
DOTECTION			27.60 to 33.60 27.60 to 33.60 41.40 to 50.40 55.20 to 67.20								
ROTECTION	OPERATING INDICATION		Not provided								
THERS	REMOTE SENSING		Not provided								
	REMOTE ON/OFF		Option (Refer to Instruction	n Manual)							
	INPUT-OUTPUT-RC *6			/	50MΩ min (At Room Temp	verature)					
	INPUT-FG		, , ,	,	· · · · ·	/					
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										
ENVIRONMENT	OPERATING TEMP., HUMID.AND ALTITUDE *4										
	/										
	STORAGE TEMP., HUMID.AND ALTITUDE		10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis								
	VIBRATION		196.1m/s ² (20G), 11ms, once each X, Y and Z axis								
	AGENCY APPROVAL	6	UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN								
AFETY AND											
EGULATIONS	HARMONIC ATTENU		,								
LUCEATIONS			Complies with IEC61000-3-2								
THERS	CASE SIZE/WEIGHT		84×46.5×180mm [3.31×1.83×7.09 inches] (W×H×D) / 550g max (without chassis and cover)								
*1 Spanificati	COOLING METHOD		Convection (Refer to Instruction Manual 3.1 and 3.2) *4 on Manual. at the rated input/output. * To meet the specifications. Do not operate over-load								
*2 This is th capacitor of Measured (Equivalen	on is changeed at option, refer le value that measured on n of 22 µF at 150mm from outpu I by 20MHz oscilloscope on t to KEISOKU-GIKEN: RM103) e change in DC output for an ei	neasuring I It terminal. r Ripple-No	board with *4 Derating is require *5 () means peak c device is damage contact us about t	ed. urrent. There is a possibility that an d when the specification is exceeded	condition. internal * Parallel operation is not Please * Derating is required wh						

*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

LFA240F | CO\$EL

Block diagram





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.

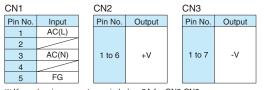
CN1 1-1123724-3 1-1123722-5 Chain 1123721-1 Loose 1318912-1 CN2 1-1123723-6 1-1123722-6 Chain 1123721-1 Loose 1318912-1 Loose 1318912-1 Loose 1318912-1 Loose 1318912-1 Loose 1318912-1 Loose 1318912-1 Loose 1318912-1 Loose 1318912-1 Loose 1318912-1 Loose 1318912-1	I/C	Connector	Mating connector	Terminal			
CN2 1-1123723-6 1-1123722-6 Chain 1123721-1 CN0 1.1123723-7 1.1123722-7 Chain 1123721-1	CNI	1 1100704 0	1 1100700 5	Chain	1123721-1		
CN2 1-1123723-6 1-1123722-6 Loose 1318912-1 CN2 1-1123723-7 1-1123723-7 Chain 1123721-1	CIVI	1-1123724-3	1-1123/22-5	Loose	1318912-1		
CN2 1 1102702 7 1 1102702 7 Chain 1123721-1	010	4 4400700 0	4 4400700 0	Chain	1123721-1		
CN2 1 1102702 7 1 1102702 7	CN2	1-1123/23-6	1-1123/22-6	Loose	1318912-1		
	0.10	4 4400700 7	4 4400700 7	Chain	1123721-1		
Loose 1318912-1	CN3	1-1123/23-7	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

FININU.	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

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







300

3

F

4

Α

2

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

pulse load.

(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

-

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 WATT	*5 *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

SPECIFICATIONS

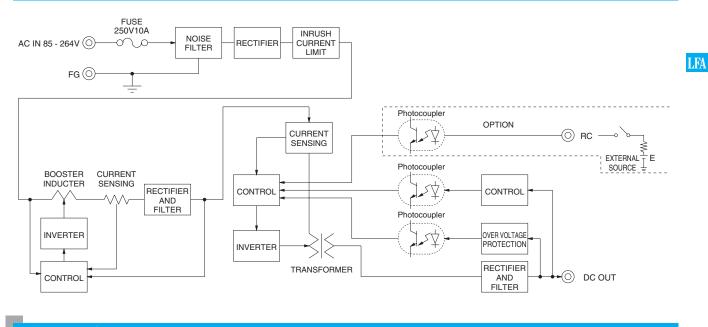
	MODEL	LFA300F-3R3-TY	LFA300F-5-TY	LFA300F-12-TY	LFA300F-15-TY	LFA300F-24-TY	LFA300F-24-HTY	LFA300F-30-TY	LFA300F-36-TY	LFA300F-48-TY	
	VOLTAGE[V]	AC85 - 264	1φ (Refer	to Instructio	n Manual 1.	1 and 3.2) *	4				
		ACIN 100V	2.7typ (lo=100%) 4.1typ (lo=100%)								
	CURRENT[A]	ACIN 200V	1.4typ (lo=100%)	2.0typ (Io=	=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				51		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
	POWER FACTOR (Io=100%) ACIN 200V		0.92typ 0.95typ								
		ACIN 100V	15 / 30typ (lo=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start)								
	INRUSH CURRENT[A]	ACIN 200V	30 / 30typ (lo=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start)								
	LEAKAGE CURRENT[mA]		0.45 / 0.75max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)								
	VOLTAGE[V]			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	27	22	14	14 (Peak19)	11	9.4	7
	LINE REGULATION			20max	48max	60max	96max	96max	144max	144max	192max
	LOAD REGULATION	-		40max	100max	120max	150max	150max	240max	240max	240max
		<u> </u>	80max	80max	120max	120max	120max	240max	150max	150max	150max
	RIPPLE[mVp-p]	-10-0°C *2		140max	160max	160max	160max	320max	200max	200max	200max
		0 to +40°C *2		120max	150max	150max	150max	300max	250max	250max	250max
UTPUT	RIPPLE NOISE[mVp-p]	-10-0°C *2		160max	180max	180max	180max	360max	300max	300max	300max
		0 to +40°C		50max	120max	150max	240max	240max	360max	360max	480max
	TEMPERATURE REGULATION[mV]	-10 to +40°C		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 ADJUSTMENT	RANGE[V]	21 (, ,	· · · ·	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
	OUTPUT VOLTAGE SET	TINGIVI	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								
	OVERCURRENT PROTECTION						of peak curr				
PROTECTION	OVERVOLTAGE PROTECTION			5.75 to 7.00			27.60 to 33.60				
	OPERATING INDICATION		Not provide		1		1				1
THERS	REMOTE SENSING		Not provide								
	REMOTE ON/OFF				ction Manua	D.					
	INPUT-OUTPUT-RC *6					,	500V 50MΩ	min (At Ro	om Tempera	ature)	
	INPUT-FG		,	,		,	500V 50MΩ			/	
ISOLATION	OUTPUT·RC-FG *6										
	OUTPUT-RC *6		AC100V 1minute, Cutoff current = 25mA, DC100V 10M Ω min (At Room Temperature)								
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE *4		-10 to +70°C, 20 - 90%RH (Non condensing) (Refer to Instruction Manual 3.2), 3,000m (10,000feet) max								
	STORAGE TEMP., HUMID.AND ALTITUDE		-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max								
	VIBRATION		10 - 55Hz, 19.6m/s 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	LS		1 //	,	,		mplies with	DEN-AN		
OISE	AGENCY APPROVALS UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN CONDUCTED NOISE Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B										
EGULATIONS	HARMONIC ATTENU	JATOR	Complies v	vith IEC6100	00-3-2	,	,				
OTHERS	CASE SIZE/WEIGHT		95×52.5×222mm [3.74×2.07×8.74 inches] (W×H×D) (without terminal block) / 810g max								
	COOLING METHOD		Convection / Forced air (Refer to Instruction Manual 3.1 and 3.2) *4								
 *1 Specification is changeed at option, refer to Instruction Manual. *2 This is the value that measured on measuring board with capacitor of 22 µF at 150mm from output terminal. *4 Derating is required. *5 () means peak current. There is a possibility that an internal device is damaged when the specification is exceeded. Please *6 () mean peak current. There is a possibility that an internal device is damaged when the specification is exceeded. Please 											
Measured (Equivalen		r Ripple-No).	oise meter	device is dam contact us ab		pecification is ex	ceeded. Please	* Derating is	required when o		

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

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

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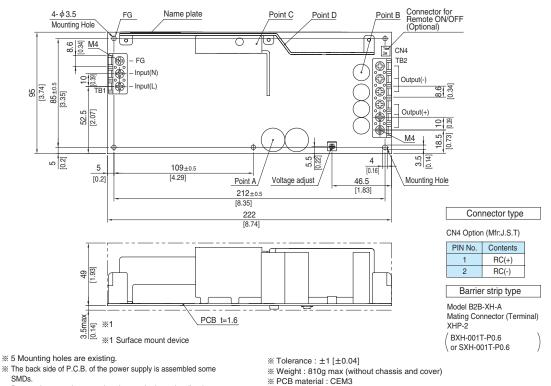
Block diagram



External view



Standard 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, Point C, Point D are thermometry points. Please refer to Instruction Manual 3.
- % Keep drawing current per pin below 20A for TB2.
- % Dimensions in mm, []=inches % Screw tightening torque : M4 1.6N * m (16.9kgf * cm) max