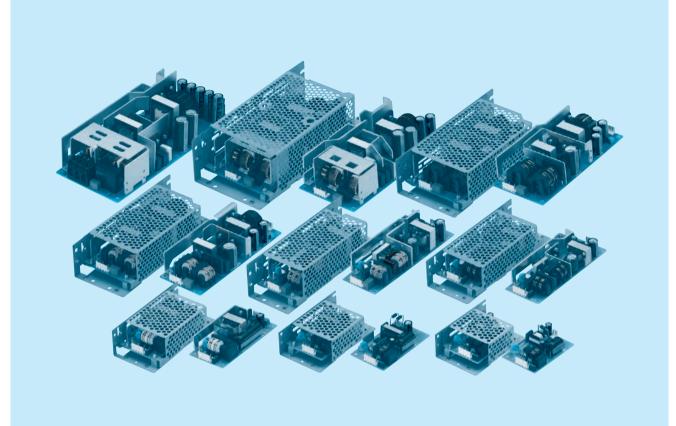
AC-DC Power Supplies Open Frame/ Enclosed Type







LFA-series



Feature

Small and compact PCB construction Built-in inrush current, overcurrent and overvoltage protection circuits Harmonic attenuator (Complies with IEC61000-3-2) Universal input (AC85-264V) Power factor correction (LFA50F-300F) Built-in reducing standby power circuit (LFA10F, 15F)

Safety agency approvals

UL60950-1, C-UL(CSA60950-1), EN60950-1, EN62368-1, EN50178, EN60065 Complies with DEN-AN

EMI

Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

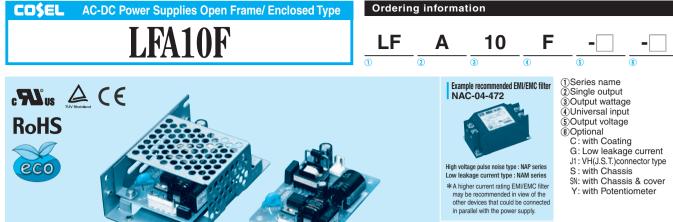
5-year warranty (refer to Instruction Manual)

CE marking

Low Voltage Directive RoHS Directive

EMS Compliance : EN61204-3, EN61000-6-2

EN61000-4-2 EN61000-4-3 EN61000-4-4 EN61000-4-5 EN61000-4-6 EN61000-4-8 EN61000-4-11



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. *Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

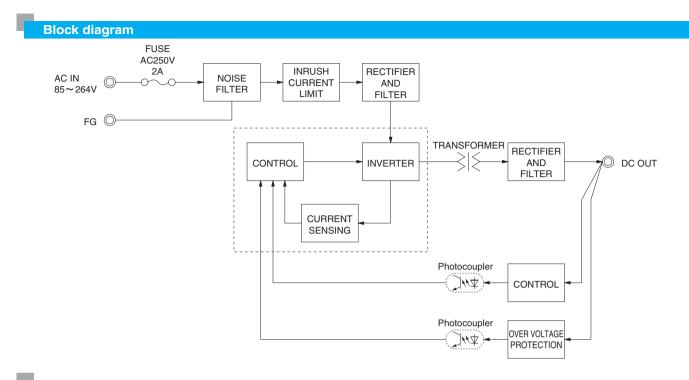
MODEL	LFA10F-3R3-Y	LFA10F-5	LFA10F-12	LFA10F-15	LFA10F-24
MAX OUTPUT WATTAGE[W]	6.6	10	10.8	10.5	12
DC OUTPUT	3.3V 2A	5V 2A	12V 0.9A	15V 0.7A	24V 0.5A
		·	·	* *	

SPECIFICATIONS

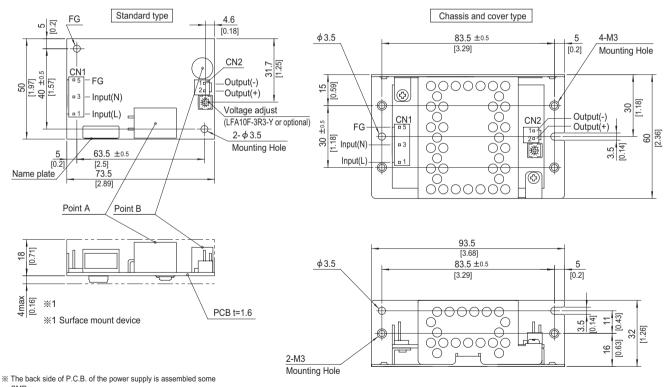
	MODEL		LFA10F-3R3-Y	LFA10F-5	LFA10F-12	LFA10F-15	LFA10F-24				
	VOLTAGE[V]		AC85 - 264 1 ¢ (Refer	to "Derating", Instru	ction Manual 1 and 3) *3						
		ACIN 100V	0.18typ (lo=100%)	0.26typ (lo=100%)						
	CURRENT[A]	ACIN 200V	0.11typ (lo=100%)	0.16typ (lo=100%)						
	FREQUENCY[Hz]		50 / 60 (47 - 440)								
IPUT		ACIN 100V	68.0typ	74.0typ	76.5typ	77.5typ	79.5typ				
	EFFICIENCY[%]	ACIN 200V	68.5typ	76.0typ	79.0typ	80.0typ	83.0typ				
		ACIN 100V	15typ (lo=100%)								
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%)								
	LEAKAGE CURRENT[mA]		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.15/0.30max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC62368-1 and DEN-AN)							
	VOLTAGE[V]		3.3	5	12	15	24				
	CURRENT[A]		2.0	2.0	0.9	0.7	0.5				
	LINE REGULATION[n	1V1 ∗ 5	20max	20max	48max	60max	96max				
	LOAD REGULATION	-	40max	40max	100max	120max	150max				
		0 to +50°C	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				
		0 to +50°C	120max	120max	150max	150max	150max				
UTPUT	RIPPLE NOISE[mVp-p]	-10 - 0°C	160max	160max	180max	180max	180max				
	*1	lo=0 - 35%	240max	240max	300max	300max	320max				
		0 to +50°C	50max	50max	120max	150max	240max				
	TEMPERATURE REGULATION[mV]	-10 to +50℃	60max	60max	150max	180max	290max				
	DRIFT[mV] *2		20max	20max	48max	60max	96max				
	START-UP TIME[ms]	*2					from turning off the input volta				
ŀ	HOLD-UP TIME[ms]		20typ (ACIN 100V, I0=10				from turning on the input volta				
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.63	,	s available for adjusting ou		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								
DOTEOTION	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				
THERS	REMOTE SENSING	ION	Not provided Not provided								
	REMOTE ON/OFF										
			Not provided AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
SOLATION	INPUT-FG OUTPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)								
							00m (10,000 feet) mey *0				
	OPERATING TEMP., HUMID.AND				<u> </u>	/· · ·	00m (10,000 feet) max *3				
NVIRONMENT	STORAGE TEMP., HUMID.AND	ALIIIUDE			ng), 9,000m (30,000 feet)						
	VIBRATION				I, 60minutes each along X	, Y and Z axis					
			196.1m/s ² (20G), 11m			E ENEO170 Osmalias					
AFETY AND	AGENCY APPROVAL	5	, (,,	0-1, EN62368-1, EN6006	5, EN50178 Complies v	VITIN DEIN-AIN				
OISE EGULATIONS	CONDUCTED NOISE				EN55011-B, EN55022-B						
EGULATIONS	HARMONIC ATTENU	ATOR			(Not built-in to active filter	,	(50				
THERS	CASE SIZE/WEIGHT		-		es] (W×H×D) / 55g max	(with chassis & cover :	150g max)				
	COOLING METHOD		Convection (Refer to "I		n wanual 3) *3						
capacito Measure (Equivale A circuit Therefor	e value that measured on mex r of 22 µ F at 150mm from outp d by 20MHz oscilloscope or Ripj int to KEISOKU-GIKEN: RM103 reducing standby power is bui e, the internal switch element i , and the Ripple/Ripple Noise	out terminal. ole-Noise met). It in this unit. is intermitten	er *2 Drift is the a half-hocord constant t *3 Derating	ur warm-up at 25°C, with at the rated input/output. is required.	r an eight hour period after	 Please contact us about a To meet the specifications Parallel operation is not p Derating is required when 	dynamic load and input response. another class. s. Do not operate over-loaded condit				
			unuoad 🚜 When tw	in or more limits are oners	unnul if may not comply with						

the IEC61000-3-2. June 26, 2020





External view



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		
014	11-1123724-3	1-1123722-5	Chain	1123721-1		
CINT	1-1123724-3	1-1123722-5	Loose	1318912-1		
CNID	4 4400700 0	1-1123722-2	Chain	1123721-1		
CINZ	1-1123723-2	1-1123722-2	Loose	1318912-1		
(Mfr:Tvco Electronics)						

<PIN CONNECTION>

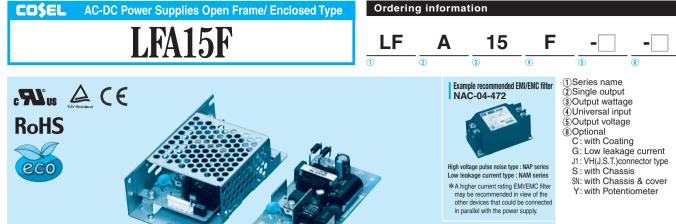
CN1		CN2		
Pin No.	Input	Pin No.	Output	※ Tolerance : ±1 [±0.04]
1	AC(L)	1	-V	% Weight : 55g max (with chassis & cover
2		'	-v	※ PCB material / thickness : CEM3 / 1.6m
3	AC(N)	2	+V	* Optional chassis and cover material : El
4		2	÷ν	Mounting torque (Mounting hole of chassis)
5	FG			

% I/O Connector is Mfr. Tyco Electronics

% Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 6.

- : 150g max) ۱m
- lectric galvanizing steel board.

s): 0.6N • m (6.3kgf • cm) max



Specification is changed at option, refer to Instruction Manual.

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

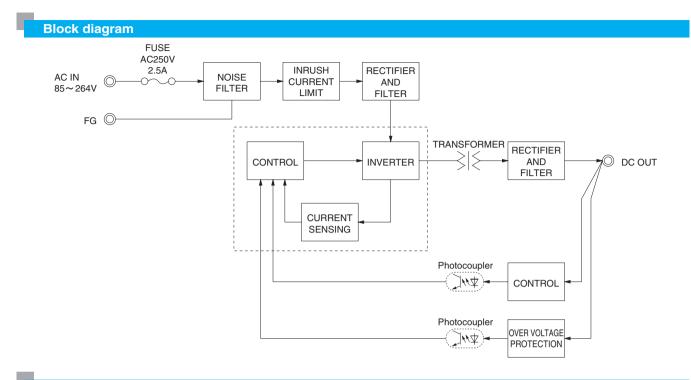
SPECIFICATIONS

	MODEL		LFA15F-3R3-Y	LFA15F-5	LFA15F-12	LFA15F-15	LFA15F-24		
	VOLTAGE[V]		AC85 - 264 1 ¢ (Refer	to "Derating", Instruction	n Manual 1 and 3) *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)						
VPUT		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 co		71		1		
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (At co	, , , ,					
	LEAKAGE CURRENT[mA]		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	00V / 240V 60Hz, lo=10	00%. According to IEC6	2368-1 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[n	nV1 *5	20max	20max	48max	60max	96max		
	LOAD REGULATION	-	40max	40max	100max	120max	150max		
	LOVE HEADENHOUL	0 to +50°C		80max	120max	120max	120max		
	RIPPLE[mVp-p]	-10 - 0°C		140max	160max	160max	160max		
	*1	lo=0 - 35%		140max	240max	240max	280max		
		0 to +50°C		120max	150max	150max	150max		
OUTPUT	RIPPLE NOISE[mVp-p]	-10 - 0°C		160max	180max	180max	180max		
011-01	*1	lo=0 - 35%		240max	300max	300max	320max		
		0 to +50°C		50max	120max	150max	240max		
	TEMPERATURE REGULATION[mV]	-10 to +50℃		60max	150max	180max	290max		
		-10 10 +50 C *2	20max	20max		60max	96max		
	DRIFT[mV]	*2			48max				
	START-UP TIME[ms]			, , ,	ns typ for less than Trhinut	e of applying input again fro	m turning off the input voltag		
0	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io= 2.85 to 3.63	1	ilable for adjusting out		00()		
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.63	4.90 to 5.30	, , ,	ut voltage between ±10	23.00 to 25.00		
	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 Works over 105% of rating and recovers automatically						
	OVERCURRENT PROTE			, °		47.05 +- 04.00	07.00 to 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						
THERS	OPERATING INDICAT	ION	Not provided						
INCHO	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Not provided AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)						
	INPUT-OUTPUT								
SOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)						
	OUTPUT-FG					/			
	OPERATING TEMP., HUMID.AND						m (10,000 feet) max *3		
NVIRONMENT	STORAGE TEMP., HUMID.AND A	ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max						
	VIBRATION		10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis						
	IMPACT	-		s, once each X, Y and Z					
AFETY AND	AGENCY APPROVAL			,		EN50178 Complies with	n DEN-AN		
IOISE	CONDUCTED NOISE			VCCI-B, CISPR-B, EN5					
REGULATIONS	HARMONIC ATTENU	ATOR		00-3-2 (Class A) *6 (Not	,				
OTHERS	CASE SIZE/WEIGHT	_				ith chassis & cover : 19	Og max)		
	COOLING METHOD		Convection (Refer to "	Derating", Instruction Ma	inual 3) *3				
capacito Measure (Equival A circuit Therefo	e value that measured on mea r of 22 μF at 150mm from outp d by 20MHz oscilloscope or R ent to KEISOKU-GIKEN: RMIC reducing standby power is bui re, the internal switch elemen I, and the Ripple/Ripple Noise	out terminal. ipple-Noise r 03). It in this unit. nt is intermit	Please re meter *2 Drift is th a half-ho constant tent *3 Derating	:0-35% is different. sfer to the Instruction Manual 1 e change in DC output for an e ur warm-up at 25°C, with the in at the rated input/output. is required. o or more units are operating if 100-0-0.0	ight hour period after *6 put voltage held * *	Please contact us about ano To meet the specifications. D Parallel operation is not poss Derating is required when op	o not operate over-loaded condition		

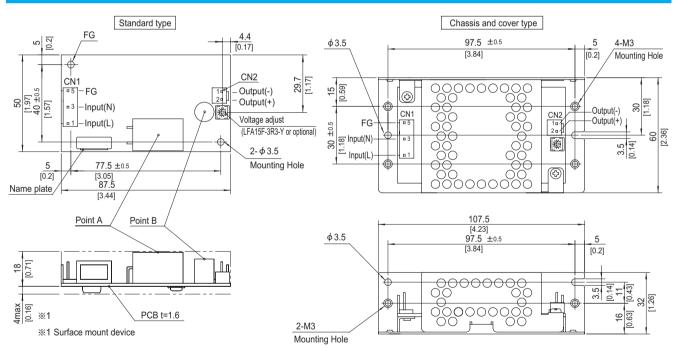
the IEC61000-3-2. June 26, 2020

load.





External view



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

- W Use the spacer of 8mm length or more regarding insulation.
 And do not use press-fitting bush.
- Point A, Point B are thermometry points. Please refer to Instruction Manual 3.

I/C	Connector	Mating connector	Terminal		
014	1-1123724-3	1-1123722-5	Chain	1123721-1	
CINT	1-1123724-3	1-1123722-5	Loose	1318912-1	
010	4 4400700 0	1-1123722-2	Chain	1123721-1	
CNZ	CN2 1-1123723-2	1-1123722-2	Loose	1318912-1	
		(Mfr:Ty	co Electronics)		

<PIN CONNECTION>

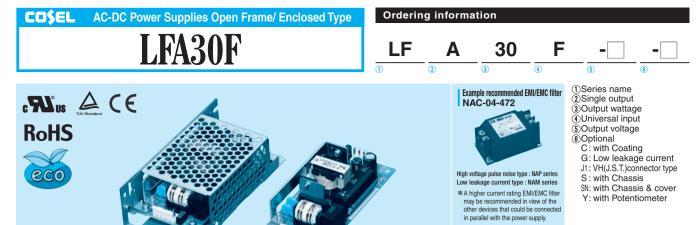
CN1		CN2	
Pin No.	Input	Pin No.	Output
1	AC(L)	1	-V
2		1	- v
3	AC(N)	2	+V
4		2	τv
5	FG		

% 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 6.



Specification is changed at option, refer to Instruction Manual.

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

SPECIFICATIONS

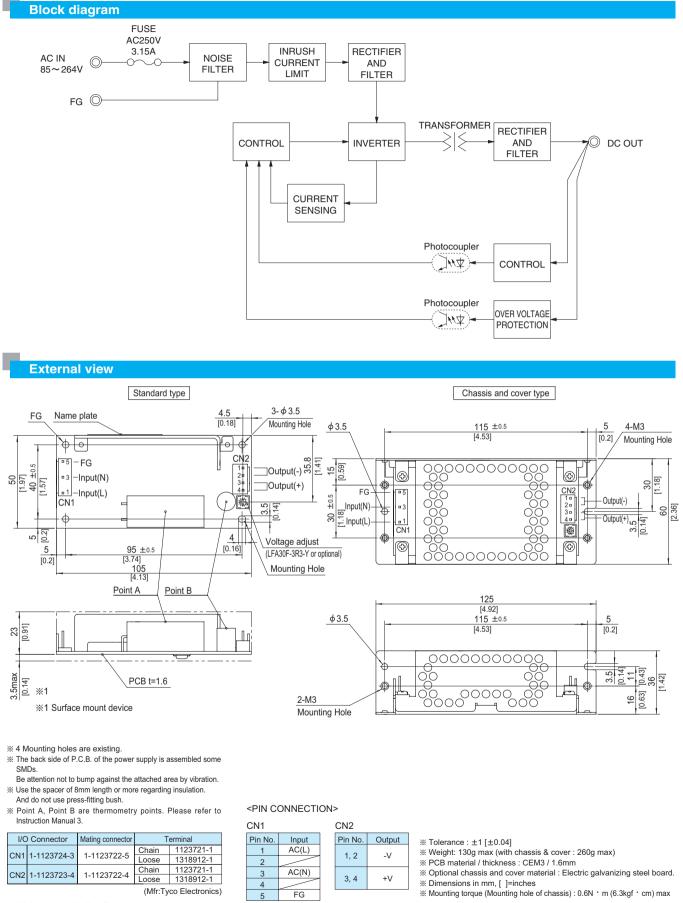
	MODEL		LFA30F-3R3-Y	LFA30F-5	LFA30F-12	LFA30F-15	LFA30F-24				
	VOLTAGE[V]		AC85 - 264 1 ¢ (Re	er to "Derating", Ins	truction Manual 1 and 3) *3					
		ACIN 100V	0.50typ (lo=100%)	0.65typ (lo=100%	%)						
	CURRENT[A]	ACIN 200V	0.30typ (lo=100%) 0.35typ (lo=100%)								
	FREQUENCY[Hz]		50 / 60 (47 - 440)								
IPUT		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)								
	INRUSH CURRENT[A]	ACIN 200V	30typ (Io=100%) (At cold start) (Ta=25℃)								
	LEAKAGE CURREN	T[mA]	0.30 / 0.65max (ACI	0.30 / 0.65max (ACIN 100V / 240V 60Hz, lo=100%, According to IEC62368-1 and DEN-AN)							
	VOLTAGE[V]		3.3	5	12	15	24				
	CURRENT[A]		6.0	6.0	2.5	2.0	1.3				
	LINE REGULATION[mV] *5		20max	20max	48max	60max	96max				
	LOAD REGULATION[mV] *5		40max	40max	100max	120max	150max				
	RIPPLE[mVp-p]	0 to +50℃*1	80max	80max	120max	120max	120max				
	I'm-Frefuish-hl	-10-0°C *1	140max	140max	160max	160max	160max				
	RIPPLE NOISE[mVp-p]	0 to +50℃*1	120max	120max	150max	150max	150max				
UTPUT		-10-0°C *1	160max	160max	180max	180max	180max				
D S H	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	120max	150max	240max				
		-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, I	o=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.63	Fixed ("Y"option	is available for adjusting	output voltage betweer	ו ±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								
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				
IRCUIT AND	OPERATING INDICA	TION	Not provided								
THERS	REMOTE SENSING		Not provided								
	REMOTE ON/OFF		Not provided								
	INPUT-OUTPUT		AC3,000V 1minute,	Cutoff current = 10r	nA, DC500V 50M Ω min	(At Room Temperature)				
SOLATION	INPUT-FG		AC2,000V 1minute,	Cutoff current = 10r	nA, DC500V 50M Ω min	(At Room Temperature)				
	OUTPUT-FG		, ,		A, DC500V 50M Ω min (A	/					
	OPERATING TEMP., HUMID. AND	O ALTITUDE	-10 to +70℃, 20 - 90	%RH (Non condens	sing) (Refer to "Derating"	, Instruction Manual 3),	3,000m (10,000feet) ma				
NVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max								
	VIBRATION		10 - 55Hz, 19.6m/s ²	(2G), 3minutes peri	od, 60minutes each alor	ng X, Y and Z axis					
	IMPACT		196.1m/s ² (20G), 11	, ,							
AFETY AND	AGENCY APPROVA	LS	UL60950-1, C-UL (C	SA60950-1), EN60	950-1, EN62368-1, EN6	0065, EN50178 Compli	ies with DEN-AN				
OISE	CONDUCTED NOISE		Complies with FCC-	B, VCCI-B, CISPR-I	B, EN55011-B, EN55022	2-B					
EGULATIONS	HARMONIC ATTENU		· · ·	, ,	(Not built-in to active filte	,					
THERS	CASE SIZE/WEIGHT				nches] (W×H×D) / 130	g max (with chassis & c	over : 260g max)				
	COOLING METHOD		Convection (Refer to	"Derating", Instruct	ion Manual 3) *3						
from ou	the value that measured or tput terminal. ed by 20MHz oscilloscope of		-		Please contact us for	out dynamic load and input res					

*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.

- * 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.

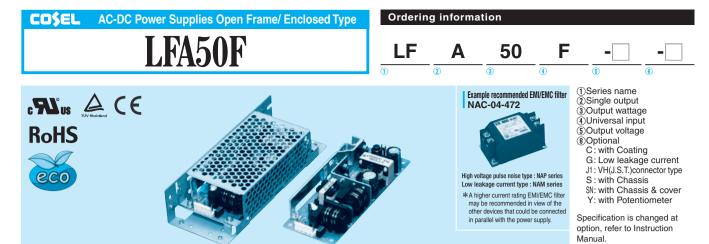
June 26, 2020





% I/O Connector is Mfr. Tyco Electronics

% Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 6.



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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

'	VOLTAGE[V]		AC05 06414	(D. () (D)						
F			AC85 - 264 1 ¢ (Refer to "Derating", Instruction Manual 1 and 3) *3							
		ACIN 100V	0.47typ (lo=100%)	0.67typ (lo=100)%)	,				
	CURRENT[A]	ACIN 200V	0.27typ (lo=100%) 0.36typ (lo=100%)							
1	FREQUENCY[Hz]		50 / 60 (47 - 63)							
		ACIN 100V	73.5typ	77.5typ	80.0typ	80.5typ	81.5typ	82.0typ	81.0typ	
	FFFICIENCY[%]	ACIN 200V	74.0typ	79.0typ	81.5typ	81.5typ	83.0typ	83.5typ	82.5typ	
		ACIN 100V	0.96typ							
F		ACIN 200V	0.83typ	0.90typ						
-		ACIN 100V	15typ (lo=100%) (At cold start) (Ta=25°C)							
	INRUSH CURRENT[A]		30typ (Io=100%) (At cold start) (Ta=25°C)							
	LEAKAGE CURRENT[mA]		21 (/ / / /	,	0%. According to	o IEC62368-1 an	d 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[mV] *4		40max	40max	100max	120max	150max	240max	240max	
- F		0 to +50℃*1	80max	80max	120max	120max	120max	150max	150max	
1	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	
TE		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]	**2	350typ (ACIN 1)		401110	Joomax	Joinax	1441110	1921110	
	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 ADJUSTMENT RANGE[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			% of rating and			23.00 10 23.00	34.30 10 37.30	40.00 10 50.00	
E.	OVERCORNENT PROT		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	
	OPERATING INDICA		Not provided	5.75 10 7.00	13.00 10 10.00	17.23 10 21.00	27.00 10 33.00	41.40 10 30.40	55.20 10 07.20	
	REMOTE SENSING	TION	Not provided							
· ·									_	
	REMOTE ON/OFF		Not provided	uto Cutoff ourro			(At Room Tempe	roturo)		
-			,		· · · · · · · · · · · · · · · · · · ·		<u> </u>		-	
	INPUT-FG		,	,	,		(At Room Tempe	,		
	OUTPUT-FG OPERATING TEMPHUMID.AND						t Room Tempera	,	0.000(+-+)	
	STORAGE TEMP., HUMID.AND		,	,	0/ (0 ,		uai 3), 3,000m (1	0,000leet) max	
NVIRONMENT –	VIBRATION	ALIIIUDE	-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max 10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
					· · · · ·		y x, r and z axis			
		6), 11ms, once ea				Complian with DE		
	AGENCY APPROVAL						065, EN50178 (Jomplies with DE	IN-AIN	
	CONDUCTED NOISE HARMONIC ATTENU		· ·			011-B, EN55022	-D			
		ATUK		EC61000-3-2 (C	,					
DTHERS -	CASE SIZE/WEIGHT					, 0	max (with chase	sis & cover : 3250	j max)	
	COOLING METHOD		Convection (Re	fer to "Derating",	Instruction Man	uai 3) *3				

RM103). *2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at

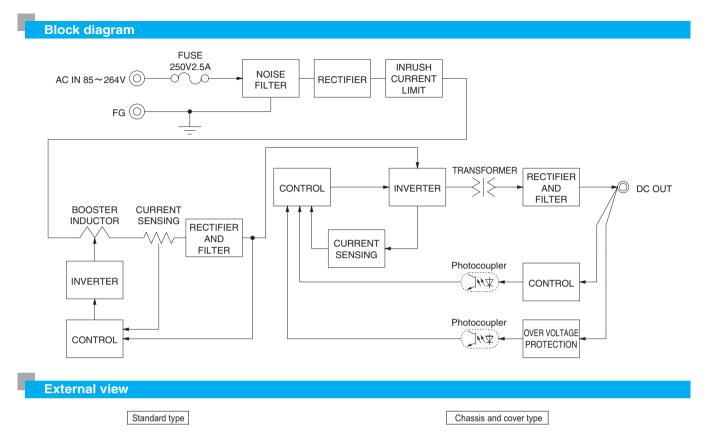
25°C, with the input voltage held constant at the rated input/output.

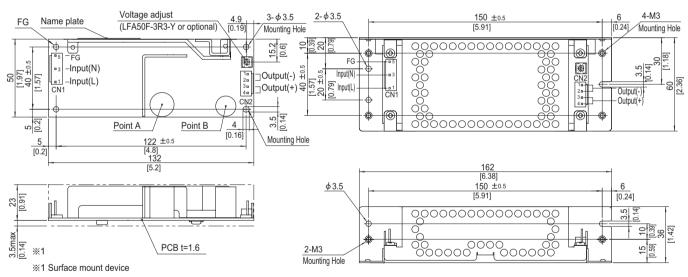
To meet the specifications. Do not operate over-loaded condition.

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

Parallel operation is not possible.







% 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						
014	4 4400704 0	1-1123722-5	Chain	1123721-1				
CN1	1-1123724-3	1-1123722-5	Loose	1318912-1				
CN2	1-1123723-4	1-1123722-4	Chain	1123721-1				
		1-1123722-4	Loose	1318912-1				
(Mfr:Tyco Electronics)								

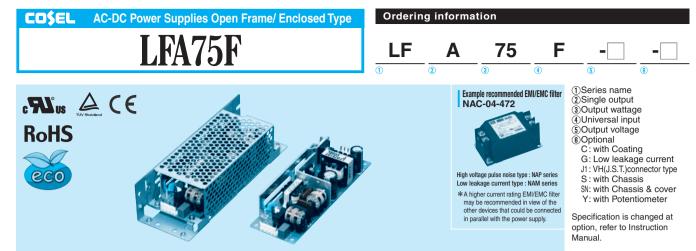
<PIN CONNECTION>

	CN1		CN2		
	Pin No.	Input	Pin N	o. Output	% Tolerance : ±1 [±0.04]
	1 2	AC(L)	1, 2	-V	 Weight : 165g max (with chassis & cover : 325g max) PCB material / thickness : CEM3 / 1.6mm
_	3 4	AC(N)	3, 4	+V	X Optional chassis and cover material : Electric galvanizing steel board. Dimensions in mm, []=inches Munuting terms (C) (Incuting terms) = 0 (D) (Incuting terms)
s)	5	FG		·	✓ 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 6.

% 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. *Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

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

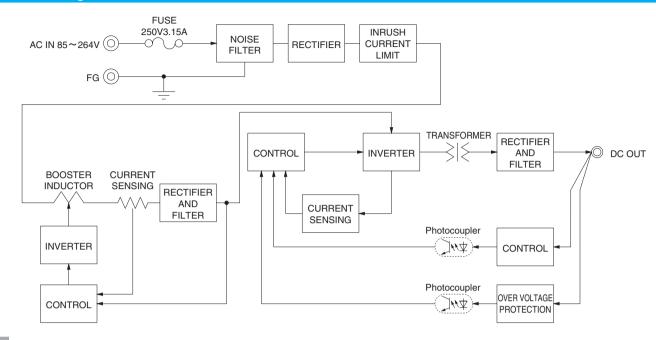
	MODEL		LFA75F-3R3-Y	LFA75F-5	LFA75F-12	LFA75F-15	LFA75F-24	LFA75F-36	LFA75F-48		
	VOLTAGE[V]		AC85 - 264 1 φ	(Refer to "Derat	ing", Instruction	Manual 1 and 3)	*3				
		ACIN 100V	0.70typ (lo=100%)	1.00typ (lo=100	0%)	· ·					
	CURRENT[A]	ACIN 200V	0.40typ (lo=100%)	0.50typ (lo=100	0%)						
	FREQUENCY[Hz]		50 / 60 (47 - 63								
		ACIN 100V	73.5typ	78.0typ	81.5typ	81.5typ	82.5typ	82.5typ	82.5typ		
NPUT	EFFICIENCY[%]	ACIN 200V	75.0typ	80.0typ	83.0typ	83.0typ	84.5typ	84.5typ	84.5typ		
		ACIN 100V	0.96typ 0.97typ								
	POWER FACTOR (lo=100%)	ACIN 200V	0.83typ 0.90typ								
		ACIN 100V	15typ (lo=100%) (At cold start) (Ta=25 $^{\circ}$ C)								
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (At cold start) (Ta=25°C)								
	LEAKAGE CURREN		0.40 / 0.75max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC62368-1 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	mV1 *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		
ουτρυτ	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]	*2			4011187	ounax	Joinax	1441110	1921110		
	HOLD-UP TIME[ms]		350typ (ACIN 100V, Io=100%) 20typ (ACIN 100V, Io=100%)								
	OUTPUT VOLTAGE ADJUSTMENT	DANCEIVI	2.85 to 3.63	· · · · · · · · · · · · · · · · · · ·	is available for a	djusting output vo	ltage between +	10%)			
	OUTPUT VOLTAGE SET		3.30 to 3.40	4.90 to 5.30	11.50 to 12.50	14.40 to 15.60	23.00 to 25.00	34.50 to 37.50	46.00 to 50.00		
	OVERCURRENT PROT		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 Works over 105% of rating and recovers automatically								
DOTEOTION	OVERVOLTAGE PROTE		4.00 to 5.25	5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	41.40 to 50.40	55.20 to 67.20		
ROTECTION	OPERATING INDICA			5.75 10 7.00	13.00 10 10.00	17.23 10 21.00	27.00 10 33.00	41.40 10 50.40	55.20 10 07.20		
THERS	REMOTE SENSING	TION	Not provided								
	REMOTE SENSING		Not provided Not provided								
	INPUT-OUTPUT			uto Cutoff ourro	nt - 10m A DCE	00V 50M Ω min		vroturo)			
SOLATION	INPUT-FG						· ·				
SOLATION	OUTPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature) AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)								
	OPERATING TEMP., HUMID.AND							ual 3), 3,000m (1	0.000faat) may		
	STORAGE TEMP., HUMID.AND				0, (000m (30,000fee		uai 5), 5,000m (1	0,000leet) max		
NVIRONMENT	VIBRATION	ALIIIODE	,		0,, ,	inutes each alon	,				
	IMPACT), 11ms, once ea			$y \wedge$, r anu z axis	>			
	AGENCY APPROVAL	6					0065 ENE0179 (Complies with DE			
AFETY AND OISE	CONDUCTED NOISE					011-B, EN55022			-11-7411		
	HARMONIC ATTENU			EC61000-3-2 (C	,	011-D, EN00022	-D				
				· · · · ·	,		max (with abaasi	0 % 00/0r : 140~			
OTHERS	CASE SIZE/WEIGHT					, 0	max (with chassi	s & cover : 440g	iiidX)		
	COOLING METHOD		Convection (Re	fer to "Derating",	mstruction Man	uai 3) 🔧					
from ou	the value that measured or tput terminal. ed by 20MHz oscilloscope or				*4 Pl	erating is required. ease contact us abou ease contact us abou		input response.			

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. 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.

LFA75F | CO\$EL

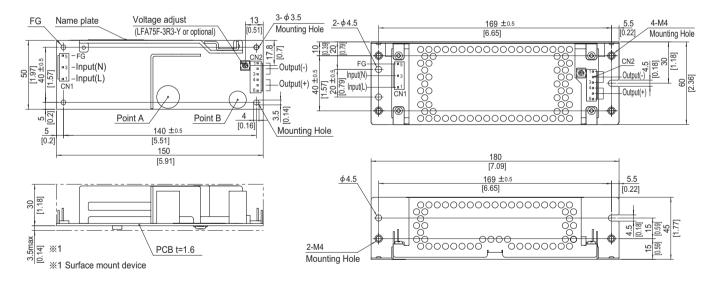




External view

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.

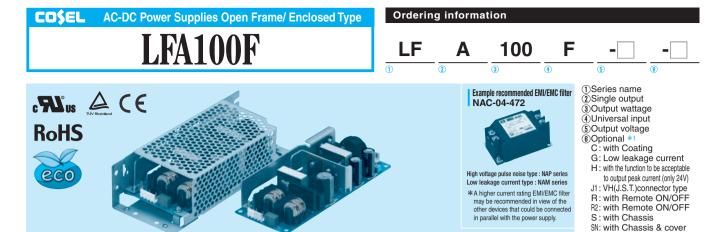
I/C	Connector	Mating connector	Terminal							
014	4 4400704 0	1-1123722-5	Chain	1123721-1						
CINT	1-1123724-3	1-1123722-5	Loose	1318912-1						
CNID	1-1123723-6	1-1123722-6	Chain	1123721-1						
CNZ		1-1123722-6	Loose	1318912-1						
(Mfr:Tyco Electronics)										

<PIN CONNECTION>

CN1		CN2		
Pin No.	Input	Pin No.	Output	% Tolerance : ±1 [±0.04]
1	AC(L)	44.0		※ 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	* Dimensions in mm, []=inches
5	FG			^J % 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 6.



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. *Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

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

Y: with Potentiometer

Please refer to Instruction

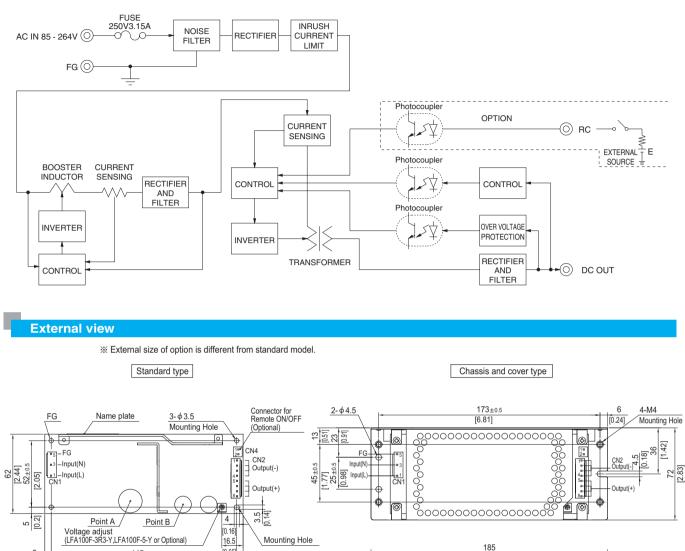
manual 6.

	MODEL		LFA100F-3R3-Y	LFA100F-5-Y	LFA100F-12	LFA100F-15	LFA100F-24	LFA100F-24-H	LFA100F-36	LFA100F-4
	VOLTAGE[V]		AC85 - 264 1	φ (Refer to "D	erating", Instru	ction Manual 1	and 3) *4			
		ACIN 100V	0.9typ (lo=100%)	1.3typ (lo=10	0%)					
	CURRENT[A]	ACIN 200V	0.5typ (lo=100%)	0.7typ (lo=10	0%)					
	FREQUENCY[Hz]		50 / 60 (47 - 6	63)						
		ACIN 100V	77.0typ	82.0typ	82.0typ	83.0typ	84.0typ	84.0typ	84.0typ	84.5typ
NPUT	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 (lo=100%)	ACIN 200V	0.92typ	0.95typ						
		ACIN 100V	15typ (lo=100%) (At cold start) (Ta=25 $^{\circ}$ C)							
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (At cold start) (Ta=25°C)							
	LEAKAGE CURREN		21.1	, ,	/ 240V 60Hz,	lo=100% Acc	ording to IEC6	2368-1 and DF	N-AN)	
	VOLTAGE[V]	<u> </u>		5	12	15	24	24	36	48
	CURRENT[A]	*5	3.3 20	20	8.5	6.7	4.3	4.3 (Peak 5.4)	2.8	2.1
	LINE REGULATION[mV] *7		20max	20max	48max	60max	96max	96max	144max	192max
	LOAD REGULATION	-	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℃*2	120max	120max	150max	150max	150max	300max	250max	250max
OUTPUT	RIPPLE NOISE[mVp-p]	-10-0°C *2	160max	160max	180max	180max	180max	360max	300max	300max
/011/01		0 to +50℃	50max	50max	120max	150max	240max	240max	360max	480max
	TEMPERATURE REGULATION[mV]	-10 to +50 °C	60max	60max	120max	180max	240max 290max	240max 290max	450max	600max
-		*3	20max		48max	60max	290max 96max		144max	
	DRIFT[mV]			20max		oumax	901112X	96max	144max	192max
F	START-UP TIME[ms]			100V, lo=100	,					
	HOLD-UP TIME[ms]	DANOFIN		100V, lo=100%	ŕ		for a direction of			
	OUTPUT VOLTAGE ADJUSTMENT		2.85 to 3.63			ion is available	, , ,		04 50 1. 07 50	40.001.50.0
	OUTPUT VOLTAGE SETTING[V]			5.00 to 5.15	11.50 to 12.50		23.00 to 25.00	23.00 to 25.00	34.50 to 37.50	46.00 to 50.0
	OVERCURRENT PROT				works over 10	· ·		· ·	1	ř.
ROTECTION	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
CIRCUIT AND	OPERATING INDICA	TION	Not provided							
JINERS	REMOTE SENSING		Not provided							
	REMOTE ON/OFF		Option (Refer to Instruction Manual)							
	INPUT-OUTPUT-RC	*6	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature) AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)							
SOLATION	INPUT-FG								,	-
	OUTPUT-RC-FG	*6			rrent = 25mA, [
	OUTPUT-RC	*6		,	rrent = 25mA, [/		
	OPERATING TEMP., HUMID.AND				Non condensin	0, (3), 3,000m (10,	000teet) ma
INVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE		,	Non condensin	0//			-	
	VIBRATION				minutes period		ich along X, Y a	and Z axis		
	IMPACT				e each X, Y an					
SAFETY AND	AGENCY APPROVAL				50-1), EN6095			N50178 Comp	lies with DEN-	AN
	CONDUCTED NOISE		· ·		I-B, CISPR-B, I	EN55011-B, El	N55022-B			
REGULATIONS	HARMONIC ATTENU		<u> </u>	1 IEC61000-3-						
OTHERS	CASE SIZE/WEIGHT				.32×6.10 inch) / 280g max (with chassis &	cover : 480g m	nax)
	COOLING METHOD				ng", Instruction I	Manual 3) *4				
*2 This is th capacitor of Measured (Equivalen)	on is changed at option, refer t e value that measured on i of 22 µ F at 150mm from output I by 20MHz oscilloscope o t to KEISOKU-GIKEN: RM103 change in DC output for an e varm-up at 25°C, with the inpu	measuring t terminal. r Ripple-No). sight hour pe	booard with *4 *5 bise meter riod after a *6	device is damaged contact us about th Applicable when R	d. urrent. There is a p d when the specifica	ation is exceeded. I	* To m nternal cond Please * Paral * Derat * Soun	lel operation is not p ting is required whe id noise may be g	tions. Do not op possible. n operated with cha	ssis and cover.

half-hour warm-up at 25°C, with the input voltage held constant $LFA\!-\!12$

*7 Please contact us about dynamic load and input response. June 26, 2020

Block diagram



Mounting Hole 145±0.5 [5.71] [0.65] [0.2] φ4.5 155 [6.1] [6.81] 00 2-M4 Mounting Hole PCB t=1.6 **%1** *1 Surface mount device

% 4 Mounting holes are existing.

5

[1.18]

30

3.5max

% 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						
CN1 1	1-1123724-3	4 4400700 5	Chain	1123721-1					
		1-1123722-5	Loose	1318912-1					
CN2 1-11	4 4400700 0	4 4400700 0	Chain	1123721-1					
	1-1123723-8	1-1123722-8	Loose	1318912-1					
	I/C CN1	I/O Connector CN1 1-1123724-3		CN1 1-1123724-3 1-1123722-5 Chain Loose CN2 1 1123723 8 1 1123722 8 Chain					

(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 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

ק,₽

6

[0.24]

4.5 [0.18] [0.59] 45

20

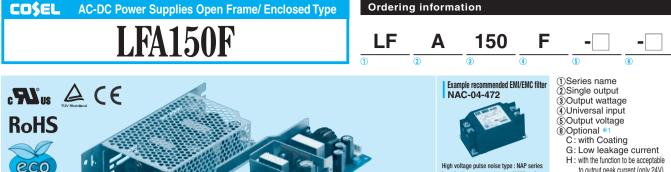
1.77]

[7.28] 173±0.5

CN4 Option (Mfr:J.S.T)						
	PIN No.	Contents				
	1	RC(+)				
	2	RC(-)				

Barrier strip type Model B2B-XH-A Mating Connector (Terminal) XHP-2 / BXH-001T-P0.6

or SXH-001T-P0.6



High voltage pulse noise type : NAP series Low leakage current type : NAM series *A higher current rating EM/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply. N: with the function to be acceptable to output peak current (only 24V)
 J1: VH(J.S.T.)connector type
 R: with Remote ON/OFF
 R2: with Remote ON/OFF
 S: with Chassis
 SN: with Chassis & cover
 Y: with Potentiometer
 Please refer to Instruction

manual 6.

This power supply is manufactured by SMD technology. The stress to PC.B like twisting or bending causes the defect of the unit, so handle the unit with care. *Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

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

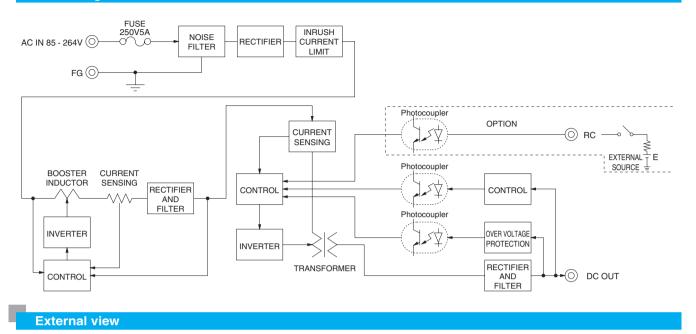
	MODEL		LFA150F-3R3-Y	LFA150F-5-Y	LFA150F-12	LFA150F-15	LFA150F-24	LFA150F-24-H	LFA150F-36	LFA150F-48	
	VOLTAGE[V]		AC85 - 264 1	φ (Refer to "D	erating", Instru	ction Manual 1	and 3) *4	·			
		ACIN 100V	1.4typ (lo=100%)	2.0typ (lo=10	0%)						
	CURRENT[A]	ACIN 200V	0.7typ (lo=100%)	1.0typ (lo=10	0%)						
	FREQUENCY[Hz]		50 / 60 (47 - 6	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							
	POWER FACTOR (lo=100%)	ACIN 200V	0.92typ	0.95typ							
		ACIN 100V	15typ (lo=100)%) (At cold sta	art) (Ta=25℃)						
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100	%) (At cold sta	art) (Ta=25℃)						
	LEAKAGE CURREN	T[mA]	0.40 / 0.75ma	x (ACIN 100V	/240V 60Hz,	lo=100%, Acc	ording to IEC6	2368-1 and DE	EN-AN)		
	VOLTAGE[V]		3.3	5	12	15	24	24	36	48	
	CURRENT[A]	*5	30	30	12.5	10	6.3	6.3 (Peak 7.9)	4.2	3.2	
	LINE REGULATION[mV] *7		20max	20max	48max	60max	96max	96max	144max	192max	
	LOAD REGULATION	[mV] *7	40max	40max	100max	120max	150max	150max	240max	240max	
		0 to +40℃*2	80max	80max	120max	120max	120max	240max	150max	150max	
	RIPPLE[mVp-p]	-10-0°C *2	140max	140max	160max	160max	160max	320max	200max	200max	
		0 to +40℃*2	120max	120max	150max	150max	150max	300max	250max	250max	
OUTPUT	RIPPLE NOISE[mVp-p]	-10-0°C *2	160max	160max	180max	180max	180max	360max	300max	300max	
	TEMPERATURE REGULATION[mV]	0 to +40℃	50max	50max	120max	150max	240max	240max	360max	480max	
		-10 to +40℃	60max	60max	150max	180max	290max	290max	450max	600max	
	DRIFT[mV]	*3	20max	20max	48max	60max	96max	96max	144max	192max	
	START-UP TIME[ms] 35		350typ (ACIN	100V, lo=100°	%)						
	HOLD-UP TIME[ms]		20typ (ACIN 1	100V, Io=100%	»)						
	OUTPUT VOLTAGE ADJUSTMENT	RANGE[V]	2.85 to 3.63	4.50 to 5.50	Fixed ("Y"opti	ion is available	for adjusting of	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 10	05% of rating (works over 10	1% of peak cur	rrent at option	-H) and recove	rs automaticall	у	
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	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 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)								
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)								
1002/11011	OUTPUT·RC-FG	*6									
	OUTPUT-RC	*6		,	,			n Temperature)			
	OPERATING TEMP., HUMID.AND							uction Manual 3	3), 3,000m (10,	000feet) max	
ENVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max							
	VIBRATION				minutes period		ich along X, Y	and Z axis			
	IMPACT		<u> </u>		e each X, Y an						
SAFETY AND	AGENCY APPROVAL							EN50178 Comp	olies with DEN-	AN	
NOISE	CONDUCTED NOISE		· · · · · · · · · · · · · · · · · · ·		I-B, CISPR-B, I	EN55011-B, El	N55022-B				
REGULATIONS	HARMONIC ATTENU	-		1EC61000-3-2	· · · ·					<u> </u>	
OTHERS	CASE SIZE/WEIGHT						/ 390g max (v	vith chassis & c	over : 650g ma	ix)	
	COOLING METHOD		· · ·		ing", Instruction	Manual 3) *4					
	ion is changeed at option, refer ie value that measured on i			at the rated input/or Derating is required				se contact us about neet the specifica		erate over-loaded	
capacitor of	of 22 µ F at 150mm from output	t terminal.	*5	() means peak cu	urrent. There is a p		nternal cond	lition.			
	d by 20MHz oscilloscope o t to KEISOKU-GIKEN: RM103		oise meter	device is damaged contact us about th	d when the specificate detail	ation is exceeded. I		llel operation is not ting is required whe		esis and covor	
	change in DC output for an e		riod after a *6		emote control (optior	nal) is added.		iting is required whe nd noise may be g			
	warm-up at 25°C, with the inpu	it voltage he			about dynamic load	and input response		e load.			
T EM 14						<u>~</u>					

June 26, 2020



Chassis and cover type

Block diagram



※ External size of option is different from standard model.

Standard type

176±0.5 6 4-M4 $2 - \phi 4.5$ FG Name plate Point A Point B **3-**φ3.5 [6.93] [0.24] Mounting Hole Mounting Hole 15 [0.59] 25 [0.98] $\left[\circ \right]$ -10 0 0 42 ਜ਼−FG FG CN3 Output(-) CN3 Output(-) ∎3 –Input(N) Input(N) $\frac{75}{[2.95]}$ $\frac{65_{\pm 0.5}}{[2.6]}$ <u>∎1</u>–Input(L) CN1 - 1 Input(L) $\frac{55\pm0.5}{[2.17]}$ 85 3.35] 1.38] CN1 18] õ CN2 Output(+) 29巻 R Ø ଜ 3.5 0.14] 0.26] 5 [0.2] Connector for Remote 4 ON/OFF (optional) Voltage adjust <u>ON/OFF (optional)</u> (LFA150F-3R3-Y,LFA150F-5-Y or Optional)/ [0.16] 18 [0.71 Mounting Hole 188 150 ± 0.5 5 [7.4][5.91] [0.2] φ4.5 176±0.5 160 [0.24] [6.93] [6.3] 33.5 [1.32] 4.5 [0.18] 15 [0.59] 47 8 1.85 2-M4 [0.79] ର Mounting Hole PCB t=1.6

% 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.

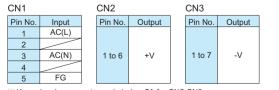
I/C	Connector	Mating connector	Terminal				
CNIA	1-1123724-3	1-1123722-5	Chain	1123721-1			
CINT	1-1123724-3	1-1123722-5	Loose	1318912-1			
010	1-1123723-6	1-1123722-6	Chain	1123721-1			
CNZ	1-1123723-6	1-1123722-6	Loose	1318912-1			
0.10	4 4400700 7	4 4 4 9 9 7 9 9 7	Chain	1123721-1			
CN3	1-1123723-7	1-1123722-7	Loose	1318912-1			
(MferTure Fleeterries)							

(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

June 26, 2020

LFA-15

Connector type

RC(+)

RC(-)

CN4 Option (Mfr. J S T)

PIN No. Contents

Barrier strip type

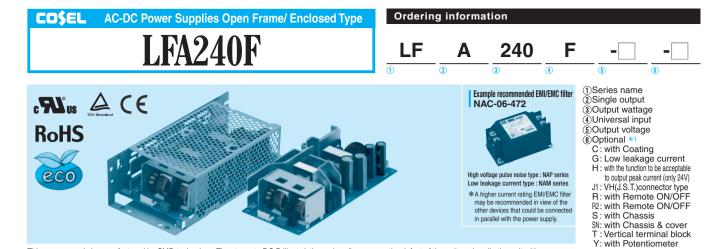
Mating Connector (Terminal) XHP-2

2

Model B2B-XH-A

BXH-001T-P0.6

or SXH-001T-P0.6



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. *Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

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

Please refer to Instruction

manual 6.

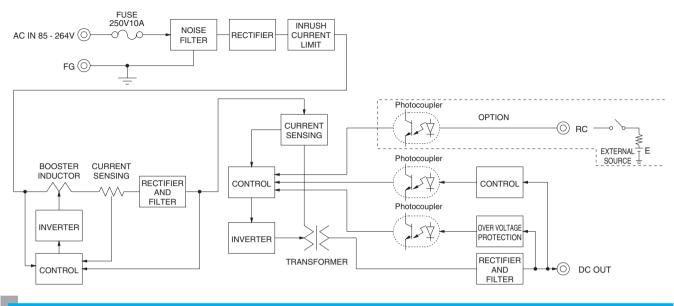
SPECIFICATIONS

	MODEL		LFA240F-24	LFA240F-24-H	LFA240F-36	LFA240F-48					
	VOLTAGE[V]		AC85 - 264 1 ¢ (Refer to "Derating", Instruction Manual 1 and 3) *4								
		ACIN 100V	3.3typ (lo=100%)								
	CURRENT[A]	ACIN 200V									
	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	onoop	01.000	or eqp					
	POWER FACTOR (lo=100%)	ACIN 200V	0.95typ								
		ACIN 100V	15 / 30typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 3 sec. to re-start)								
	INRUSH CURRENT[A]	ACIN 200V	30 / 30typ (lo=100%) (Primary inrush current /secondary inrush current) (More than 3 sec. to re-start)								
	LEAKAGE CURREN			/ 240V 60Hz, lo=100%, Act							
	VOLTAGE[V]	ILINAJ	24	24	36	48					
	CURRENT[A]	*5	10	10 (Peak12.5)	6.7	5					
				, ,							
	LINE REGULATION			96max	144max	192max 240max					
	LOAD REGULATION	<u> </u>		150max	240max						
	RIPPLE[mVp-p]	0 to +40℃*2	120max	240max	150max	150max					
		-10-0°C *2		320max	200max	200max					
Ουτρυτ	RIPPLE NOISE[mVp-p]	0 to +40°C *2		300max	250max	250max					
		-10-0°C *2	180max	360max	300max	300max					
	TEMPERATURE REGULATION[mV]	0 to +40℃		240max	360max	480max					
		-10 to +40℃		290max	450max	600max					
H	DRIFT[mV]	*3	96max 96max 144max 192max								
	START-UP TIME[ms]		350typ (ACIN 100V, Io=100%)								
	HOLD-UP TIME[ms]		20typ (ACIN 100V, lo=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								
PROTECTION	OVERVOLTAGE PROTECTION		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 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
ISOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)								
ISOLATION	OUTPUT·RC-FG	*6	AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)								
	OUTPUT-RC	*6	AC100V 1minute, Cutoff current = 25mA, DC100V 10M Ω min (At Room Temperature)								
	OPERATING TEMP., HUMID.AND	ALTITUDE *4	-10 to +70°C, 20 - 90%RH (Non condensing) (Refer to "Derating", Instruction Manual 3), 3,000m (10,000feet) max								
ENVIRONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE									
	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								
SAFETY AND	AGENCY APPROVA	LS	UL60950-1, C-UL (CSA60950-1), EN60950-1, EN62368-1, EN60065, EN50178 Complies with DEN-AN								
NOISE											
REGULATIONS	HARMONIC ATTENU	JATOR	Complies with IEC61000-3-	-2 (Class A) *8							
0711500	CASE SIZE/WEIGHT		84×46.5×180mm [3.31×1.83×7.09 inches] (W×H×D) / 550g max (with chassis & cover : 880g max)								
OTHERS	COOLING METHOD		Convection (Refer to "Derat	ting", Instruction Manual 3) *4	ł						
 *2 This is the capacitor of Measured (Equivalen) *3 Drift is the 	on is changeed at option, refer e value that measured on i of 22 µ F at 150mm from output l by 20MHz oscilloscope o t to KEISOKU-GIKEN: RM103 change in DC output for an e varm-up at 25°C, with the inpu	measuring t terminal. r Ripple-No). eight hour pe	board with *4 Derating is require *5 () means peak c device is damage contact us about triod after a *6 Applicable when r	ed. urrent. There is a possibility that an d when the specification is exceeded.	internal condition. Please * Parallel operation is no * Derating is required wl * Sound noise may be	cations. Do not operate over-loaded					
FA-16				ine 26 2020							

LFA-16

LFA240F | CO\$EL

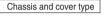
Block diagram

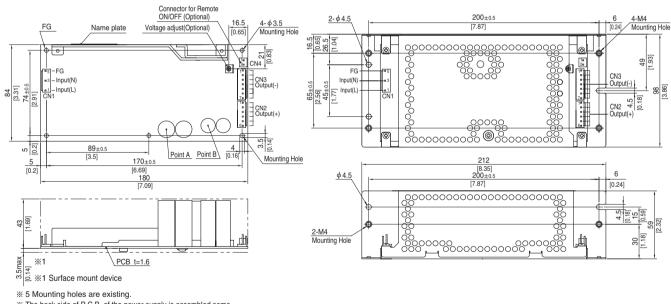


External view

% External size of option is different from standard model.

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 are thermometry points. Please refer to Instruction Manual 3.

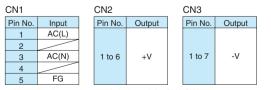
Mating connector	Terminal		
1 1100700 5	Chain	1123721-1	
1-1123/22-5	Loose	1318912-1	
4 4400700 0	Chain	1123721-1	
1-1123/22-0	Loose	1318912-1	
4 4400700 7	Chain	1123721-1	
1-1123/22-7	Loose	1318912-1	
	Mating connector 1-1123722-5 1-1123722-6 1-1123722-7	1-1123722-5 1-1123722-6 Chain Loose 1-1123722-7 Chain	

(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

CN4 Option (Mfr:J.S.T) PIN No. Contents

	r otrip tupo	
2	RC(-)	
1	RC(+)	

arrier 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 LFA300F A 300 3 (F -LF (1) Series name
(2) Single output
(3) Output wattage
(4) Universal input
(5) Output voltage
(6) Optional *1
(5) C: with Coating
(6) Cytonal *1
(7) C: with Coating
(7) C: with Chassis
(7) C: with Ciantal Hortinal block
Please refer to Instruction manual 6. Example recommended EMI/EMC filter NAC-06-472 **RoHS** eco High voltage pulse noise type : NAP series Low leakage current type : NAM series *A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

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. *Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

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

Please refer to Instruction manual 6.

SPECIFICATIONS

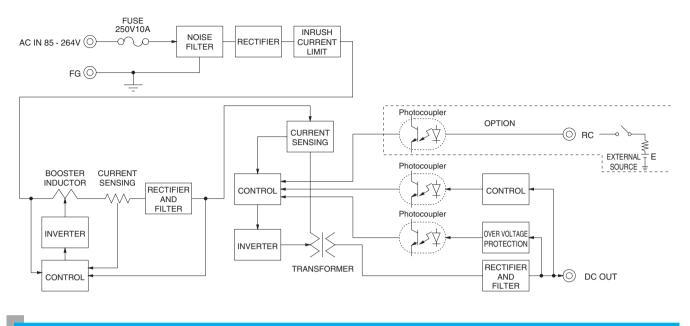
	MODEL		LFA300F-3R3-TY	LFA300F-5-TY	LFA300F-12-TY	LFA300F-15-TY	LFA300F-24-TY	LFA300F-24-HTY	LFA300F-30-TY	LFA300F-36-TY	LFA300F-48-T	
	VOLTAGE[V]		AC85 - 264	1φ (Refer to	o "Derating", I	nstruction M	anual 1 and 3	3) *4				
		ACIN 100V	2.7typ (lo=100%)	4.1typ (lo=	100%)							
	CURRENT[A]	ACIN 200V	1.4typ (lo=100%)	2.0typ (lo=	100%)							
	FREQUENCY[Hz]	50 / 60 (47	- 63)									
		ACIN 100V	75.0typ	79.0typ	80.0typ	81.5typ	85.0typ	85.0typ	85.5typ	85.5typ	85.5typ	
NPUT	EFFICIENCY[%]	ACIN 200V	77.0typ	82.5typ	83.0typ	84.5typ	88.0typ	88.0typ	88.0typ	88.0typ	88.0typ	
		ACIN 100V	0.98typ	0.99typ								
	POWER FACTOR (lo=100%)	ACIN 200V	0.92typ	0.95typ								
		ACIN 100V	15 / 30typ (o=100%) (Pi	rimary inrush	current /Seco	ndary inrush c	current) (More	than 3 sec. to	o re-start)		
	INRUSH CURRENT[A]	30 / 30typ (o=100%) (Pi	rimary inrush	current /Seco	ndary inrush o	current) (More	than 3 sec. to	o re-start)			
	LEAKAGE CURREN	T[mA]	0.45 / 0.75n	nax (ACIN 10	00V/240V 6	0Hz, lo=100	%, According	to IEC62368	-1 and DEN-	AN)		
	VOLTAGE[V]		3.3	5	12	15	24	24	30	36	48	
		Convection	40	40	17	14	12.5	12.5 (Peak19)	10	8.4	6.3	
	CURRENT[A] *5	Forced air	60	60	27	22	14	14 (Peak19)	11	9.4	7	
	LINE REGULATION	mV1 *7	20max	20max	48max	60max	96max	96max	144max	144max	192max	
	LOAD REGULATION	-	40max	40max	100max	120max	150max	150max	240max	240max	240max	
		0 to +40°C *2	80max	80max	120max	120max	120max	240max	150max	150max	150max	
	RIPPLE[mVp-p]	-10-0°C *2	140max	140max	160max	160max	160max	320max	200max	200max	200max	
		0 to +40°C *2	120max	120max	150max	150max	150max	300max	250max	250max	250max	
UTPUT	RIPPLE NOISE[mVp-p]	-10-0°C *2	160max	160max	180max	180max	180max	360max	300max	300max	300max	
		0 to +40°C	50max	50max	120max	150max	240max	240max	360max	360max	480max	
	TEMPERATURE REGULATION[mV]	-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]					oomax	Joinax	Joinax	THINAX	Тттпах	TOZINAX	
	HOLD-UP TIME[ms]		350typ (ACIN 100V, Io=100%) 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						36.00 to 37.44		
	OVERCURRENT PROTECTION		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 49.92 Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically									
ROTECTION			4.00 to 5.25	5.75 to 7.00				· · · · ·	1	41.40 to 50.40	1	
IRCUIT AND	OVERVOLTAGE PROTECTION OPERATING INDICATION		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 67.20 Not provided									
THERS	REMOTE SENSING		Not provided									
Eno	REMOTE ON/OFF		Option (Refer to Instruction Manual)									
	INPUT-OUTPUT-RC	*6			,		N 50MO mir	At Boom To	At Room Tomporature)			
	INPUT-FG		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature) AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)									
SOLATION	OUTPUT·RC-FG	*6										
	OUTPUT-RC	*6	AC100V 1minute, Cutoff current = 25mA, DC100V 10M Ω min (At Room Temperature) AC100V 1minute, Cutoff current = 25mA, DC100V 10M Ω min (At Room Temperature)									
	OPERATING TEMP HUMID.AND		-10 to +70°C, 20 - 90%RH (Non condensing) (Refer to "Derating", Instruction Manual 3), 3,000m (10,000feet) max									
	STORAGE TEMP., HUMID.AND											
NVIRONMENT	VIBRATION	ALITIODE										
	IMPACT		10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60minutes each along X, Y and Z axis									
	AGENCY APPROVAL	6	196.1m/s ² (20G), 11ms, once each X, Y and Z axis UL60950-1, C-UL (CSA60950-1), EN60950-1, EN62368-1, EN60065, EN50178 Complies with DEN-AN									
AFETY AND	CONDUCTED NOISE				CCI-B, CISPI				178 Complie			
EGULATIONS	HARMONIC ATTENU		· ·				1-D, LN3302	2-D				
2002/110/10	CASE SIZE/WEIGHT		Complies with IEC61000-3-2 (Class A) *8 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)									
THERS	CASE SIZE/WEIGHT				(Refer to "De	,		, ,	y max (with cr	125515 & CUVEL .	. 1,270y ma	
Not Operations						rauny , mstr	uotion Manua	,				
*2 This is th capacitor of Measured (Equivalen	on is changeed at option, refer e value that measured on n of 22 µ F at 150mm from outpui d by 20MHz oscilloscope o it to KEISOKU-GIKEN: RM103 change in DC output for an e	measuring I t terminal. r Ripple-No).	board with * * bise meter	device is dam contact us ab	quired. ak current. There naged when the s out the detail.	pecification is ex	ceeded. Please	 To meet the condition. Parallel ope Derating is 	eration is not pose required when op	ns. Do not oper sible. perated with chass	sis and cover.	
*3 Drift is the	e change in DC output for an e warm-up at 25°C, with the inpu	eight hour pe		6 Applicable wh	en remote control et us about dynam				se may be gene	rated by power :		

LFA-18

June 26, 2020



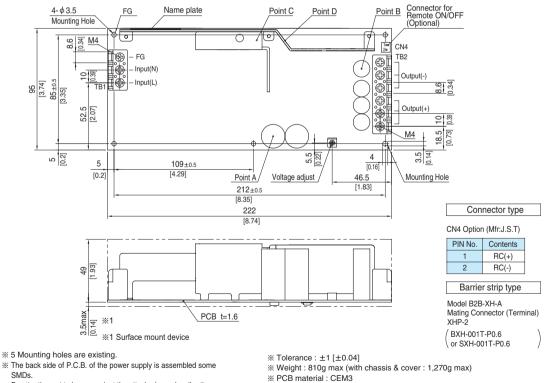
Block diagram



External view

* External size of option is different from standard model.

Standard type



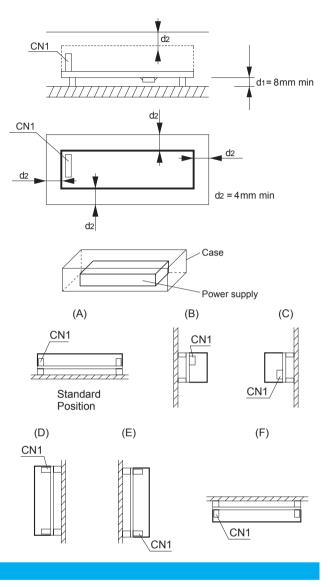
- % The back side of P.C.B. of the power supply is assembled some SMDs.
- Be attention not to bump against the attached area by vibration. % Use the spacer of 8mm length or more regarding insulation.
- And do not use press-fitting bush.
- * Point A, Point B, Point C, Point D are thermometry points. Please 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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Assembling and Installation Method

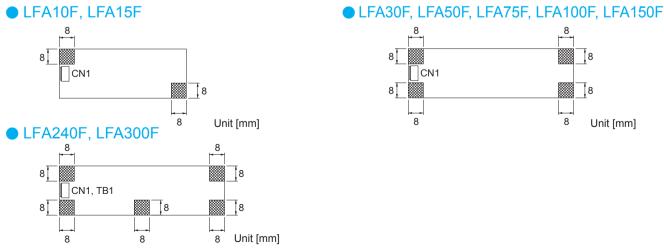
Installation method

- 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.
- In case of metal chassis, keep the distance between d1 & d2 for to insulate between lead of component and metal chassis, use the spacer of 8mm or more between d1. If it is less than d1 & d2, insert the insulation sheet between power supply and metal chassis.
- There is a possibility that it is not possible to cool enough when the power supply is used by the sealing up space as showing in right figure.Please use it after confi rming the temperature of point A and point B of Instruction Manual 3.
- (F) mounting is not possible when unit is with case cover, but if need to operate unit by (F) positioning with case cover, temperature / load derating is necessary. For more details, please contact our sales or engineering departments.



Mounting screw

The mounting screw should be M3. The hatched area shows the allowance of metal parts for mounting.

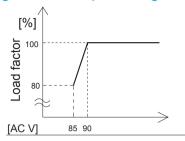


- If metallic fi ttings are used on the component side of the board, ensure there is no contact with surface mounted components.
- This product uses SMD technology.Please avoid the PCB installation method which includes the twisting stress or the bending stress. *Recommendation to electrically connect FG to metal chassis for reducing noise.

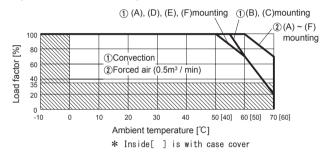
June 26, 2020

Derating

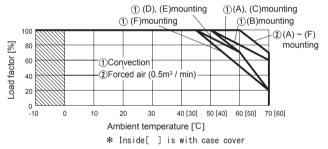
Derating curve for input voltage



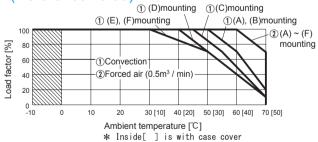
LFA10F Ambient temperature derating curve (Reference value)



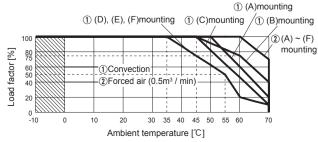
LFA30F Ambient temperature derating curve (Reference value)



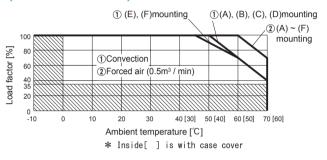
LFA75F Ambient temperature derating curve (Reference value)



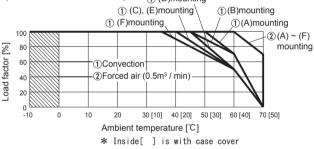
LFA100F Ambient temperature derating curve (Reference value)



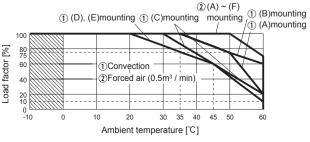
LFA15F Ambient temperature derating curve (Reference value)



LFA50F Ambient temperature derating curve (Reference value) ① (D)mounting



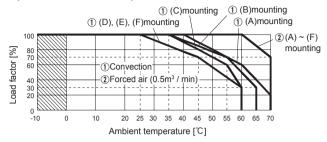
●LFA100F-□-SN Ambient temperature derating curve (Reference value)



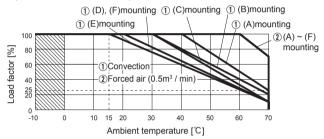
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Derating

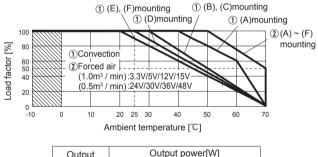
LFA150F Ambient temperature derating curve (Reference value)



LFA240F Ambient temperature derating curve (Reference value)



LFA300F Ambient temperature derating curve (Reference value)



 Convection 	②Forced air				
132.0	198.0				
200.0	300.0				
204.0	324.0				
210.0	330.0				
300.0	336.0				
300.0	330.0				
302.4	338.4				
302.4	336.0				
	①Convection 132.0 200.0 204.0 210.0 300.0 300.0 302.4				

The operative ambient temperature is different by with / without chassis cover or mounting position.

Note: In the hatched area, the specification of Ripple, Ripple Noise is different from other area.

Make sure the temperature at point A and point B is less than the temperatures shown in Instruction Manual 3.

The ambient temperature should be measured 5 to 10 cm away from the power supply so that it won't be influenced by the heat from the power supply. Please consult us for more details.

Instruction Manual

◆ It is neccessary to read the "Instruction Manual" and "Before using our product" before you use our product.

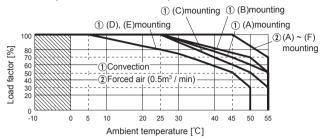
Instruction Manual Before using our produc

https://en.cosel.co.jp/product/powersupply/LFA/ https://en.cosel.co.jp/technical/caution/index.html

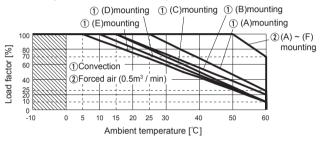




●LFA150F-□-SN Ambient temperature derating curve (Reference value)



LFA240F--SN Ambient temperature derating curve (Reference value)





Basic	Characteristics Da	ata									
Marial		Switching	Input	Inrush	PCB/Patt	PCB/Pattern			Series/Parallel operation availability *2		
Model	Circuit method	frequency [kHz]	current *1 [A]	current protection	Material	Single sided	Double sided	Series operation	Parallel operation		
LFA10F	Flyback converter	100	0.26	LF	CEM-3	Yes		Yes	No		
LFA15F	Flyback converter	100	0.35	Thermistor	CEM-3	Yes		Yes	No		
LFA30F	Flyback converter	130	0.65	Thermistor	CEM-3	Yes		Yes	No		
LFA50F	Active filter 60-440	0.67	Thermistor	CEM-3	Yes		Yes	No			
LFA5UF	Flyback converter	130	0.67			100		162	INO		
LFA75F	Active filter	60-440	1.0	- 1.0	Thermistor	CEM-3	Yes		Yes	No	
LIA/JI	Flyback converter	130	1.0		CEM-5	165		165	INO		
LFA100F	Active filter	60	1.3	Thermistor	CEM-3		Yes	Yes	No		
LFATUUF	Forward converter	140	1.5	inermistor	CEIVI-3		165	ies	INO		
LFA150F	Active filter	60	2.0	Thermistor	CEM-3		Yes	Yes	No		
LFAISUF	Forward converter	140	2.0	THEITHISLOI	CEIM-5		165	ies	INO		
LFA240F	Active filter	60	3.3	SCR	CEM-3		Vaa	Yes	Nie		
LFA240F	Forward converter	140	3.3	SCR	GEIVI-3		Yes	ies	No		
LFA300F	Active filter	60	4.1	SCD	CEM 2	Ma	No		No		
LFA300F	Forward converter	140	4.1	SCR	CEM-3		Yes	Yes	INO		

*1 The value of input current is at ACIN 100V and rated load.*2 Refer to Instruction Manual 2.



Макро Групп – это:

- дистрибьютор электронных компонентов с 1994 года
- контрактный производитель электроники с 2007 года с собственным производством в Санкт-Петербурге (компания Макро ЕМС, входит в ГК Макро Групп)
- поставщик полупроводниковых материалов
- комплексный поставщик электронных компонентов
- моделирование и производство полупроводниковых эпитаксиальных гетероструктур для задач оптоэлектроники

Головной офис расположен в Санкт-Петербурге. Собственные представительства в крупных промышленных городах России и стран СНГ.

Преимущества для наших заказчиков:

- работа по тендерам с 2012 года
- оформление банковских гарантий
- отсрочки платежей
- поставка электронных компонентов по проектным ценам
- инженерная поддержка проектов заказчиков
- сертификат системы менеджмента качестве ISO 9001-2015
- необходимые сертификаты и лицензии

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