

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

MODEL			LFA10F-3R3-Y	LFA10F-5	LFA10F-12	LFA10F-15	LFA10F-24		
ΜΑΧ Ουτρυ	JT 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		
SPECIF	ICATIONS								
	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%)						
	CURRENT[A]	ACIN 200V	0.11typ (lo=100%) 0.16typ (lo=100%)						
	FREQUENCY[Hz]		50 / 60 (47 - 440)		/				
NPUT		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%)		71	1	1 71		
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%)						
	LEAKAGE CURRENT	[mA]	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	100V / 240V 60Hz, I	o=100%, According to IE	C60950-1 and DEN-AN)		
	VOLTAGE[V]		3.3	5	12	15	24		
	CURRENT[A]		2.0	2.0	0.9	0.7	0.5		
	LINE REGULATION[mV] *5		20max	20max	48max	60max	96max		
	LOAD REGULATION[mV] *5		40max	40max	100max	120max	150max		
		0 to +50℃	80max	80max	120max	120max	120max		
	RIPPLE[mVp-p]	-10 - 0°C	140max	140max	160max	160max	160max		
	*1	lo=0 - 35%	190max	160max	240max	240max	280max		
ουτρυτ		0 to +50°C	120max	120max	150max	150max	150max		
	RIPPLE NOISE[mVp-p]	-10 - 0°C	160max	160max	180max	180max	180max		
	*1	lo=0 - 35%	240max	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]		200typ (ACIN 100V, Io=100%) * Start-up time is 700ms typ for less than 1 minute of applying input again from turning off the input vo						
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)						
	OUTPUT VOLTAGE ADJUSTMENT	RANGE[V]	2.85 to 3.63	Fixed ("Y"option is	s available for adjusting o	utput voltage between ±	10%)		
	OUTPUT VOLTAGE SETT	ING[V]	3.30 to 3.40	4.90 to 5.30	11.50 to 12.50	14.40 to 15.60	23.00 to 25.00		
	OVERCURRENT PROTE	CTION	Works over 105% of	rating and recovers a	utomatically	I			
ROTECTION	OVERVOLTAGE PROTE	CTION	4.00 to 5.25	5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60		
IRCUIT AND	OPERATING INDICAT	ION	Not provided			I			
THERS	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Not provided						
	INPUT-OUTPUT		AC3,000V 1minute, 0	Cutoff current = 10mA	, DC500V 50M Ω min (A	t Room Temperature)			
SOLATION	INPUT-FG				, DC500V 50M Ω min (A	1 /			
	OUTPUT-FG		AC500V 1minute, Cu	toff current = 25mA,	DC500V 50M min (At I	Room Temperature)			
	OPERATING TEMP., HUMID.AND	ALTITUDE	-10 to +70°C, 20 - 90	%RH (Non condensi	ng) (Refer to Instruction I	Anual 3.2), 3,000m (10,	000 feet) max *3		
	STORAGE TEMP., HUMID.AND	ALTITUDE			ng), 9,000m (30,000 feet)				
NVIRONMENT	VIBRATION		10 - 55Hz, 19.6m/s ²	2G), 3minutes period	l, 60minutes each along	X, Y and Z axis			
	IMPACT		196.1m/s² (20G), 11r	ns, once each X, Y a	nd Z axis				
AFETY AND	AGENCY APPROVAL	s	UL60950-1, C-UL (CSA60950-1), EN60950-1, EN60065, EN50178 Complies with DEN-AN						
IOISE	CONDUCTED NOISE		Complies with FCC-E	B, VCCI-B, CISPR-B,	EN55011-B, EN55022-B				
REGULATIONS	HARMONIC ATTENU	ATOR	Complies with IEC61	000-3-2 (Class A) *6	(Not built-in to active filte	er) *4			
	CASE SIZE/WEIGHT					1	150g max)		
OTHERS			50×22×73.5mm [1.97×0.87×2.89 inches] (W×H×D) / 55g max (with chassis & cover : 150g max) Convection (Refer to Instruction Manual 3.1 and 3.2) *3						

capacitor of 22 µ F at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103). A circuit reducing standby power is built in this unit. Therefore, the internal switch element is intermittent

operated, and the Ripple/Ripple Noise specification in load

*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

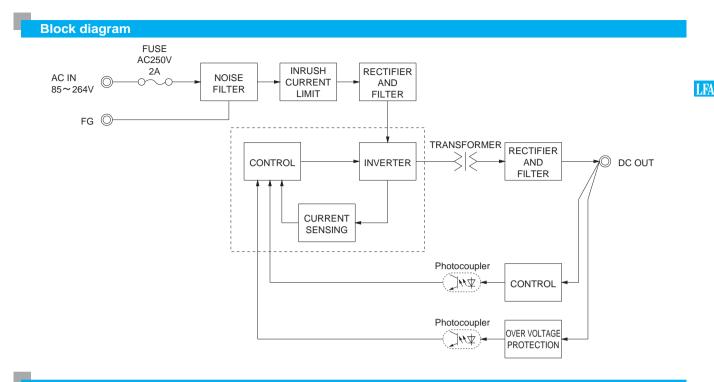
- constant at the rated input/output. *3 Derating is required.
- *4

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

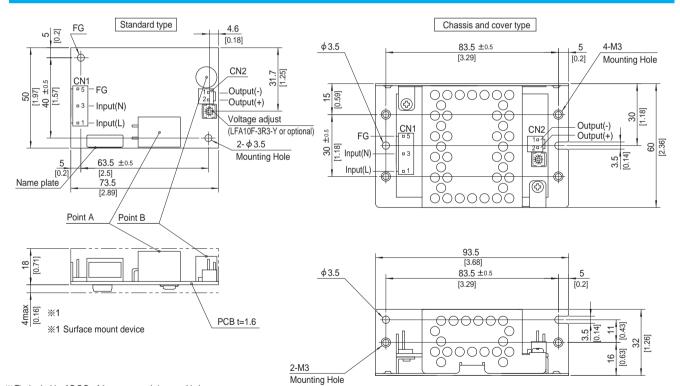
*

- Please contact us about dynamic load and input response. *6 Please contact us about another class.
 - To meet the specifications. Do not operate over-loaded condition.
 - Parallel operation is not possible.
 - Derating is required when operated with chassis and cover. Sound noise may be generated by power supply in case of pulse
 - load.





External view



- % The back side of P.C.B. of the power supply is assembled some SMDs.
- Be attention not to bump against the attached area by vibration. % 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	11 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)							

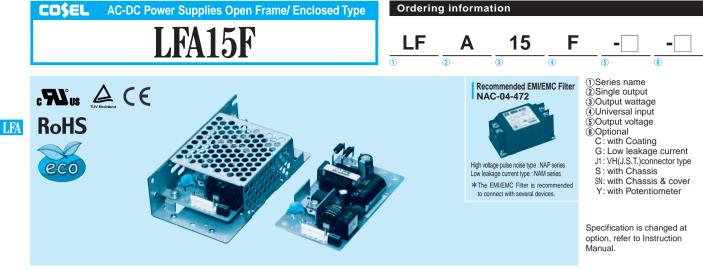
<PIN CONNECTION>

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

- Folerance : ±1 [±0.04] Neight : 55g max (with chassis & cover : 150g max) PCB material / thickness : CEM3 / 1.6mm
- Dptional 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.



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

MODEL			LFA15F-3R3-Y	LFA15F-5	LFA15F-12	LFA15F-15	LFA15F-24				
ΜΑΧ Ουτρι	JT WATTAGE[W]		9.9	15	15.6	15	16.8				
DC OUTPUT	Г		3.3V 3A	5V 3A	12V 1.3A	15V 1A	24V 0.7A				
SPECIF	ICATIONS										
	MODEL		LFA15F-3R3-Y	LFA15F-5	LFA15F-12	LFA15F-15	LFA15F-24				
	VOLTAGE[V]			er to Instruction Manua							
	ACIN 100V		0.24typ (lo=100%) 0.35typ (lo=100%)								
	CURRENT[A]	ACIN 200V	0.15typ (lo=100%)								
	FREQUENCY[Hz]		50 / 60 (47 - 440)								
NPUT		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	30typ (lo=100%) (At								
	LEAKAGE CURRENT	[mA]	0.15/0.30max (ACIN	100V / 240V 60Hz, lo	=100%, According to IEC	C60950-1 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	20max	48max	60max	96max				
	LOAD REGULATION	mV] *5	40max	40max	100max	120max	150max				
		0 to +50℃	80max	80max	120max	120max	120max				
	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				
OUTPUT	RIPPLE NOISE[mVp-p]	-10 - 0°C	160max	160max	180max	180max	180max				
		lo=0 - 35%	240max	240max	300max	300max	320max				
	TEMPERATURE REGULATION[mV]	0 to +50°C	50max	50max	120max	150max	240max				
	IEWPERATURE REGULATION[IIIV]	-10 to +50℃	60max	60max	150max	180max	290max				
	DRIFT[mV] *2		20max	20max	48max	60max	96max				
	START-UP TIME[ms]		200typ (ACIN 100V, Io=100%) *Start-up time is 700ms typ for less than 1 minute of applying input again from turning off the input vo								
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)								
	OUTPUT VOLTAGE ADJUSTMENT F	RANGE[V]	2.85 to 3.63	· · ·	available for adjusting ou	tput voltage between ±	10%)				
	OUTPUT VOLTAGE SETT	ING[V]	3.30 to 3.40	4.90 to 5.30	11.50 to 12.50	14.40 to 15.60	23.00 to 25.00				
	OVERCURRENT PROTE	CTION	Works over 105% of	rating and recovers au	Itomatically						
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				
CIRCUIT AND	OPERATING INDICAT	ION	Not provided								
OTHERS	REMOTE SENSING		Not provided								
	REMOTE ON/OFF		Not provided								
	INPUT-OUTPUT		, ,		DC500V 50M Ω min (At	1 /					
SOLATION	INPUT-FG		, ,	,	DC500V 50M Ω min (At	1 /					
	OUTPUT-FG				DC500V 50M Ω min (At R						
	OPERATING TEMP., HUMID.AND				g) (Refer to Instruction Ma		000 feet) max *3				
NVIRONMENT	STORAGE TEMP., HUMID.AND A	LTITUDE			g), 9,000m (30,000 feet) i						
	VIBRATION	-	· · · · · · · · · · · · · · · · · · ·		60minutes each along X	, Y and Z axis					
			· · · · · · · · · · · · · · · · · · ·	ns, once each X, Y an							
SAFETY AND	AGENCY APPROVAL	5	, ,	//	D-1, EN60065, EN50178	Complies with DEN-AN					
	CONDUCTED NOISE			· · · · · · · · · · · · · · · · · · ·	EN55011-B, EN55022-B						
REGULATIONS	HARMONIC ATTENU	ATOR			Not built-in to active filter		22				
OTHERS	CASE SIZE/WEIGHT				s] (W×H×D) / 80g max	(with chassis & cover : 1	90g max)				
*1 This is t	COOLING METHOD			Instruction Manual 3.	1 and 3.2) *3						
	the value that measured on mea	asuring board	d with factor	o=0-35% is different.		Please contact us for detail	IS.				

(Equivalent to KEISOKU-GIKEN: RM103). A circuit reducing standby power is built in this unit. Therefore, the internal switch element is intermittent operated, and the Ripple/Ripple Noise specification in load *4

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

constant at the rated input/output.

Derating is required.

a half-hour warm-up at 25°C, with the input voltage held

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

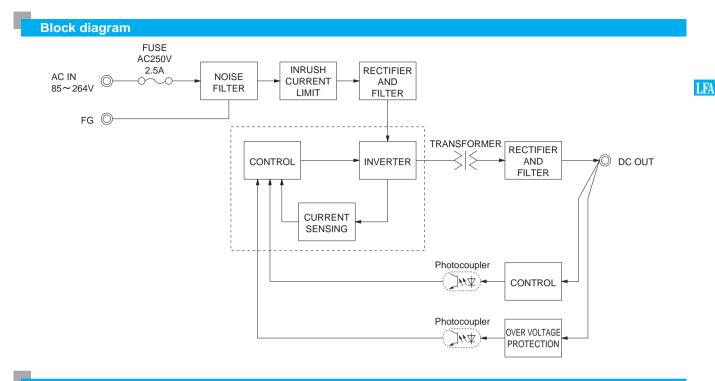
Sound noise may be generated by power supply in case of pulse

Derating is required when operated with chassis and cover.

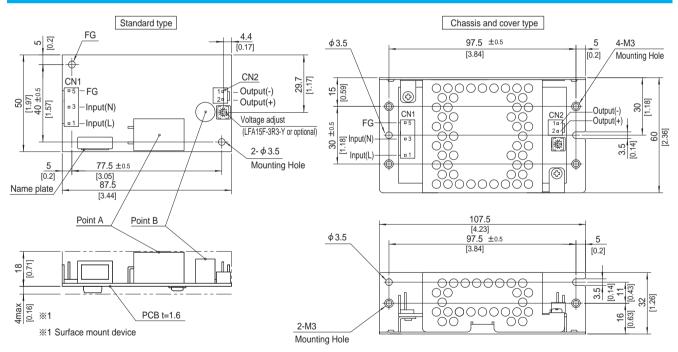
Parallel operation is not possible.

load.





External view



Be attention not to bump against the attached area by vibration. % Use the spacer of 8mm length or more regarding insulation. And do not use press-fitting bush.

※ Point A, Point B are thermometry points. Please refer to Instruction Manual 3.

I/C	Connector	Mating connector	Terminal			
014	4 4400704 0	1-1123722-5	Chain	1123721-1		
CINT	1-1123724-3	1-1123722-5	Loose	1318912-1		
010	CN2 1-1123723-2	4 4 4 9 9 7 9 9 9	Chain	1123721-1		
CN2		1-1123722-2	Loose	1318912-1		
(Mfr:Tyco Electronics)						

<PIN CONNECTION>

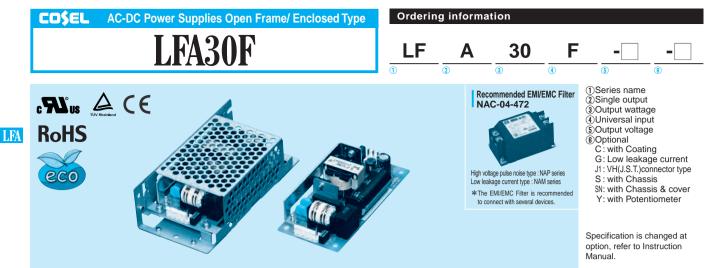
CN1		CN2	
Pin No.	Input	Pin No.	Output
1	AC(L)	1	-V
2		1	- v
3	AC(N)	2	+V
4		2	+v
5	FG		

% Tolerance : ±1 [±0.04]

- Weight : 80g max (with chassis & cover : 190g max)
- % 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			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 OUTPU	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 ¢ (Refer to Instruction Manual 1.1 and 3.2) *3								
		ACIN 100V	0.50typ (lo=100%)	50typ (lo=100%) 0.65typ (lo=100%)							
	CURRENT[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 (lo=100%) (At	cold start) (Ta=25°C)		L.	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	DIEC60950-1 and DEN	I-AN)				
	VOLTAGE[V]		3.3	5	12	15	24				
	CURRENT[A]		6.0	6.0	2.5	2.0	1.3				
OUTPUT	LINE REGULATION[mV] *		20max	20max	48max	60max	96max				
	LOAD REGULATION	[mV] *5	40max	40max	100max	120max	150max				
	RIPPLE[mVp-p]	0 to +50℃*1	80max	80max	120max	120max	120max				
		-10-0°C *1	140max	140max	160max	160max	160max				
		0 to +50℃*1	120max	120max	150max	150max	150max				
	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°C	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, lo=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	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	rating and recovers	automatically						
PROTECTION	OVERVOLTAGE PROTE	ECTION	4.00 to 5.25	5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60				
CIRCUIT AND	OPERATING INDICA	TION	Not provided								
OTHERS	REMOTE SENSING		Not provided								
	REMOTE ON/OFF		Not provided								
	INPUT-OUTPUT		AC3,000V 1minute,	Cutoff current = 10m	A, DC500V 50M Ω min	(At Room Temperature)					
ISOLATION	INPUT-FG		AC2,000V 1minute,	Cutoff current = 10m	A, DC500V 50M Ω min	(At Room Temperature)					
	OUTPUT-FG		AC500V 1minute, C	utoff current = 25mA,	DC500V 50M Ω min (A	t Room Temperature)					
	OPERATING TEMP., HUMID.AND	ALTITUDE	-10 to +70℃, 20 - 90	%RH (Non condens	ng) (Refer to Instructior	n Manual 3.2), 3,000m (10,000feet) max *				
ENVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75℃, 20 - 90	%RH (Non condens	ng), 9,000m (30,000fee	t) max					
	VIBRATION		10 - 55Hz, 19.6m/s ²	(2G), 3minutes perio	d, 60minutes each alon	g X, Y and Z axis					
	IMPACT		196.1m/s ² (20G), 11	ms, once each X, Y a	nd Z axis						
SAFETY AND	AGENCY APPROVAI	_S	UL60950-1, C-UL (C	SA60950-1), EN609	50-1, EN60065, EN501	78 Complies with DEN-	AN				
NOISE	CONDUCTED NOISE		Complies with FCC-	B, VCCI-B, CISPR-B	EN55011-B, EN55022-	-B					
REGULATIONS	HARMONIC ATTENU	JATOR	Complies with IEC61	000-3-2 (Class A) <u>*6</u> (Not built-in to active filter)	*4					
	CASE SIZE/WEIGHT		50×26.5×105mm [1.97×1.04×4.13 ind	hes] (W×H×D) / 130g	max (with chassis & co	over : 260g max)				
OTHERS											

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

This is the value that measured on measuring board with capacitor of 22 µ F at 150mm *1 *4 from output terminal. *5

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

COOLING METHOD

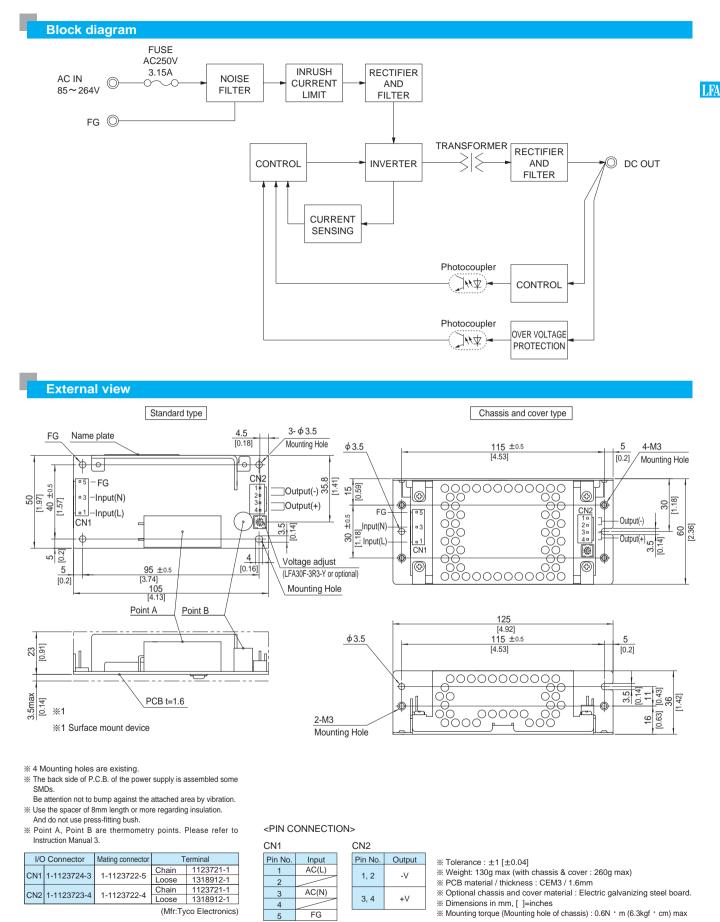
When two or more units are operating it may not comply with the IEC61000-3-2. Please contact us for details.

Please contact us about dynamic load and input response. Please contact us about another class. *6

- * 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.

^{*} To meet the specifications. Do not operate over-loaded condition.





% 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.

Ordering information AC-DC Power Supplies Open Frame/ Enclosed Type COSEL LFA50F LF A 50 F - Series name
 Single output
 Output wattage Recommended EMI/EMC Filter NAC-04-472 Universal input **RoHS** 5 Output voltage Optional
 C: with Coating
 G: Low leakage current J1: VH(J.S.T.)connector type High voltage pulse noise type : NAP series Low leakage current type : NAM series eco S : with Chassis SN: with Chassis & cover *The EMI/EMC Filter is recommended Y: with Potentiometer to connect with several devices. Specification is changed at option, refer to Instruction Manual.

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

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

SPECIFICATIONS

LFA

	MODEL		LFA50F-3R3-Y	LFA50F-5	LFA50F-12	LFA50F-15	LFA50F-24	LFA50F-36	LFA50F-48		
	VOLTAGE[V]		AC85 - 264 1 φ	(Refer to Instrue	ction Manual 1.1	and 3.2) *3	•				
		ACIN 100V	0.47typ (lo=100%)	0.67typ (lo=100	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 (Io=100%)	ACIN 200V	0.83typ 0.90typ								
		ACIN 100V	15typ (lo=100%) (At cold start) (Ta=25 $^{\circ}$ C)								
	INRUSH CURRENT[A]		30typ (lo=100%) (At cold start) (Ta=25℃)						
	LEAKAGE CURREN	T[mA]	0.40 / 0.75max	(ACIN 100V / 24	10V 60Hz, lo=1	00%, According	to IEC60950-1 ar	nd DEN-AN)			
	VOLTAGE[V]		3.3	5	12	15	24	36	48		
	CURRENT[A]		10.0	10.0	4.3	3.5	2.1	1.4	1.1		
	LINE REGULATION[mV] *4		20max	20max	48max	60max	96max	144max	192max		
	LOAD REGULATION		40max	40max	100max	120max	150max	240max	240max		
		0 to +50℃*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°C	60max	60max	150max	180max	290max	450max	600max		
	DRIFT[mV]	*2	20max	20max	48max	60max	96max	144max	192max		
	START-UP TIME[ms]		350typ (ACIN 1	00V, lo=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	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 50.00		
	OVERCURRENT PROT	ECTION	Works over 105	% of rating and	recovers autom	atically		1			
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	41.40 to 50.40	55.20 to 67.20		
IRCUIT AND	OPERATING INDICA	TION	Not provided			-	-		-		
THERS	REMOTE SENSING		Not provided								
	REMOTE ON/OFF		Not provided								
	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
SOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At Room Temperature)								
	OPERATING TEMP., HUMID. AND	ALTITUDE									
	STORAGE TEMP., HUMID.AND	ALTITUDE				,000m (30,000fe			,		
VIRONMENT	VIBRATION				0, .		ng X, Y and Z axis	5			
	IMPACT), 11ms, once ea			0				
AFETY AND											
OISE	CONDUCTED NOISE					6011-B, EN55022					
EGULATIONS				EC61000-3-2 (C		,					
	CASE SIZE/WEIGHT				,	W×H×D) / 165	g max (with chas	sis & cover : 325	g max)		
THERS	COOLING METHOD			fer to Instruction		, ,			<i>.</i> ,		
	the value that measured on					erating is required.					

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

*****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.

Derating is required *4 Please contact us about dynamic load and input response.

*5 Please contact us about another class.

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

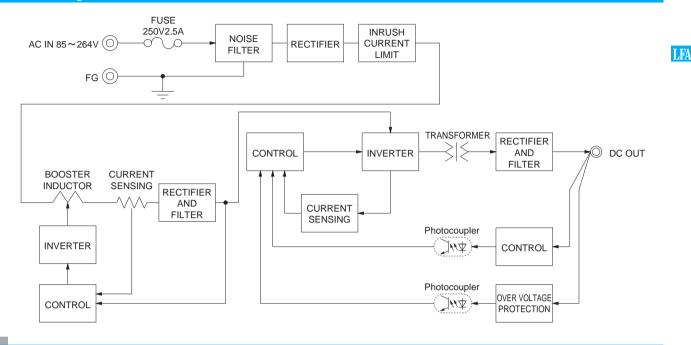
* Parallel operation is not possible.

* * Derating is required when operated with chassis and cover

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

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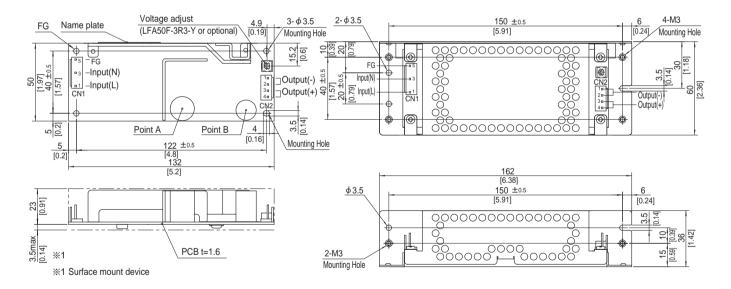




External view

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	Terminal			
0.14	4 4400704 0	4 4400700 5	Chain	1123721-1		
CN1	1-1123724-3	1-1123722-5	Loose	1318912-1		
CNID	N2 1-1123723-4	1-1123722-4	Chain	1123721-1		
CNZ		1-1123722-4	Loose	1318912-1		
(Mfr:Tvco Electronics)						

<PIN CONNECTION>

CN1		CN2		
Pin No.	Input	Pin No.	Output	% Tolerance : ±1 [±0.04]
1	AC(L)	1.2	-V	※ Weight : 165g max (with cl
2		1, 2	-v	% PCB material / thickness :
3	AC(N)	3.4	+V	※ Optional chassis and cove
4		3, 4	+v	※ Dimensions in mm, []=inc ※ Mounting torque (Mounting I)
5	FG			* wounting torque (wounting r

chassis & cover : 325g max)

CEM3 / 1.6mm

er material : Electric galvanizing steel board.

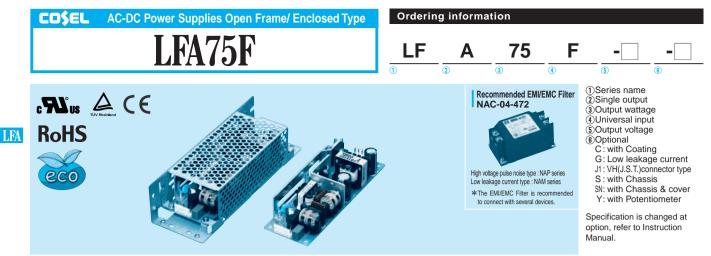
ches

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 φ	(Refer to Instrue	ction Manual 1.1	and 3.2) *3	·					
		ACIN 100V	0.70typ (lo=100%)	1.00typ (lo=100		,						
	CURRENT[A]	ACIN 200V	0.40typ (lo=100%)	0.50typ (lo=100	0%)							
	FREQUENCY[Hz]	1	50 / 60 (47 - 63		,							
		ACIN 100V	73.5typ	78.0typ	81.5typ	81.5typ	82.5typ	82.5typ	82.5typ			
IPUT	EFFICIENCY[%]	ACIN 200V	75.0typ	80.0typ	83.0typ	83.0typ	84.5typ	84.5typ	84.5typ			
		ACIN 100V	0.96typ									
	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	30 typ (lo=100%) (At cold start) (Ta=25%)									
	LEAKAGE CURREN	T[mA]				00%, According	to IEC60950-1 ar	nd 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℃*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	82.5typ 84.5typ 84.5typ 1.6 192max 240max 150max 200max 250max 300max 480max 600max 192max 0 46.00 to 50.00 0 55.20 to 67.20			
	RIPPLE NOISE[mVp-p]	-10-0°C *1	160max	160max	180max	180max	180max	300max	300max			
		0 to +50°C	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 1	00V, lo=100%)			·		•			
	HOLD-UP TIME[ms]		20typ (ACIN 10	0V, lo=100%)								
	OUTPUT VOLTAGE ADJUSTMENT	DUTPUT VOLTAGE ADJUSTMENT RANGE[V]		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 50.00			
	OVERCURRENT PROT	ECTION	Works over 105	% of rating and	recovers automa	atically						
ROTECTION	OVERVOLTAGE PROT	ECTION	4.00 to 5.25	5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	41.40 to 50.40	55.20 to 67.20			
IRCUIT AND	OPERATING INDICA	TION	Not provided									
THERS	REMOTE SENSING		Not provided									
	REMOTE ON/OFF		Not provided									
	INPUT-OUTPUT		AC3,000V 1mir	ute, Cutoff curre	ent = 10mA, DC	500V 50M Ω min	(At Room Tempe	erature)				
OLATION	INPUT-FG		AC2,000V 1mir	ute, Cutoff curre	ent = 10mA, DC5	500V 50M Ω min	(At Room Tempe	erature)				
	OUTPUT-FG		AC500V 1minut	te, Cutoff current	t = 25mA, DC50	0V 50M Ω min (A	At Room Tempera	ature)				
	OPERATING TEMP., HUMID.AND	ALTITUDE	-10 to +70℃, 20) - 90%RH (Non	condensing) (R	efer to Instructio	n Manual 3.2), 3,	000m (10,000fee	et) max *3			
VIRONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE				,000m (30,000fe						
	VIBRATION		10 - 55Hz, 19.6	m/s² (2G), 3minu	utes period, 60m	ninutes each alor	ng X, Y and Z axis	6				
	IMPACT		196.1m/s ² (20G), 11ms, once ea	ach X, Y and Z a	ixis						
AFETY AND	AGENCY APPROVA						78 Complies with	h DEN-AN				
DISE	CONDUCTED NOISE		Complies with F	CC-B, VCCI-B,	CISPR-B, EN55	011-B, EN55022	2-В					
EGULATIONS	HARMONIC ATTENU	JATOR		EC61000-3-2 (C	/							
THERS	CASE SIZE/WEIGHT		50×33.5×150	mm [1.97×1.32>	×5.91 inches] (W	/×H×D) / 230g	max (with chassi	s & cover : 440g	max)			
	COOLING METHOD		Convection (Re	fer to Instruction	Manual 3.1 and	3.2) *3						

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

*5 Please contact us about another class. *

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

* Drift is the change in DC output for an eight hour period after a half-hour warm-up at Parallel operation is not possible. $25^\circ\!C$, with the input voltage held constant at the rated input/output.

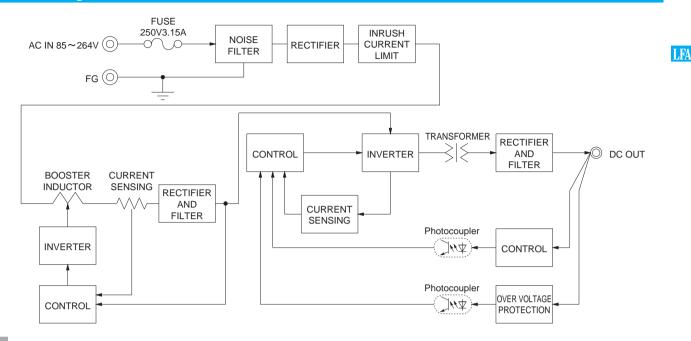
*4

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

*****2

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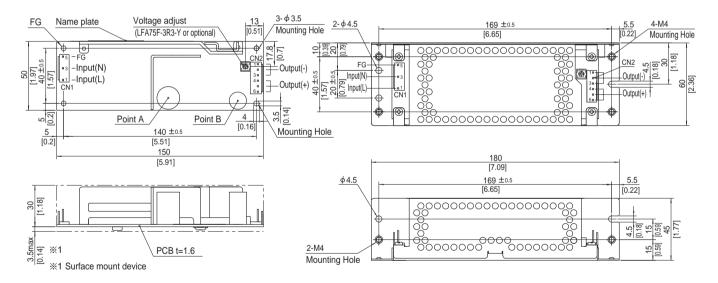
Block diagram



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
- Point A, Point B are thermometry points. Please refer to Instruction Manual 3.

I/O Connector		Mating connector	Terminal			
0.14	1-1123724-3	1-1123722-5	Chain	1123721-1		
CINI	1-1123724-3	1-1123722-5	Loose	1318912-1		
0.10		4 4400700 0	Chain	1123721-1		
CINZ	1-1123723-6	1-1123722-6	Loose	1318912-1		
(Mfr:Tyco Electronics)						

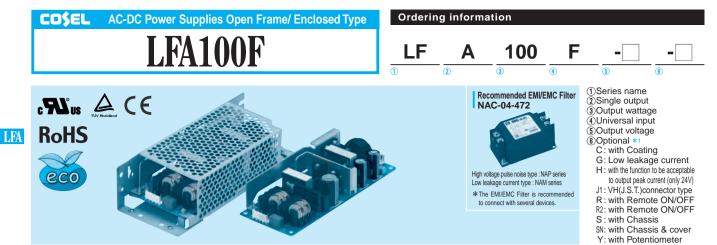
<PIN CONNECTION>

CN1		CN2		
Pin No.	Input	Pin No.	Output	% Tolerance : ±1 [±0.04]
1	AC(L)	4 4 9		※ Weight : 230g max (with chassis & cover : 440g max)
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	X Dimensions in mm, []=inches X Magnitude (Albert and Albert and Alb
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

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.

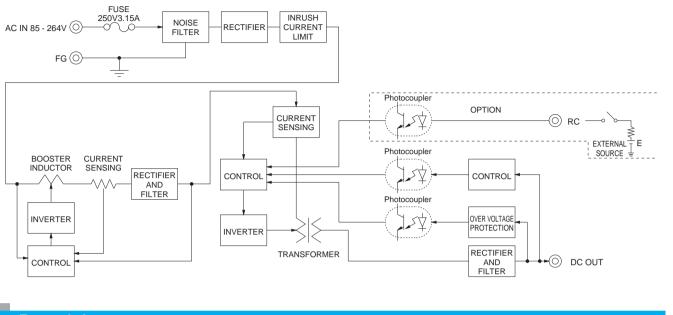
MODEL			LEA100E-3R2-V	LFA100F-5-Y	L FA100F-12	LFA100F-15	LFA100F-24		LFA100F-36	LFA100F-4	
-		*5	66	100	102	100.5	103.2	103.2 (129.6)	100.8	100.8	
	WATTAGE[W]	*5	3.3V 20A	5V 20A	102 12V 8.5A	100.5 15V 6.7A	24V 4.3A	24V 4.3 (5.4)A	36V 2.8A	48V 2.1A	
DC OUTPUT		*5	3.3V 20A	5V 20A	12V 0.5A	15V 0.7A	24V 4.3A	24V 4.3 (5.4)A	30V 2.0A	40V 2.1A	
SPECIFIC	CATIONS										
N	MODEL		LFA100F-3R3-Y	LFA100F-5-Y	LFA100F-12	LFA100F-15	LFA100F-24	LFA100F-24-H	LFA100F-36	LFA100F-4	
V	/OLTAGE[V]		AC85 - 264 1	φ (Refer to In	struction Manu	al 1.1 and 3.2)	*4				
	CURRENT[A]	ACIN 100V	0.9typ (lo=100%)	1.3typ (lo=10	00%)						
	JORKENI[A]	ACIN 200V	0.5typ (lo=100%)	5typ (lo=100%) 0.7typ (lo=100%)							
F	REQUENCY[Hz]		50 / 60 (47 -	D / 60 (47 - 63)							
F	EFFICIENCY[%]	ACIN 100V	77.0typ	82.0typ	82.0typ	83.0typ	84.0typ	84.0typ	84.0typ	84.5typ	
NPUT		ACIN 200V	79.0typ	84.0typ	84.5typ	85.5typ	87.0typ	87.0typ	87.0typ	87.0typ	
P	OWER FACTOR (lo=100%)	ACIN 100V	0.98typ	0.99typ							
Ľ	ACIN 200V		0.92typ	0.95typ							
	NRUSH CURRENT[A]	ACIN 100V		0%) (At cold sta	, , ,						
		ACIN 200V		0%) (At cold sta	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
	EAKAGE CURREN	[[mA]		· `	//240V 60Hz,			1	, ,		
-	/OLTAGE[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	
	INE REGULATION[-		20max	48max	60max	96max	96max	144max	192max	
	OAD REGULATION		40max	40max	100max	120max	150max	150max	240max	240max	
R	RIPPLE[mVp-p]	0 to +50℃*2		80max	120max	120max	120max	240max	150max	150max	
			140max	140max	160max	160max	160max	320max	200max	200max	
R	RIPPLE NOISE[mVp-p]	0 to +50°C *2	120max	120max	150max	150max	150max	300max	250max	250max	
		-10-0°C *2	160max	160max	180max	180max	180max	360max	300max	300max	
TE	EMPERATURE REGULATION[mV]	0 to +50°C		50max 60max	120max 150max	150max 180max	240max 290max	240max 290max	360max 450max	480max 600max	
		-10 to +50℃ *3	60max 20max	20max	48max	60max	290max 96max	96max	144max	192max	
	DRIFT[mV] START-UP TIME[ms]	*3		1 100V, lo=100		oumax	9011182	9011183	144111aX	19211188	
	HOLD-UP TIME[ms]				,						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		20typ (ACIN 100V, Io=100%) 2.85 to 3.63 4.50 to 5.50 Fixed ("Y"option is available for adjusting output voltage)								
	DUTPUT VOLTAGE SET		3.30 to 3.40	5.00 to 5.15	11.50 to 12.50	1	23.00 to 25.00	23.00 to 25.00	34.50 to 37.50	46.00 to 50.0	
	OVERCURRENT PROT			1	(works over 10					1	
-	OVERVOLTAGE PROTE			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	
	OPERATING INDICA		Not provided								
	REMOTE SENSING		Not provided								
R	REMOTE ON/OFF		Option (Refer to Instruction Manual)								
11	NPUT-OUTPUT-RC	*6			current = 10mA	, DC500V 50N	1 Ω min (At Ro	om Temperatu	re)		
	NPUT-FG		AC2,000V 1n	ninute, Cutoff o	current = 10mA	, DC500V 50N	1Ω min (At Ro	om Temperatu	re)		
	OUTPUT·RC-FG	*6	AC500V 1mi	nute, Cutoff cu	rrent = 25mA, I	DC500V 50M	2 min (At Roor	n Temperature)		
C	OUTPUT-RC	*6	AC100V 1mi	nute, Cutoff cu	rrent = 25mA, I	DC100V 10MS	2 min (At Roor	n Temperature)		
0	PERATING TEMP., HUMID.AND	ALTITUDE *4	-10 to +70℃,	20 - 90%RH (Non condensin	ig) (Refer to In	struction Manu	ial 3.2), 3,000r	n (10,000feet)	max	
	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75℃,	20 - 90%RH (Non condensin	ig), 9,000m (30),000feet) max				
	/IBRATION		10 - 55Hz, 19	9.6m/s² (2G), 3	minutes period	, 60minutes ea	ch along X, Y	and Z axis			
	MPACT		196.1m/s ² (20)G), 11ms, ond	ce each X, Y ar	nd Z axis					
	AGENCY APPROVAL				50-1), EN6095			mplies with DE	N-AN		
	CONDUCTED NOISE		Complies wit	h FCC-B, VCC	I-B, CISPR-B,	EN55011-B, E	N55022-B				
EGULATIONS	HARMONIC ATTENU	ATOR	Complies wit	h IEC61000-3-	-2 (Class A) *8						
DTHERS -	CASE SIZE/WEIGHT			-	1.32×6.10 inch		0) / 280g max (with chassis &	cover : 480g n	nax)	
- C	COOLING METHOD				tion Manual 3.1	and 3.2) *4					
*2 This is the capacitor of 2	is changed at option, refer to value that measured on n 22 µ F at 150mm from output by 20MHz oscilloscope or	neasuring t terminal.	ooard with *4 *5				* To m nternal cond	se contact us about a neet the specifica lition. Ilel operation is not	ations. Do not op	erate over-loa	
	o KEISOKU-GIKEN: RM103)		nad metel	contact us about t		adon is exceeded.			possible. n operated with cha	ssis and cover.	
	hange in DC output for an ei				Remote ON/OFF (opt					r supply in cas	

nange in half-hour warm-up at 25°C, with the input voltage held constant *7 Please contact us about dynamic load and input response.

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Block diagram

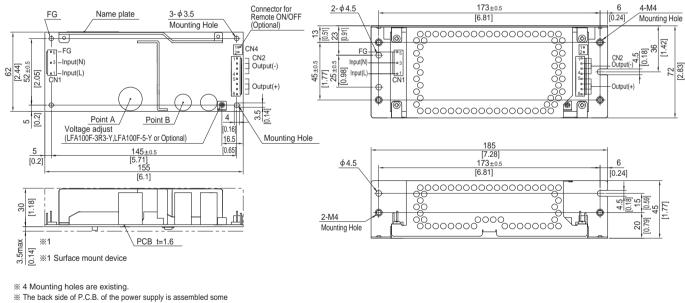


External view

% External size of option is different from standard model.

Standard type

Chassis and cover type



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					
	CN1	1-1123724-3	1-1123722-5	Chain	1123721-1				
		1-1123724-3	1-1123722-5	Loose	1318912-1				
	CN2	1-1123723-8	1-1123722-8	Chain	1123721-1				
		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 1 AC(L) 1 to 4 -V 2 AC(N) 3 5 to 8 +V 4 FG 5

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

% Tolerance : ±1 [±0.04]

Weight : 280g max (with chassis & cover : 480g max)

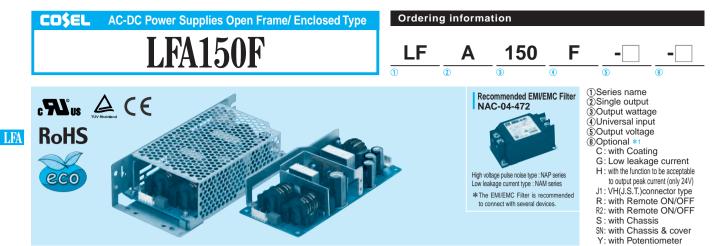
※ PCB material : CEM3

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

* Dimensions in mm, []=inches

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

Connector type								
CN4 Option (Mfr:J.S.T)								
PIN No.	Contents							
1	RC(+)							
2								
Barrie	r strip type							
Model B2B-XH-A Mating Connector (Terminal) XHP-2								
BXH-001T-P0.6 or SXH-001T-P0.6								



Please refer to Instruction

manual 5.

pulse load.

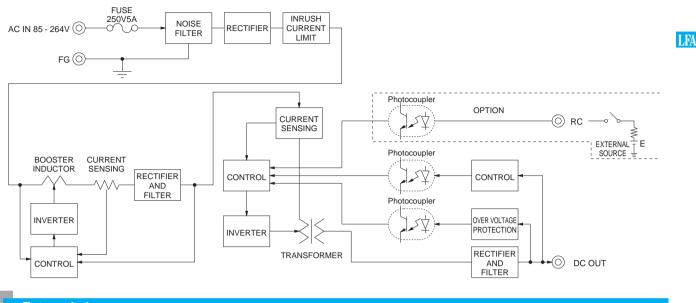
This power supply is manufactured by SMD technology. The stress to P.C.B like twisting or bending causes the defect of the unit, so handle the unit with care.

so handle the u	init with care.								manual 5.		
MODEL			LFA150F-3R3-Y	LFA150F-5-Y	LFA150F-12	LFA150F-15	LFA150F-24	LFA150F-24-H	LFA150F-36	LFA150F-48	
ΜΑΧ Ουτρι	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	
	ICATIONS										
SFECIFI											
	MODEL				LFA150F-12			LFA150F-24-H	LFA150F-36	LFA150F-48	
	VOLTAGE[V]		AC85 - 264 1 ¢ (Refer to Instruction Manual 1.1 and 3.2) *4								
	CURRENT[A]	ACIN 100V	1.4typ (lo=100%) 2.0typ (lo=100%)								
		ACIN 200V		1.0typ (lo=10	0%)						
	FREQUENCY[Hz]		50 / 60 (47 - 6	· · · · · · · · · · · · · · · · · · ·	1			1		1	
	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							
	ACIN 200V		0.92typ	0.95typ							
	INRUSH CURRENT[A]		15typ (Io=100%) (At cold start) (Ta=25℃)								
		ACIN 200V		%) (At cold sta	, ,						
	LEAKAGE CURREN	T[mA]		``	/240V 60Hz,	lo=100%, Acc		1	,		
	VOLTAGE[V]		3.3	5	12	15	24	24	36	48	
	CURRENT[A]	*5	30	30	12.5	10	6.3	6.3 (Peak 7.9)	4.2	3.2	
	LINE REGULATION[mV] *7	20max	20max	48max	60max	96max	96max	144max	192max	
	LOAD REGULATION	[mV] *7	40max	40max	100max	120max	150max	150max	240max	240max	
	RIPPLE[mVp-p]	0 to +40℃*2	80max	80max	120max	120max	120max	240max	150max	150max	
	KIFFEE[IIIvp-p]	-10-0°C *2	140max	140max	160max	160max	160max	320max	200max	200max	
	RIPPLE NOISE[mVp-p]	0 to +40℃*2	120max	120max	150max	150max	150max	300max	250max	250max	
	KIPPLE NOISELIINP-PJ	-10-0°C *2	160max	160max	180max	180max	180max	360max	300max	300max	
		0 to +40℃	50max	50max	120max	150max	240max	240max	360max	200max 250max	
	TEMPERATURE REGULATION[mV]	-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, lo=1009	%)						
	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"opti	on is available	for adjusting o	output voltage)			
	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 50.00	
	OVERCURRENT PROT	ECTION	Works over 1	05% of rating (works over 10	1% of peak cur	rent at option -	-H) and recove	rs automaticall	у	
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 67.20	
CIRCUIT AND	OPERATING INDICA	TION	Not provided								
OTHERS	REMOTE SENSING		Not provided								
	REMOTE ON/OFF		Option (Refer to Instruction Manual)								
	INPUT-OUTPUT-RC	*6	AC3,000V 1m	ninute, Cutoff c	urrent = 10mA	, DC500V 50M	IΩ min (At Roo	om Temperatur	e)		
	INPUT-FG		AC2,000V 1m	ninute, Cutoff c	urrent = 10mA	, DC500V 50M	IΩ min (At Roo	om Temperatur	e)		
SOLATION	OUTPUT·RC-FG	*6	AC500V 1mir	ute, Cutoff cur	rrent = 25mA, [DC500V 50M Ω	2 min (At Room	n Temperature)			
	OUTPUT-RC	*6	AC100V 1mir	ute, Cutoff cur	rrent = 25mA, [DC100V 10MΩ	2 min (At Room	n Temperature)			
	OPERATING TEMP., HUMID. AND	ALTITUDE *4	-10 to +70℃,	20 - 90%RH (I	Non condensin	g) (Refer to Ins	struction Manu	al 3.2), 3,000m	n (10,000feet) ı	max	
	STORAGE TEMP., HUMID.AND			,	Non condensin	0, (
ENVIRONMENT	VIBRATION		10 - 55Hz, 19	.6m/s² (2G), 3r	minutes period	60minutes ea	ch along X, Y a	and Z axis			
	IMPACT		196.1m/s ² (20	G), 11ms, onc	e each X, Y an	d Z axis	0				
SAFETY AND	AGENCY APPROVAL	LS			50-1), EN6095		EN50178 Con	nplies with DEI	N-AN		
NOISE	CONDUCTED NOISE				I-B, CISPR-B, I						
REGULATIONS	HARMONIC ATTENU	JATOR	Complies with	IEC61000-3-2	2 (Class A) *8						
	CASE SIZE/WEIGHT				.46×6.30 inche	s] (W×H×D)	/ 390g max (w	rith chassis & c	over : 650g ma	ax)	
OTHERS	COOLING METHOD				tion Manual 3.		U (!!		5 5		
*2 This is th capacitor of Measured (Equivalen	on is changeed at option, refer e value that measured on r of 22μF at 150mm from output d by 20MHz oscilloscope o tt to KEISOKU-GIKEN: RM103)	measuring I t terminal. r Ripple-No).	n Manual. board with *4 *5 bise meter	at the rated input/or Derating is required () means peak or device is damaged contact us about the	utput. d. urrent. There is a p d when the specifica ne detail.	ossibility that an ir ation is exceeded. I	* To m nternal cond Please * Paral * Derat	llel operation is not p ting is required whe	tions. Do not op possible. n operated with cha	ssis and cover.	
*3 Drift is the	it to KEISOKU-GIKEN: RM103) e change in DC output for an e warm-up at 25℃, with the inpu	eight hour pe		Applicable when re	ne detail. emote control (optior about dynamic load		* Soun	ting is required when nd noise may be go a load.			

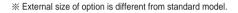
43 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant *7 Please contact us about dynamic load and input response.

Chassis and cover type

Block diagram



External view



Standard type

6 <u>2-φ4.5</u> 176±0. 4-M4 FG 3-φ3.5 Name plate Point A Point B Mounting Hole [6.93] [0.24] Mounting Hole 15 [0.59] 25 [0.98] 0 ۲ 0 6 42 1.65 -FG FG CN3 Output(-) ₽ 0 0 70 70 10 0 0 0 0 CN3 Output(-) ■3 –Input(N) Input(N) ò ŏŏ 75 [2.95] 65±0.5 [2.6] <u>__</u>Input(L) CN1 <u>55±0.5</u> [2.17] _Input(L) õ 00 35] <u>35±0</u> 1.38] CN2 4: 6: 0 Output(+) 0 CN2 Output(+) 00 ò 00 ¢ 29卷 <u>/CN4</u>导播 0 ര A. 3.5 6.5 [0.26] Connector for Remote 5 4 ON/OFF (optional) Voltage adjust <u>ON/OFF (optional)</u>/ (LFA150F-3R3-Y,LFA150F-5-Y or Optional) 0.16 Mounting Hole 18 188 150±0.5 5 [0.2] [5.91] φ4.5 176±0.5 6 160 [6.3] [6.93] [0.24] OC 4.5 0.18] 15 [0.59] 33.5 [1.32] $\overset{\circ}{\circ}$ 1.85] 2-M4 Mounting Hole [0.79] 20 3.5max [0.14] PCB t=1.6 Ж1 %1 Surface mount device

% 4 Mounting holes are existing.

 $\ensuremath{\mathbbmm}$ 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.

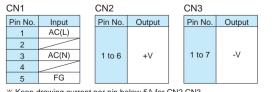
I/C	Connector	Mating connector	Т	erminal			
CNIA	1-1123724-3	1-1123722-5	Chain	1123721-1			
CIVI	1-1123724-3	1-1123722-5	Loose	1318912-1			
010	4 4400700 0	4 4400700 0	Chain	1123721-1			
CINZ	1-1123723-6	1123723-6 1-1123722-6 Loose	Loose	1318912-1			
010	4 4400700 7	4 4400700 7	Chain	1123721-1			
CN3	1-1123723-7	1-1123722-7	Loose	1318912-1			
	(Mfr:Type Electronics)						

(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 (with chassis & cover : 650g max)

※ PCB material : CEM3

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

* Dimensions in mm, []=inches

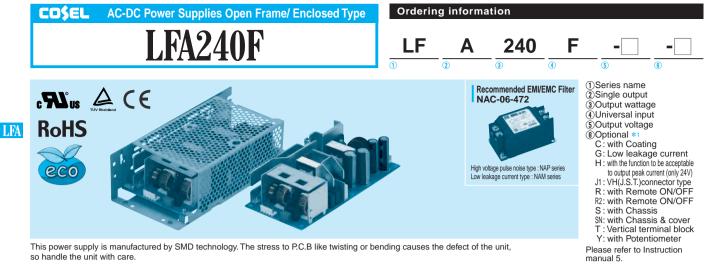
※ Mounting torque (Mounting hole of chassis) :1.5N • m (16kgf • cm) max

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

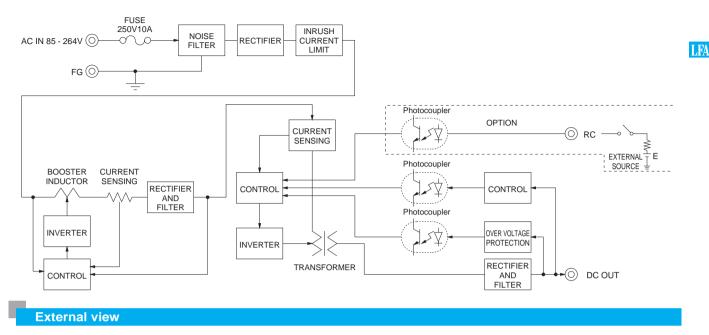
SPECIFICATIONS

	MODEL		LFA240F-24	LFA240F-24-H	LFA240F-36	LFA240F-48					
	VOLTAGE[V]		AC85 - 264 1 \$\$ (Refer to I	nstruction Manual 1.1 and 3	3.2) *4						
		ACIN 100V	3.3typ (lo=100%)		,						
	CURRENT[A]		1.7typ (lo=100%)								
	FREQUENCY[Hz]		50 / 60 (47 - 63)								
		ACIN 100V	84.5typ	84.5typ	84.5typ	84.5typ					
INPUT	EFFICIENCY[%]	ACIN 200V	87.5typ	87.5typ	87.5typ	87.5typ					
-		ACIN 100V	0.99typ	1	//						
	POWER FACTOR (lo=100%)	ACIN 200V	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]		0.40 / 0.75max (ACIN 100V / 240V 60Hz, lo=100%, According to IEC60950-1 and DEN-AN)								
	VOLTAGE[V]	i [iii/A]	24	24	36	48					
	CURRENT[A]	*5		10 (Peak12.5)	6.7	5					
			96max	96max	144max	192max					
	LINE REGULATION[mV] *7 LOAD REGULATION[mV] *7			150max	240max	240max					
	LOAD REGULATION	0 to +40°C *2		240max	150max	150max					
	RIPPLE[mVp-p]	-10-0°C *2	160max	320max	200max	200max					
		0 to +40°C *2	150max	300max	250max	250max					
OUTPUT	RIPPLE NOISE[mVp-p]	-10-0°C *2	180max	360max	300max	300max					
OUIFUI		0 to +40°C		240max	360max	480max					
	TEMPERATURE REGULATION[mV]		240max 290max	240max	450max	600max					
	DDIETUNA	-10 to +40℃									
	DRIFT[mV]	*3	96max	96max	144max	192max					
F	START-UP TIME[ms]		350typ (ACIN 100V, Io=10	,							
	HOLD-UP TIME[ms]	DANOFRA	20typ (ACIN 100V, Io=100	,	-)						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed ("Y"option is available	1	1	40.00 / 50.00					
	OUTPUT VOLTAGE SETTING[V] OVERCURRENT PROTECTION		23.00 to 25.00 23.00 to 25.00 34.50 to 37.50 46.00 to 50.00 Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically								
PROTECTION	OVERVOLTAGE PROTE		27.60 to 33.60	27.60 to 33.60	41.40 to 50.40	55.20 to 67.20					
CIRCUIT AND OTHERS		TION	Not provided								
UTHERS	REMOTE SENSING		Not provided								
	REMOTE ON/OFF		Option (Refer to Instructio	/							
	INPUT-OUTPUT-RC	*6	, , ,		50MΩ min (At Room Temp	,					
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
	OUTPUT·RC-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)								
	OUTPUT-RC				$0M\Omega$ min (At Room Tempe	,					
	OPERATING TEMP., HUMID. AND				to Instruction Manual 3.2), 3	3,000m (10,000feet) max					
ENVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75℃, 20 - 90%RH								
	VIBRATION			•	es each along X, Y and Z a	kis					
	IMPACT		196.1m/s ² (20G), 11ms, o								
SAFETY AND	AGENCY APPROVAI			10	0065, EN50178 Complies w	ith DEN-AN					
NOISE	CONDUCTED NOISE		Complies with FCC-B, VC		-B, EN55022-B						
REGULATIONS	HARMONIC ATTENU	-	Complies with IEC61000-3	1 /							
OTHERS	CASE SIZE/WEIGHT				H×D) / 550g max (with cha	ssis & cover : 880g max)					
	COOLING METHOD		Convection (Refer to Instru-		1						
	on is changeed at option, refer e value that measured on r					us about another class. pecifications. Do not operate over-loade					
	of 22 µ F at 150mm from output			current. There is a possibility that	. 10 11000 110 0	positionations. Do not operate over-10806					
Measured	by 20MHz oscilloscope o	r Ripple-No	bise meter device is damag	ged when the specification is exce	eded. Please * Parallel operatio	n is not possible.					
(Equivalor	t to KEISOKU-GIKEN: RM103)		contact us abou			ired when operated with chassis and cover.					
	change in DC output for an e	ight hour pe	riod after a *6 Applicable when	remote control (optional) is added	* Sound noise m	ay be generated by power supply in case					

LFA-16

LFA240F | CO\$EL

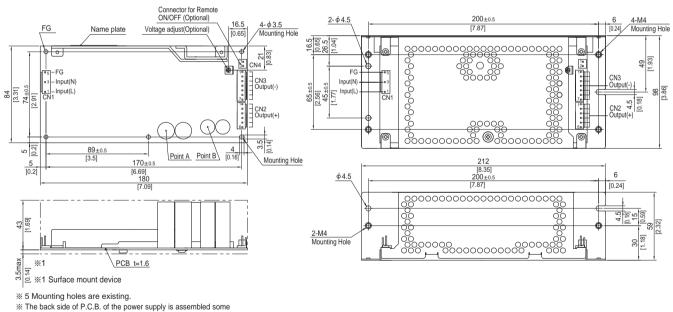
Block diagram



% External size of option is different from standard model.

Standard type

Chassis and cover type



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.

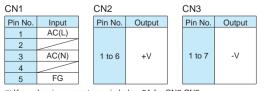
I/C	Connector	Mating connector	Т	erminal		
CN1	1-1123724-3	1-1123722-5	Chain	1123721-1		
CINT	1-1123724-3	123724-3 1-1123722-5 L	Loose	1318912-1		
010	1-1123723-6	1-1123722-6	Chain	1123721-1		
CNZ	1-1123723-6	1-1123722-6	Loose	1318912-1		
010	4 4400700 7	4 4400700 7	Chain	1123721-1		
CN3	1-1123723-7	1-1123722-7	Loose	1318912-1		
(MiriTures Electropics)						

(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 (with chassis & cover : 880g max)
- ※ 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

RC(+)

RC(-)

CN4 Option (Mfr:J.S.T)

PIN No. Contents

1

2

BXH-001T-P0 6

or SXH-001T-P0.6

Ordering information **COSEL** AC-DC Power Supplies Open Frame/ Enclosed Type LFA300F LF A 300 F -(1) Series name
(2) Single output
(3) Output wattage
(4) Universal input
(5) Output voltage
(6) Optional *1
(5) Curve leakage current
(1) W leakage current
(2) W leakage current
(1) W leakage current
(2) W leakage current
(3) W leakage current
(4) W leakage current
(2) W leakage current
(3) W leakage current
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(5) W leakage current
(4) W leakage current
(5) W leakage current
(6) W leakage current
(6) W leakage current
(7) W leakage current
(7) W leakage current
(7) W leakage
(8) W leakage current
(8) W leakage Recommended EMI/EMC Filter NAC-06-472 **RoHS** 0 High voltage pulse noise type : NAP series Low leakage current type : NAM series eco

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

MODEL		LFA300F-3R3-TY	LFA300F-5-TY	LFA300F-12-TY	LFA300F-15-TY	LFA300F-24-TY	LFA300F-24-HTY	LFA300F-30-TY	LFA300F-36-TY	LFA300F-48-TY
MAX OUTPUT WATTAGE[W] *5		198	300	324	330	336	336 (456)	330	338.4	336
	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

Please refer to Instruction manual 5.

SPECIFICATIONS

LFA

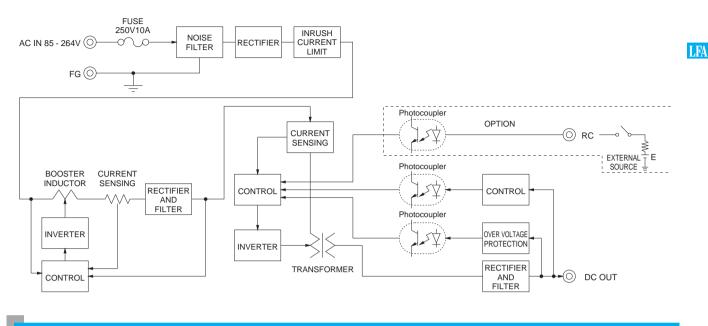
	MODEL		LFA300F-3R3-TY	LFA300F-5-TY	LFA300F-12-TY	LFA300F-15-TY	LFA300F-24-TY	LFA300F-24-HTY	LFA300F-30-TY	LFA300F-36-TY	LFA300F-48-T
	VOLTAGE[V]		AC85 - 264	1φ (Refer to	o Instruction I	Manual 1.1 a	nd 3.2) *4				
	CURRENT[A]	ACIN 100V	2.7typ (lo=100%) 4.1typ (lo=100%)								
	CURRENT[A]	ACIN 200V	1.4yp (lo=100%) 2.0typ (lo=100%)								
	FREQUENCY[Hz]		50 / 60 (47 - 63)								
INPUT	EFFICIENCY[%]	ACIN 100V	75.0typ	79.0typ	80.0typ	81.5typ	85.0typ	85.0typ	85.5typ	85.5typ	85.5typ
		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 (lo=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start)								
	INRUSH CURRENT[A]		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, lo=100%, According to IEC60950-1 and DEN-AN)								
OUTPUT	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[mV] *7		20max	20max	48max	60max	96max	96max	144max	144max	192max
	LOAD REGULATION	[mV] *7	40max	40max	100max	120max	150max	150max	240max	240max	240max
	RIPPLE[mVp-p]	0 to +40°C *2	80max	80max	120max	120max	120max	240max	150max	150max	150max
		-10-0°C *2	140max	140max	160max	160max	160max	320max	200max	200max	200max
	RIPPLE NOISE[mVp-p]	0 to +40°C *2	120max	120max	150max	150max	150max	300max	250max	250max	250max
		-10-0°C *2	160max	160max	180max	180max	180max	360max	300max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +40℃	1	50max	120max	150max	240max	240max	360max	360max	480max
		-10 to +40°C	60max	60max	150max	180max	290max	290max	450max	450max	600max
	DRIFT[mV] *3		20max	20max	48max	60max	96max	96max	144max	144max	192max
	START-UP TIME[ms]		350typ (ACIN 100V, Io=100%)								
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)								
	OUTPUT VOLTAGE ADJUSTMENT 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
	OUTPUT VOLTAGE SETTING[V]		3.30 to 3.40	5.00 to 5.15	12.00 to 12.48	15.00 to 15.60	24.00 to 24.96	24.00 to 24.96	30.00 to 31.20	36.00 to 37.44	48.00 to 49
	OVERCURRENT PROTECTION		Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically								
PROTECTION CIRCUIT AND OTHERS	OVERVOLTAGE PROTECTION		4.00 to 5.25 5.75 to 7.00 13.80 to 16.80 17.25 to 21.00 27.60 to 33.60 27.60 to 33.60 34.50 to 42.00 41.40 to 50.40 55.20 to 67.								
	OPERATING INDICATION		Not provided								
	REMOTE SENSING		Not provided								
	REMOTE ON/OFF		Option (Refer to Instruction Manual)								
ISOLATION	INPUT-OUTPUT-RC *6										
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
	OUTPUT·RC-FG *6										
	OUTPUT-RC *6										
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 APPROVALS CONDUCTED NOISE		· · · · ·					178 Complie	s with DEN-A	٨N	
OISE			Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B								
EGULATIONS			Complies with IEC61000-3-2 (Class A) *8								
OTHERS	CASE SIZE/WEIGHT		95×52.5×222mm [3.74×2.07×8.74 inches] (W×H×D) (without terminal block) / 810g max (with chassis & cover : 1,270g max								
	COOLING METHOD		Convection / Forced air (Refer to Instruction Manual 3.1 and 3.2) *4								
*2 This is th capacitor of Measured	on is changeed at option, refer e value that measured on of 22µF at 150mm from outpu l by 20MHz oscilloscope o	on Manual. at the rated input/output. *8 Please contact us about another class. board with *4 Derating is required. * To meet the specifications. Do not operate over-loa *56 () means peak current. There is a possibility that an internal of evice is damaged when the specification is exceeded. Please * Parallel operation is not possible.									
*3 Drift is the	t to KEISOKU-GIKEN: RM103 change in DC output for an e varm-up at 25°C, with the inpu	, eight hour pe		contact us abo 6 Applicable wh 7 Please contact	en remote control					erated with chase rated by power	

pulse load.

*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

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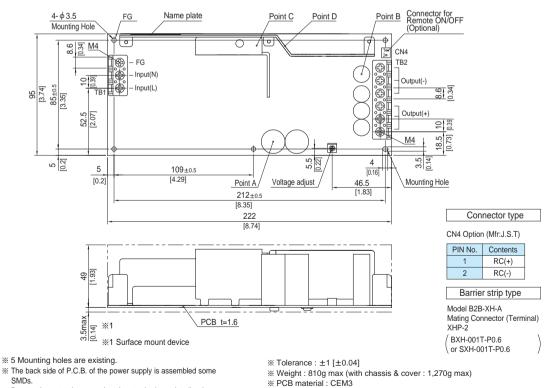
Block diagram



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

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