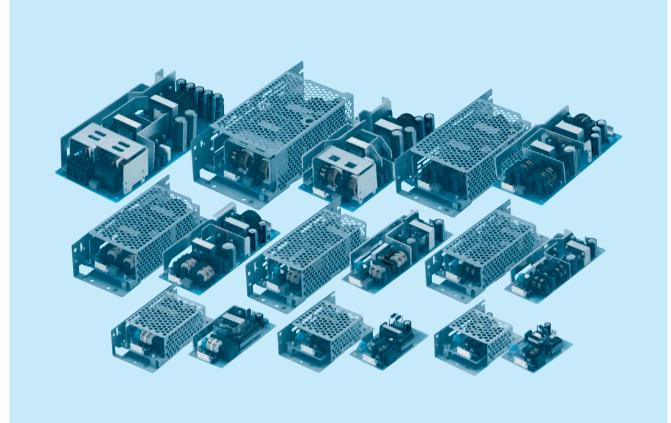
AC-DC Power Supplies Open Frame/ Enclosed Type





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), EN62368-1 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

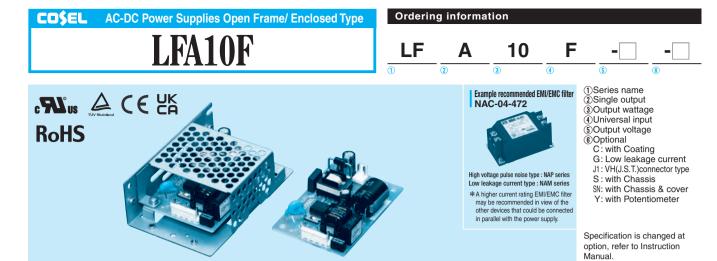
Low Voltage Directive RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations RoHS Regulations

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

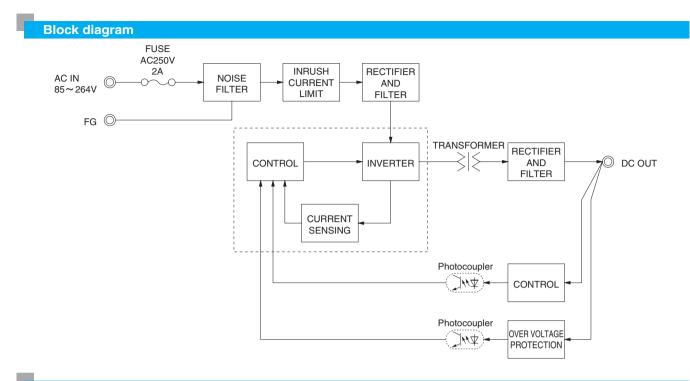


MODEL	LFA10F-3R3-Y	LFA10F-5	LFA10F-12	LFA10F-15	LFA10F-24
MAX OUTPUT WATTAGE[W]	6.6	10	10.8	10.5	12
DC OUTPUT	3.3V 2A	5V 2A	12V 0.9A	15V 0.7A	24V 0.5A
	С	* *			

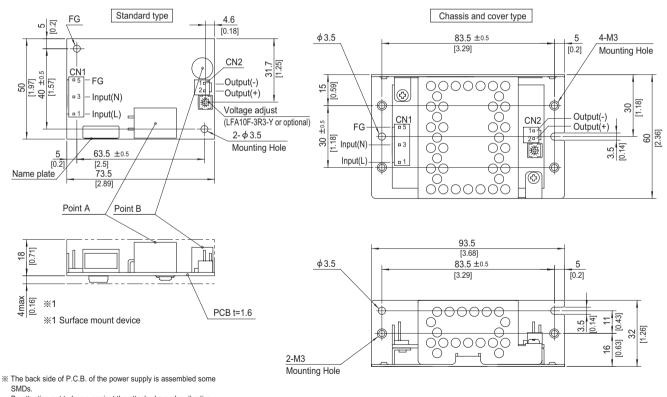
SPECIFICATIONS

	MODEL		LFA10F-3R3-Y	LFA10F-5	LFA10F-12	LFA10F-15	LFA10F-24		
	VOLTAGE[V]		AC85 - 264 1 ¢ (Refer	to "Derating", Instructio	n Manual 1 and 3) *3				
F		ACIN 100V	0.18typ (lo=100%)	0.26typ (lo=100%)					
	CURRENT[A]	ACIN 200V	0.11typ (lo=100%) 0.16typ (lo=100%)						
F	FREQUENCY[Hz]		50 / 60 (47 - 440)						
		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		
F		ACIN 100V	15typ (lo=100%)		71	1 71	1		
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%)						
F	LEAKAGE CURRENT		,	00V / 240V 60Hz, lo=1	00%. According to IEC	62368-1 and DEN-AN)			
	VOLTAGE[V]		3.3	5	12	15	24		
H	CURRENT[A]		2.0	2.0	0.9	0.7	0.5		
	LINE REGULATION[m	1V1 ∗ 5	20max	20max	48max	60max	96max		
	LOAD REGULATION	-	40max	40max	100max	120max	150max		
F	LOAD ILLUGLAHOIN	0 to +50℃	80max	80max	120max	120max	120max		
	RIPPLE[mVp-p]	-10 - 0°C		140max	160max	160max	160max		
	*1		190max	160max	240max	240max	280max		
ŀ		0 to +50℃	120max	120max	150max	150max	150max		
UTPUT	RIPPLE NOISE[mVp-p]	-10 - 0°C	160max	160max	180max	180max	180max		
	*1	lo=0 - 35%		240max	300max	300max	320max		
-		0 to +50℃	50max	50max	120max	150max	240max		
	TEMPERATURE REGULATION[mV]	-10 to +50℃	60max	60max	150max	180max	290max		
-	DRIFT[mV] *2		20max	20max	48max	60max	96max		
H	START-UP TIME[ms]								
H	HOLD-UP TIME[ms]		200typ (ACIN 100V, lo=100%) * Start-up time is 700ms typ for less than 1 minute of applying input again from turning off the input volta 20typ (ACIN 100V, lo=100%)						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.63	, ,	vilable for adjusting out	put voltage between ±	100/)		
H	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]			4.90 to 5.30	11.50 to 12.50	14.40 to 15.60	23.00 to 25.00		
	OVERCURRENT PROTE		3.30 to 3.40			14.40 10 15.60	23.00 10 25.00		
H				ting and recovers auton		47.05 +- 04.00	07.00 to 00.00		
	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						
	OPERATING INDICAT	ION	Not provided						
	REMOTE SENSING		Not provided						
	REMOTE ON/OFF		Not provided AC3,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)						
H	INPUT-OUTPUT		, ,	,	· · · · ·	/			
H	INPUT-FG			toff current = 10mA, DC					
	OUTPUT-FG			off current = 25mA, DC5		. ,			
H	OPERATING TEMP., HUMID.AND						00m (10,000 feet) max *3		
NVIRONMENT ⊢	STORAGE TEMP., HUMID.AND A	ALTITUDE		RH (Non condensing),					
H	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						
	AGENCY APPROVAL	S	, (A60950-1), EN62368-1		1			
	CONDUCTED NOISE			VCCI-B, CISPR-B, EN5					
	HARMONIC ATTENUA	ATOR	Complies with IEC61000-3-2 (Class A) *6 (Not built-in to active filter) *4						
)THERS ⊢	CASE SIZE/WEIGHT		50×22×73.5mm [1.97×0.87×2.89 inches] (W×H×D) / 55g max (with chassis & cover : 150g max)						
	COOLING METHOD		Convection (Refer to "I	Derating", Instruction Ma	anual 3) *3				
capacitor Measured (Equivaler A circuit r Therefore operated,	e value that measured on mea of 22 µF at 150mm from outp Is y 20MHz oscilloscope or Ripp Is 050KU-GIKEN: RM103 reducing standby power is buil a, the internal switch element i and the Ripple/Ripple Noise	but terminal. ble-Noise met). It in this unit. is intermitten	Please re er *2 Drift is th a half-ho constant t *3 Derating	=0-35% is different. After 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 i 1000-3-2.	ight hour period after *(put voltage held * *	Please contact us about a To meet the specifications. Parallel operation is not po Derating is required when	ynamic load and input response. nother class. Do not operate over-loaded cond seible. operated with chassis and cover. rated by power supply in case of p		
FA-2				May 14, 2025			www.cosel.co.jp/		





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/O Connector		Mating connector	Т	erminal				
014	4 4400704 0	1-1123722-5	Chain	1123721-1				
CINT	1-1123724-3	1-1123722-5	Loose	1318912-1				
CNID	1-1123723-2	1-1123722-2	Chain	1123721-1				
CINZ	1-1123723-2	1-1123722-2	Loose	1318912-1				
(Mfr:Tyco Electronics)								

% I/O Connector is Mfr. Tyco Electronics

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

<PIN CONNECTION>

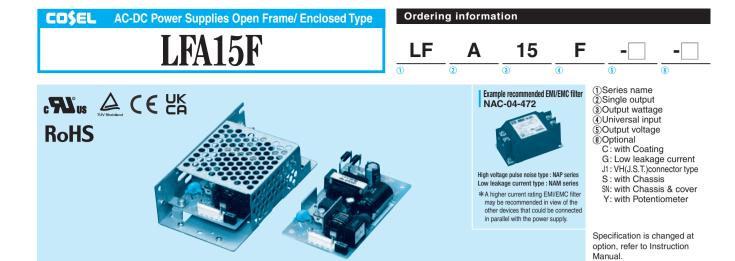
CN1		CN2		
Pin No.	Input	Pin No.	Output	※ Tol
1	AC(L)	4	-V	※ We
2		'	-v	* PC
3	AC(N)			* Op
4		2	+V	X Dir Mo
5	FG			· × WO

olerance : ±1 [±0.04]

- /eight : 55g max (with chassis & cover : 150g max) CB material / thickness : CEM3 / 1.6mm

ptional chassis and cover material : Electric galvanizing steel board. . imensions in mm, []=inches

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



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

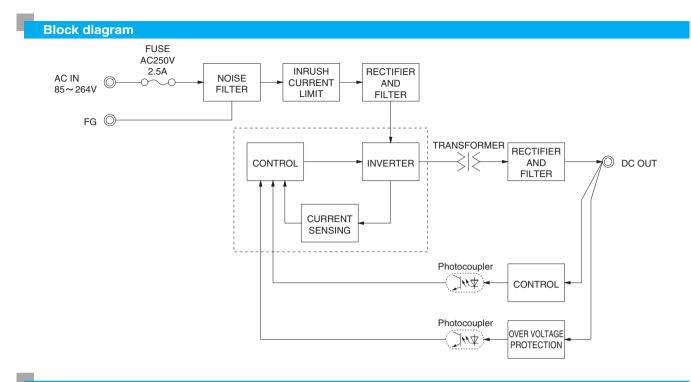
SPECIFICATIONS

	MODEL		LFA15F-3R3-Y	LFA15F-5	LFA15F-12	LFA15F-15	LFA15F-24			
	VOLTAGE[V]		AC85 - 264 1 φ (Refer	AC85 - 264 1 ¢ (Refer to "Derating", Instruction 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)							
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 co	1 71						
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (At co	,,,,,						
	LEAKAGE CURRENT[mA]			, , ,	00%, According to IEC	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	nVl *5	20max	20max	48max	60max	96max			
	LOAD REGULATION		40max	40max	100max	120max	150max			
	LOAD ILLOOLAHON	0 to +50℃	80max	80max	120max	120max	120max			
	RIPPLE[mVp-p]									
	*1	-10 - 0°C	140max 190max	140max	160max	160max	160max			
		lo=0 - 35%		160max	240max	240max	280max			
	RIPPLE NOISE[mVp-p]	0 to +50℃	120max	120max	150max	150max	150max			
DUTPUT	*1	-10 - 0°C	160max	160max	180max	180max	180max			
		lo=0 - 35%		240max	300max	300max	320max			
	TEMPERATURE REGULATION[mV]	0 to +50°C	50max	50max	120max	150max	240max			
		-10 to +50℃	60max	60max	150max	180max	290max			
	DRIFT[mV] *2		20max	20max	48max	60max	96max			
ŀ	START-UP TIME[ms]				ms typ for less than 1 minut	e of applying input again fr	om turning off the input voltag			
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=	, ,						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 to 3.63		ailable for adjusting out					
	OUTPUT VOLTAGE SETT		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 ra	ting and recovers autor	natically					
ROTECTION	OVERVOLTAGE PROTE	CTION	4.00 to 5.25	5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60			
IRCUIT AND	OPERATING INDICAT	ION	Not provided							
THERS	REMOTE SENSING		Not provided							
	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, Cu	toff current = 10mA, D	C500V 50M Ω min (At F	oom Temperature)				
	OUTPUT-FG		AC500V 1minute, Cuto	off current = 25mA, DC5	500V 50M Ω min (At Ro	om Temperature)				
	OPERATING TEMP., HUMID. AND	ALTITUDE	-10 to +70℃, 20 - 90%	RH (Non condensing) (Refer to "Derating", Ins	ruction Manual 3), 3,00	0m (10,000 feet) max *3			
	STORAGE TEMP., HUMID. AND A	ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max							
INVIRONMENT	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 APPROVAL	s	UL60950-1, C-UL (CSA60950-1), EN62368-1 Complies with DEN-AN							
IOISE	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B							
REGULATIONS	HARMONIC ATTENU	ATOR	Complies with IEC610	00-3-2 (Class A) *6 (No	t built-in to active filter)	*4				
	CASE SIZE/WEIGHT		Complies with IEC61000-3-2 (Class A) *6 (Not built-in to active filter) *4 50×22×87.5mm [1.97×0.87×3.44 inches] (W×H×D) / 80g max (with chassis & cover : 190g max)							
OTHERS	COOLING METHOD		Convection (Refer to "Derating", Instruction Manual 3) *3							
capacito Measure (Equival A circuit Therefo	he value that measured on mex or 622 µF at 150mm from outp d by 20MHz socilloscope or R ent to KEISOKU-GIKEN: RM10 reducing standby power is bui re, the internal switch elemer J, and the Ripole/Ripole Noise	out terminal. ipple-Noise r 03). It in this unit. ht is intermiti	d with factor lo- Please ru neter *2 Drift is th a half-ho constant tent *3 Derating	=0-35% is different. =6r to the Instruction Manual e change in DC output for an o ur warm-up at 25°C, with the ir at the rated input/output. is required. o or more units are operating	1.7. *5 sight hour period after *6 put voltage held * *	Please contact us about an To meet the specifications. Parallel operation is not por Derating is required when o	namic load and input response. iother class. Do not operate over-loaded conditio			

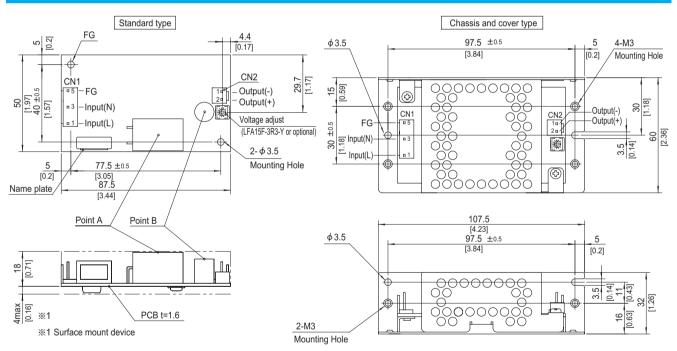
the IEC61000-3-2. May 14, 2025

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		· · · · · · · · · · · · · · · · · · ·		erminal			
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	1-1123723-2	1-1123722-2	Loose	1318912-1			
(Mfr:Tyco Electronics)							

% I/O Connector is Mfr. Tyco Electronics

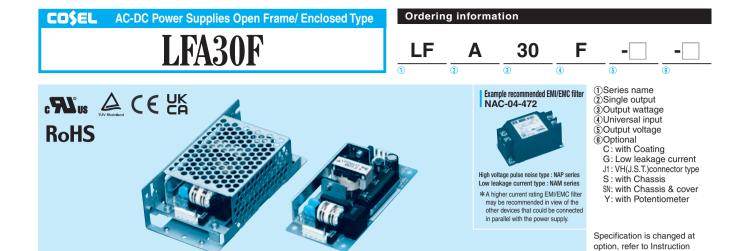
% Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 6.

<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



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 φ (Re	fer 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)							
NPUT		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 (lo=100%) (A	30typ (lo=100%) (At cold start) (Ta=25°C)						
	LEAKAGE CURREN	T[mA]	0.30 / 0.65max (AC	N 100V / 240V 60H	Iz, Io=100%, According	to IEC62368-1 and DEN	I-AN)			
	VOLTAGE[V]		3.3	5	12	15	24			
	CURRENT[A]		6.0	6.0	2.5	2.0	1.3			
	LINE REGULATION[mV] *5	20max	20max	48max	60max	96max			
	LOAD REGULATION	[mV] *5	40max	40max	100max	120max	150max			
		0 to +50℃*1	80max	80max	120max	120max	120max			
	RIPPLE[mVp-p]	-10-0°C *1	140max	140max	160max	160max	160max			
		0 to +50℃*1	120max	120max	150max	150max	150max			
OUTPUT	RIPPLE NOISE[mVp-p]	-10-0°C *1	160max	160max	180max	180max	180max			
C S		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, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed ("Y"option	is available for adjusting	output voltage between	1 ±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% o	f 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	i						
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		AC500V 1minute, C	utoff current = 25m/	A, DC500V 50M Ω min (/	At Room Temperature)				
	OPERATING TEMP., HUMID. AND	ALTITUDE	-10 to +70°C, 20 - 90%RH (Non condensing) (Refer to "Derating", Instruction Manual 3), 3,000m (10,000feet) m							
NVIRONMENT	STORAGE TEMP., HUMID. AND	ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 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 APPROVAI	LS	UL60950-1, C-UL (CSA60950-1), EN62368-1 Complies with DEN-AN							
OISE	CONDUCTED NOISE		Complies with FCC	B, VCCI-B, CISPR-	B, EN55011-B, EN55022	2-В				
EGULATIONS	HARMONIC ATTENU	JATOR	Complies with IEC61	000-3-2 (Class A) *6	(Class A) *6 (Not built-in to active filter) *4					
THERS	CASE SIZE/WEIGHT		50×26.5×105mm	[1.97×1.04×4.13 ii	nches] (W×H×D) / 130	g max (with chassis & c	over : 260g max)			
710643	COOLING METHOD		Convection (Refer to	to "Derating", Instruction Manual 3) *3						
from ou	the value that measured or tput terminal. ed by 20MHz oscilloscope or				Please contact us for	its are operating it may not co details. but 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.

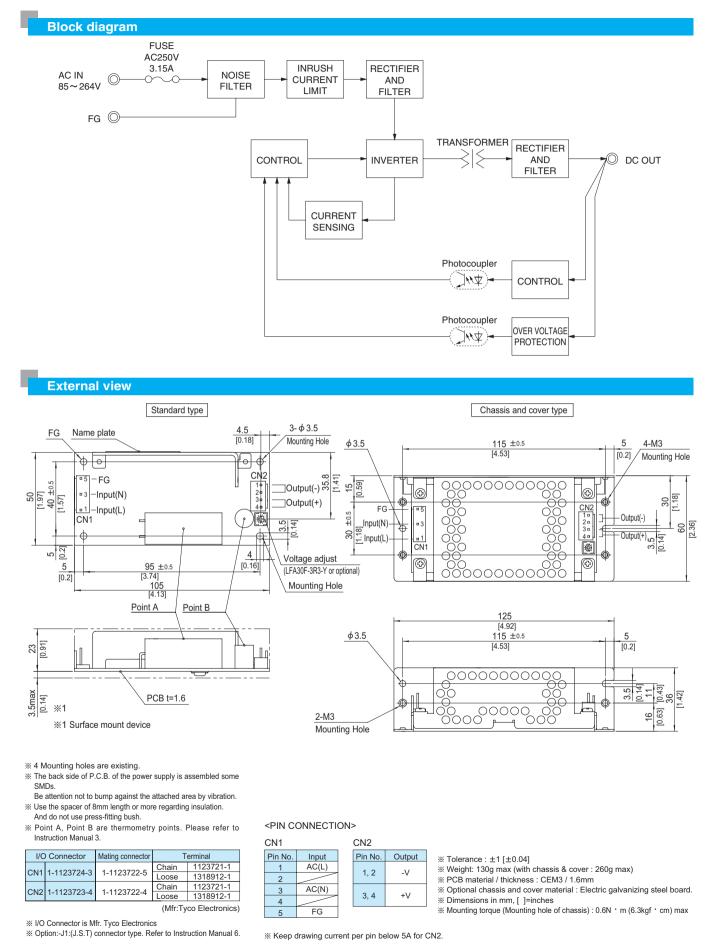
Derating is required when operated with chassis and cover. Sound noise may be generated by power supply in case of pulse load.

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Manual.

May 14, 2025

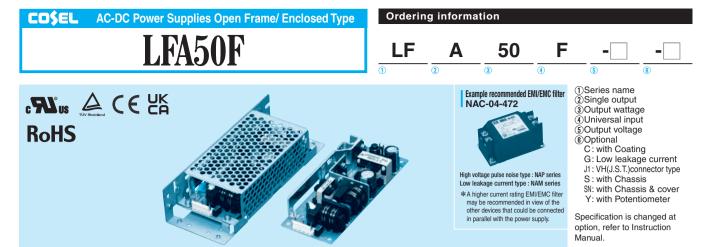




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May 14, 2025

LFA-7



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

SPECIFICATIONS

	MODEL		LFA50F-3R3-Y	LFA50F-5	LFA50F-12	LFA50F-15	LFA50F-24	LFA50F-36	LFA50F-48			
	VOLTAGE[V]		AC85 - 264 1 φ	AC85 - 264 1 ϕ (Refer to "Derating", Instruction Manual 1 and 3) *3								
		ACIN 100V	0.47typ (lo=100%)	0.67typ (lo=100	0%)							
	CURRENT[A]	ACIN 200V	0.27typ (lo=100%)	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			
IPUT	EFFICIENCY[%]	ACIN 200V	74.0typ	79.0typ	81.5typ	81.5typ	83.0typ	83.5typ	82.5typ			
		ACIN 100V	0.96typ									
	POWER FACTOR (Io=100%)	ACIN 200V	0.83typ 0.90typ									
		ACIN 100V	15typ (lo=100%	5typ (lo=100%) (At cold start) (Ta=25°C)								
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (At cold start) (Ta=25°C)									
	LEAKAGE CURRENT[mA]		0.40 / 0.75max	(ACIN 100V / 24	0V 60Hz, lo=10	00%, According t	o IEC62368-1 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	[mV] *4	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℃	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 RANGE[V]		2.85 to 3.63	Fixed ("Y"option	n is available for	adjusting output	voltage between	n ±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	34.50 to 37.50	46.00 to 50.00			
	OVERCURRENT PROT	ECTION	Works over 105% of rating and recovers automatically									
ROTECTION	OVERVOLTAGE PROTE	CTION	4.00 to 5.25	5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	41.40 to 50.40	55.20 to 67.20			
	OPERATING INDICA	TION	Not provided									
THERS	REMOTE SENSING		Not provided									
	REMOTE ON/OFF		Not provided									
	INPUT-OUTPUT		AC3,000V 1mir	ute, Cutoff curre	nt = 10mA, DC5	500V 50M Ω min	(At Room Tempe	erature)				
SOLATION	INPUT-FG		AC2,000V 1mir	ute, Cutoff curre	nt = 10mA, DC5	500V 50M Ω min	(At Room Tempe	erature)				
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)									
	OPERATING TEMP., HUMID. AND	ALTITUDE	-10 to +70°C, 20 - 90%RH (Non condensing) (Refer to "Derating", Instruction Manual 3), 3,000m (10,000feet) max									
NVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75℃, 2	0 - 90%RH (Non	condensing), 9,	000m (30,000fee	et) max					
	VIBRATION			():		inutes each alon	g X, Y and Z axis	S				
	IMPACT		· · · · · · · · · · · · · · · · · · ·), 11ms, once ea								
AFETY AND	AGENCY APPROVAL					omplies with DE						
OISE	CONDUCTED NOISE				,	011-B, EN55022	-В					
EGULATIONS	HARMONIC ATTENU			EC61000-3-2 (C	,							
THERS	CASE SIZE/WEIGHT					, ,	g max (with chas	sis & cover : 325	g max)			
	COOLING METHOD		Convection (Re	fer to "Derating",	Instruction Mar	nual 3) *3						
from ou Measur RM103)		r Ripple-No	ise meter (Equivalen		*4 P N: *5 P * To	erating is required. lease contact us abo lease contact us abo o meet the specificati arallel operation is no	ut another class. ons. Do not operate o	input response. over-loaded condition	I.			

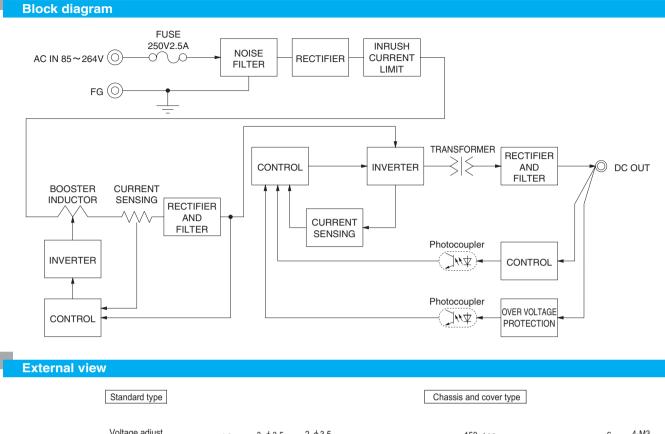
*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.

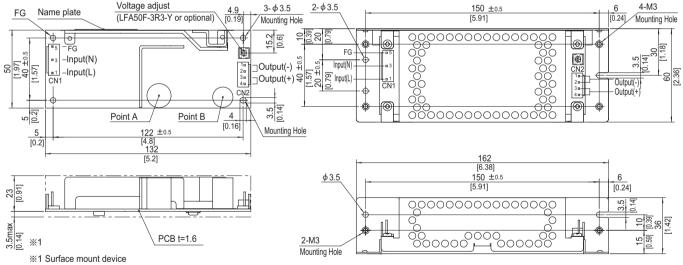
May 14, 2025

Parallel operation is not possible.

Derating is required when operated with chassis and cover







% 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/O Connector Mating connector Terminal 1123721-1 Chain CN1 1-1123724-3 1-1123722-5 1318912-1 Loose 1123721-1 Chain CN2 1-1123723-4 1-1123722-4 1318912-1 Loose (Mfr:Tyco Electronics

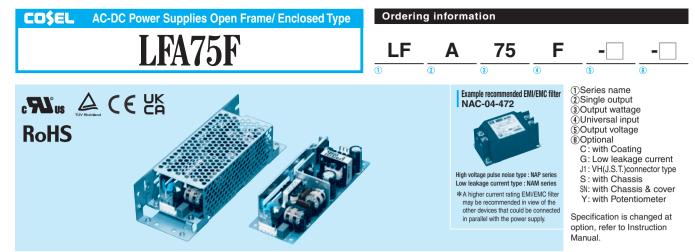
<PIN CONNECTION>

	CN1		CN2		
	Pin No.	Input	Pin No.	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	Optional chassis and cover material : Electric galvanizing steel board. Dimensions in mm, []=inches
5)	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.



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	AC85 - 264 1 ϕ (Refer to "Derating", 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%)									
	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									
	POWER FACTOR (lo=100%)	ACIN 200V	0.83typ 0.90typ									
		ACIN 100V	,1	15typ (lo=100%) (At cold start) (Ta=25°C)								
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100%) (At cold start) (Ta=25°C)									
	LEAKAGE CURRENT[mA]		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			
	LOND REGOLATION	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			
OUTPUT		0 to +50℃*1	120max	120max	150max	150max	150max	250max	250max			
	RIPPLE NOISE[mVp-p]	-10-0°C *1	160max	160max	180max	180max	180max	300max	300max			
		0 to +50℃	50max	50max	120max	150max	240max	360max	480max			
	TEMPERATURE REGULATION[mV]	-10 to +50℃	60max	60max	150max	180max	290max	450max	600max			
	DRIFT[mV] *2		20max	20max	48max	60max	96max	144max	192max			
	START-UP TIME[ms]		350typ (ACIN 1		4011187	Joomax	90111aX	14411187	1921118			
	HOLD-UP TIME[ms]		20typ (ACIN 10									
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		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		Works over 105% of rating and recovers automatically									
DOTECTION					1		27.60 to 22.60	11 10 to 50 10	55 20 to 67 20			
ROTECTION			4.00 to 5.25 5.75 to 7.00 13.80 to 16.80 17.25 to 21.00 27.60 to 33.60 41.40 to 50.40 55.20 to 67.20 Not provided									
THERS	REMOTE SENSING	TION	Not provided									
	REMOTE ON/OFF											
	INPUT-OUTPUT		Not provided AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)									
SOLATION	INPUT-FG							,				
SOLATION	OUTPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)									
	OPERATING TEMP HUMID.AND		AC500V 1minute, Cutoff current = 25mA, DC500V 50M Ω min (At Room Temperature)									
	STORAGE TEMP., HUMID.AND	-	-10 to +70°C, 20 - 90%RH (Non condensing) (Refer to "Derating", Instruction Manual 3), 3,000m (10,000feet) max									
NVIRONMENT	VIBRATION	ALITIODE			0,	inutes each alon	/					
	IMPACT						$y \wedge$, t and z axis					
	AGENCY APPROVAL	6	196.1m/s ² (20G), 11ms, once each X, Y and Z axis									
AFETY AND			UL60950-1, C-UL (CSA60950-1), EN62368-1 Complies with DEN-AN Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B									
EGULATIONS	CONDUCTED NOISE			, ,	,	JII-D, EN00022	-D					
LOULAIIUNS	HARMONIC ATTENU			EC61000-3-2 (C	,		nov (with ab	0.0000000000000000000000000000000000000				
OTHERS	CASE SIZE/WEIGHT					, ,	nax (with chassi	s & cover : 440g	max)			
	COOLING METHOD		Convection (Re	iei to Derating",	Instruction Man	uai 3) *3						
from ou	the value that measured or itput terminal. ed by 20MHz oscilloscope or). the change in DC output fo	Ripple-No	ise meter (Equivalent	to KEISOKU-GIKEN	*4 Ple N: *5 Ple * To	erating is required. ease contact us about ease contact us about meet the specification rallel operation is no	ut another class. ons. Do not operate o	input response. over-loaded condition				

*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.

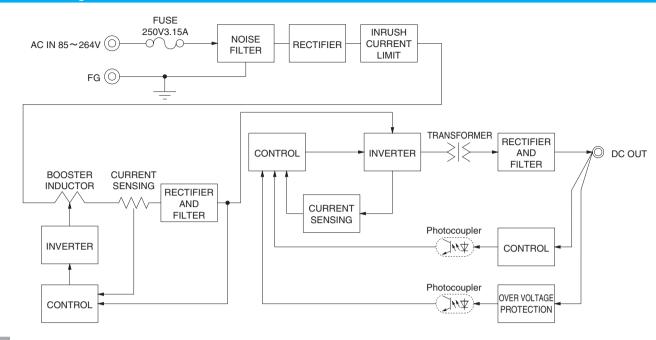
May 14, 2025

Parallel operation is not possible.

Derating is required when operated with chassis and cover



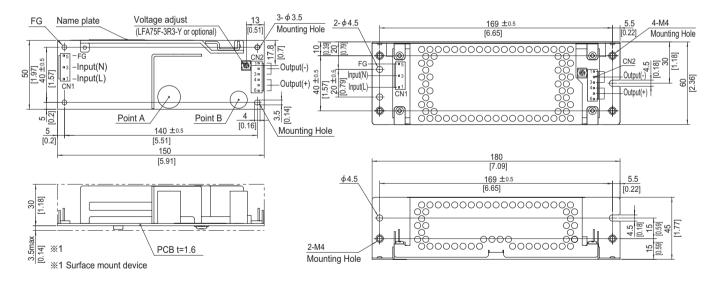




External view

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	1-1123724-3	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	1-1123723-6	1-1123722-6	Loose	1318912-1				
(Mfr:Tyco Electronics)								

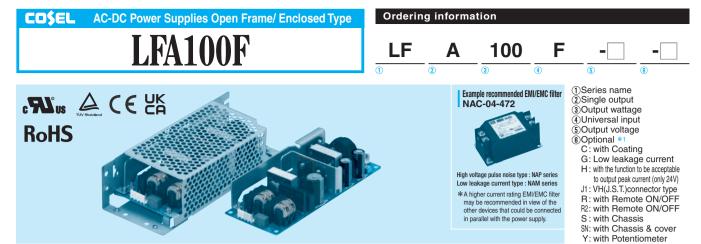
※ I/O Connector is Mfr. Tyco Electronics

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

<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)	4 to 6	+V	* Optional chassis and cover material : Electric galvanizing steel board.
4		4 10 6	+v	※ Dimensions in mm, []=inches ※ Maurilia torus (Maurilia hale of chaosis) of 5N a.m. (19)(of a.m.) may
5	FG			※ Mounting torque (Mounting hole of chassis) :1.5N * m (16kgf * cm) max

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



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								
MODEL	LFA100F-3R3-Y	LFA100F-5-Y	LFA100F-12	LFA100F-15	LFA100F-24	LFA100F-24-H	LFA100F-36	LFA100F-48

	MODEL		LFA100F-3R3-Y	LFA100F-5-Y	LFA100F-12	LFA100F-15	LFA100F-24	LFA100F-24-H	LFA100F-36	LFA100F-48		
	VOLTAGE[V]		AC85 - 264 1	φ (Refer to "D	erating", Instru	ction Manual 1	and 3) *4					
		ACIN 100V	0.9typ (lo=100%)									
	CURRENT[A]	ACIN 200V	0.5typ (lo=100%)	0.7typ (lo=10	0%)							
	FREQUENCY[Hz]		50 / 60 (47 - 63)									
		ACIN 100V	77.0typ	82.0typ	82.0typ	83.0typ	84.0typ	84.0typ	84.0typ	84.5typ		
INPUT	EFFICIENCY[%]	ACIN 200V	79.0typ	84.0typ	84.5typ	85.5typ	87.0typ	87.0typ	87.0typ	87.0typ		
		ACIN 100V	0.98typ	0.99typ								
	POWER FACTOR (lo=100%)	ACIN 200V	0.92typ	0.92typ 0.95typ								
		ACIN 100V	15typ (lo=100%) (At cold start) (Ta=25°C)									
	INRUSH CURRENT[A]	ACIN 200V	30typ (lo=100	30typ (Io=100%) (At cold start) (Ta=25℃)								
	LEAKAGE CURRENT[mA]		0.40 / 0.75ma	ax (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	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	[mV] *7	40max	40max	100max	120max	150max	150max	240max	240max		
		0 to +50℃*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		
001101		0 to +50℃	50max	50max	120max	150max	240max	240max	360max	480max		
	TEMPERATURE REGULATION[mV]	-10 to +50°C	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=100	%)							
	HOLD-UP TIME[ms]		20typ (ACIN	100V, lo=100%	s)							
	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 SETTING[V]			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 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										
	INPUT-FG		AC2,000V 1n	ninute, Cutoff c	urrent = 10mA	, DC500V 50M	IΩ min (At Roo	om Temperatur	e)			
ISOLATION	OUTPUT·RC-FG	*6	AC500V 1mir	ute, Cutoff cur	rrent = 25mA, [DC500V 50MΩ	2 min (At Roon	n Temperature)				
	OUTPUT-RC	*6	AC100V 1mir	ute, Cutoff cur	rrent = 25mA, [DC100V 10MΩ	2 min (At Roon	n Temperature)				
	OPERATING TEMP., HUMID.AND	ALTITUDE *4	-10 to +70℃,	20 - 90%RH (Non condensin	ig) (Refer to "D	erating", Instru	iction Manual 3	3), 3,000m (10,	000feet) max		
ENVIRONMENT	STORAGE TEMP., HUMID.AND	ALTITUDE	-20 to +75℃,	20 - 90%RH (Non condensin	ig), 9,000m (30	,000feet) max					
ENVIRONMENT	VIBRATION		10 - 55Hz, 19	.6m/s² (2G), 3ı	minutes period	, 60minutes ea	ch along X, Y a	and Z axis				
	IMPACT		196.1m/s² (20)G), 11ms, ond	e each X, Y an	nd Z axis						
SAFETY AND	AGENCY APPROVAL	LS	UL60950-1, 0	C-UL (CSA609	50-1), EN6236	8-1 Complies v	vith DEN-AN			_		
NOISE	CONDUCTED NOISE		Complies with	n FCC-B, VCC	I-B, CISPR-B, I	EN55011-B, El	N55022-B					
REGULATIONS	HARMONIC ATTENU	JATOR	Complies with IEC61000-3-2 (Class A) *8									
OTHERS	CASE SIZE/WEIGHT		62×33.5×15	55mm [2.44×1	.32×6.10 inch	nes] (W×H×D) / 280g max (with chassis &	cover : 480g m	nax)		
UTIENS	COOLING METHOD		Convection (F	Refer to "Deratir	ng", Instruction I	Manual 3) *4						
 \$1 Specification is changed at option, refer to Instruction 2 This is the value that measured on measuring capacitor of 22 µF at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-N (Equivalent to KEISOKU-GIKEN: RM103). *3 Drift is the change in DC output for an eight hour pe half-hour warm-up at 25°C, with the input voltage he 			board with *4 Derating is required. * To meet the specifications. Do not operate over- *5 () means peak current. There is a possibility that an internal device is damaged when the specification is exceeded. Please contact us about the detail. * Derating is required when operated with chassis and cov striod after a *6 Applicable when Remote ON/OFF (optional) is added. * Sound noise may be generated by power supply in						ssis and cover.			
IFA 19							paide			al an in/a		

LFA-12

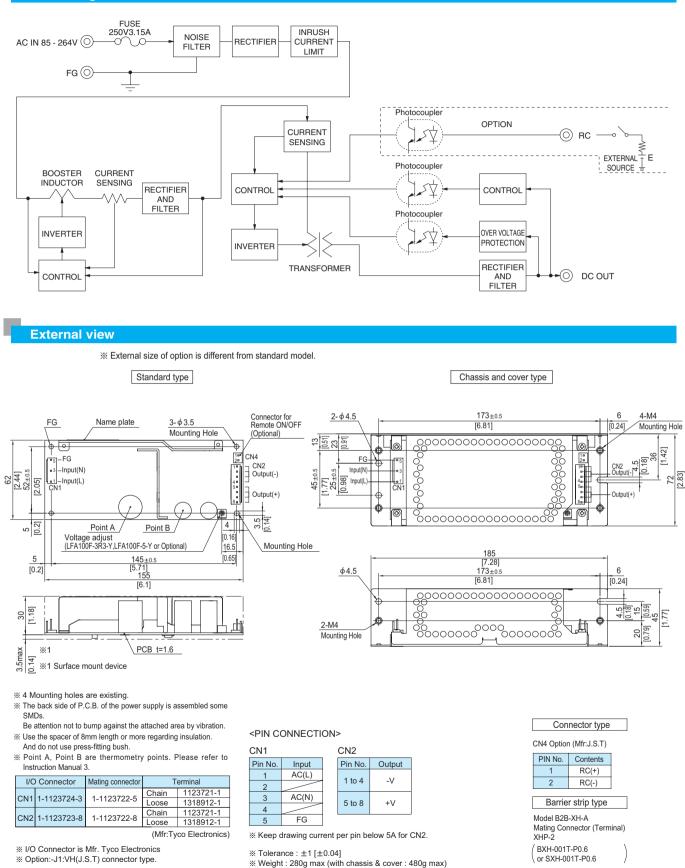


Please refer to Instruction

manual 6.



Block diagram



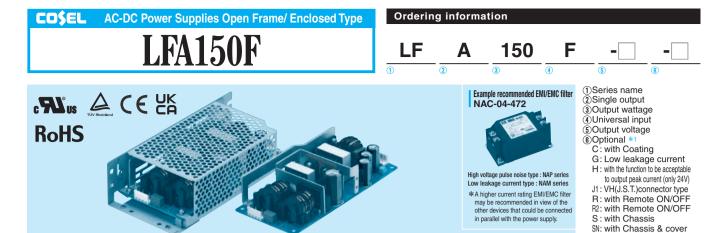
※ PCB material : CEM3

* 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

May 14, 2025



MODEL	LFA150F-3R3-Y	LFA150F-5-Y	LFA150F-12	LFA150F-15	LFA150F-24	LFA150F-24-H	LFA150F-36	LFA150F-48
MAX OUTPUT WATTAGE[W] *5	99	150	150	150	151.2	151.2 (189.6)	151.2	153.6
DC OUTPUT *5	3.3V 30A	5V 30A	12V 12.5A	15V 10A	24V 6.3A	24V 6.3 (7.9)A	36V 4.2A	48V 3.2A
SPECIFICATIONS								
MODEL	LFA150F-3R3-Y	LFA150F-5-Y	LFA150F-12	LFA150F-15	LFA150F-24	LFA150F-24-H	LFA150F-36	LFA150F-48
VOLTAOED/	1005 0044							

	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	iction Manual 1	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	50 / 60 (47 - 63)								
		ACIN 100V	80.0typ	82.5typ	82.5typ	84.0typ	85.0typ	85.0typ	85.0typ	85.5typ		
INPUT	EFFICIENCY[%]	ACIN 200V	82.0typ	85.5typ	85.0typ	86.5typ	87.5typ	87.5typ	87.5typ	88.0typ		
		ACIN 100V	0.98typ	0.99typ	, ,,	, ,,	, ,,		, ,,			
	POWER FACTOR (lo=100%)	ACIN 200V	0.92typ	0.95typ								
		ACIN 100V)%) (At cold sta	art) (Ta=25℃)							
	INRUSH CURRENT[A]	ACIN 200V		Otyp (Io=100%) (At cold start) (Ta=25°C)								
	LEAKAGE CURREN	T[mA]				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		40max	40max	100max	120max	150max	150max	240max	240max		
		0 to +40°C *2		80max	120max	120max	120max	240max	150max	150max		
	RIPPLE[mVp-p]	-10-0°C *2		140max	160max	160max	160max	320max	200max	200max		
		0 to +40°C *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		
		0 to +40°C		50max	120max	150max	240max	240max	360max	480max		
-	TEMPERATURE REGULATION[mV]	-10 to +40°C		60max	150max	180max	290max	290max	450max	600max		
	DRIFT[mV]	*3		20max	48max	60max	96max	96max	144max	192max		
	START-UP TIME[ms]			100V, lo=100	1	oomax	oomax	oomax				
	HOLD-UP TIME[ms]		21 (100V, lo=100%	,							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]				Fixed ("Y"opti	ion is available	for adjusting	output voltage)				
	OUTPUT VOLTAGE SETTING[V]		3.30 to 3.40			14.40 to 15.60	, ,	23.00 to 25.00	34.50 to 37.50	46.00 to 50.00		
	OVERCURRENT PROTECTION					1		-H) and recove	1			
PROTECTION	OVERVOLTAGE PROT			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	Not provided								
OTHERS	REMOTE SENSING		Not provided									
	REMOTE ON/OFF		Option (Refer to Instruction Manual)									
	INPUT-OUTPUT-RC	*6	· ·		/	DC500V 50N	Ω min (At Ro	om Temperatu	re)			
	INPUT-FG							om Temperatu	,			
ISOLATION	OUTPUT·RC-FG	*6						n Temperature	,			
	OUTPUT-RC	*6						n Temperature				
	OPERATING TEMP., HUMID. AND	ALTITUDE *4						uction Manual		000feet) max		
	STORAGE TEMP., HUMID.AND				Non condensin		-					
ENVIRONMENT	VIBRATION		10 - 55Hz, 19	.6m/s² (2G), 3i	minutes period	, 60minutes ea	ach along X, Y	and Z axis				
	IMPACT		196.1m/s ² (20)G), 11ms, ond	e each X, Y ar	nd Z axis						
SAFETY AND	AGENCY APPROVAI	LS	UL60950-1, C	C-UL (CSA609	50-1), EN6236	8-1 Complies	with DEN-AN					
NOISE	CONDUCTED NOISE		Complies with	n FCC-B, VCC	I-B, CISPR-B,	EN55011-B, E	N55022-B			-		
REGULATIONS	HARMONIC ATTENU	JATOR	Complies with	n IEC61000-3-	2 (Class A) *8							
0711500	CASE SIZE/WEIGHT		75×37.0×16	60mm [2.95×1	.46×6.30 inche	es] (W×H×D)	/ 390g max (v	vith chassis & c	over : 650g ma	ax)		
OTHERS	COOLING METHOD		Convection (F	Refer to "Derati	ing", Instructior	n Manual 3) *4						
	on is changeed at option, refer		n Manual.	at the rated input/or	utput.			se contact us about				
	e value that measured on i of 22 µ F at 150mm from output			Derating is require	d. urrent. There is a p	ossibility that as it		neet the specifica dition.	ations. Do not op	erate over-loaded		
	by 20MHz oscilloscope o				d when the specific			illel operation is not	possible.			
(Equivaler	t to KEISOKU-GIKEN: RM103).		contact us about th	ne detail.		* Dera	ating is required whe	n operated with cha			
	e change in DC output for an e warm-up at 25℃, with the inpu				emote control (option about dynamic load			nd noise may be g e load.	enerated by powe	supply in case o		
TTN 14		tonayo ne						544.				

May 14, 2025

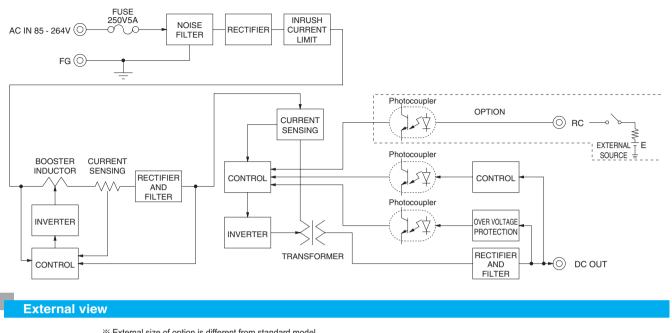
Y: with Potentiometer Please refer to Instruction

manual 6.



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] $\left[\circ \right]$ -0 0 0 42 -FG FG-CN3 Output(-) CN3 Output(-) ∎3 –Input(N) Input(N) 75 [2.95] 65±0.5 [2.6] <u>∎1</u>–Input(L) CN1 4...1 Input(L) $\frac{55\pm0.5}{[2.17]}$ 85 3.35] 1.38] CN1 18] õ CN2 Output(+) CN2 4 4 29巻 魚 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 xel 5: C 2: X1 Surface mount device 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.

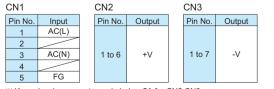
I/C	Connector	Mating connector	Terminal		
CNIA	1-1123724-3	1-1123722-5	Chain	1123721-1	
CINT	1-1123724-3	1-1123722-5	Loose	1318912-1	
010	4 4400700 0	1-1123722-6	Chain	1123721-1	
CNZ	1-1123723-6	1-1123722-6	Loose	1318912-1	
010	4 4400700 7	4 4400700 7	Chain	1123721-1	
CN3	1-1123723-7	1-1123722-7	Loose	1318912-1	
			() AG T.	····	

(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

May 14, 2025

Connector type

RC(+)

RC(-)

CN4 Option (Mfr. J S T)

PIN No. Contents

Barrier strip type

Mating Connector (Terminal) XHP-2

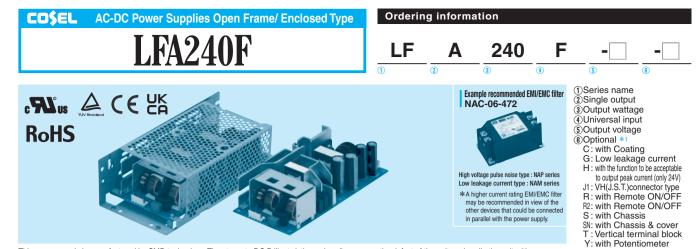
2

Model B2B-XH-A

BXH-001T-P0.6

or SXH-001T-P0.6

www.cosel.co.jp/en/



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

			LFA240F-24	LFA240F-24-H	LFA240F-36	LFA240F-48					
	VOLTAGE[V]		AC85 - 264 1 ϕ (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)								
INPUT	ACIN 100V		84.5typ 84.5typ 84.5typ 84.5typ								
	EFFICIENCY[%]	ACIN 100V	87.5typ	87.5typ	87.5typ	87.5typ					
		ACIN 100V	0.99typ	07.5typ	07.5typ	67.5typ					
	POWER FACTOR (lo=100%)	ACIN 100V	0.95typ								
		ACIN 200V	71	noru inruch ourrent /Cooo	ndary inrush current) (More	then Q and to re start)					
	INRUSH CURRENT[A]	ACIN 100V									
			30 / 30typ (lo=100%) (Primary inrush current /Secondary inrush current) (More than 3 sec. to re-start)								
	LEAKAGE CURRENT[mA]		0.40 / 0.75max (ACIN 100V / 240V 60Hz, lo=100%, According to IEC62368-1 and DEN-AN) 24 24 36 48								
	VOLTAGE[V]		24	= -	36						
	CURRENT[A]	*5	10	10 (Peak12.5)	6.7	5					
	LINE REGULATION	-	96max	96max	144max	192max					
	LOAD REGULATION		150max	150max	240max	240max					
	RIPPLE[mVp-p]	0 to +40°C *2	120max	240max	150max	150max					
	1 ··· P PJ	-10-0°C *2	160max	320max	200max	200max					
	RIPPLE NOISE[mVp-p]	0 to +40°C *2	150max	300max	250max	250max					
OUTPUT		-10-0°C *2	180max	360max	300max	300max					
	TEMPERATURE REGULATION[mV]	0 to +40℃		240max	360max	480max					
	-10 to +40		290max	290max	450max	600max					
	DRIFT[mV] *3		96max 96max 144max 192max								
	START-UP TIME[ms]		350typ (ACIN 100V, Io=100%)								
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)								
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		Fixed ("Y"option is available for adjusting output voltage)								
	OUTPUT VOLTAGE 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			Not provided								
OTHERS	REMOTE SENSING		Not provided								
	REMOTE ON/OFF		Option (Refer to Instruction Manual)								
	INPUT-OUTPUT-RC	*6	AC3,000V 1minute, Cutoff	f current = 10mA, DC500V	$750M\Omega$ min (At Room Temp	perature)					
	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 50M Ω min (At Room Temperature)								
	OUTPUT-RC	*6									
	OPERATING TEMP., HUMID. AND	ALTITUDE *4									
	STORAGE TEMP., HUMID.AND										
ENVIRONMENT	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 APPROVALS		UL60950-1, C-UL (CSA60950-1), EN62368-1 Complies with DEN-AN								
NOISE	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B								
REGULATIONS	HARMONIC ATTENU		Complies with IEC61000-3-2 (Class A) *8								
	CASE SIZE/WEIGHT				H×D) / 550g max (with cha	ssis & cover : 880g max)					
OTHERS	COOLING METHOD	-	Convection (Refer to "Dera								
*1 Specificat					,	us about another class.					
 Specification is changeed at option, refer to Instruct 2 This is the value that measured on measuring capacitor of 22 µF at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-1 (Equivalent to KEISOKU-GIKEN: RM103). Drift is the change in DC output for an eight hour p 			board with *4 Derating is requi *5 () means peak device is damag contact us about	ired. current. There is a possibility tha ged when the specification is exce	* To meet the s at an internal condition. eded. Please * Parallel operatio * Derating is requ	pecifications. Do not operate over-loade in is not possible. ired when operated with chassis and cover. ay be generated by power supply in case					

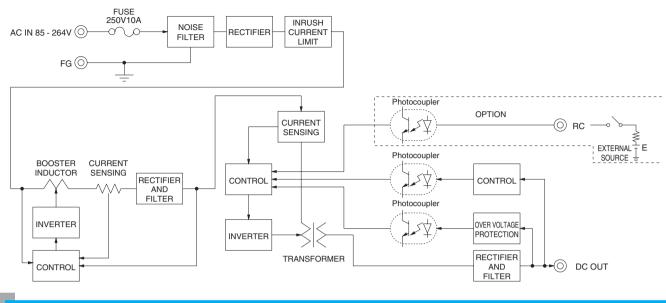
half-hour warm-up at 25°C, with the input voltage held constant *7 Please contact us about dynamic load and input response. **LFA-16**

Please refer to Instruction

manual 6.

LFA240F | CO\$EL

Block diagram

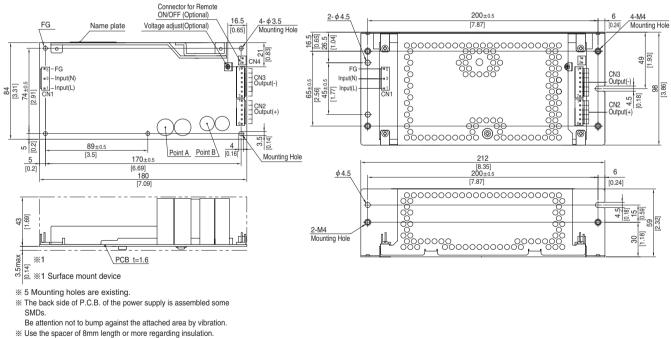


External view

※ External size of option is different from standard model.

Standard type

Chassis and cover type



And do not use press-fitting bush.

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

I/C	O Connector	Mating connector	Terminal			
0.14	1-1123724-3 1-1123722-5 C		Chain	1123721-1		
CINT	1-1123724-3	1-1123/22-5	Loose	1318912-1		
010	1-1123723-6	4 4400700 0	Chain	1123721-1		
CN2		1-1123722-6	Loose	1318912-1		
010	1-1123723-7		Chain	1123721-1		
CN3		1-1123722-7	Loose	1318912-1		

(Mfr:Tyco Electronics)

% I/O Connector is Mfr. Tyco Electronics

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

* Weight : 550g max (with chassis & cover : 880g max)

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

CN2

Pin No.

1 to 6

- * PCB material : CEM3
- % Optional chassis and cover material : Electric galvanizing steel board.

Output

+V

CN3

Pin No.

1 to 7

Output

-V

- ※ Dimensions in mm, []=inches
- % Mounting torque (Mounting hole of chassis) :1.5N * m (16kgf * cm) max

<PIN CONNECTION>

Input

AC(L)

AC(N)

FG

% Tolerance : ±1 [±0.04]

CN1

Pin No.

1

2

3 4

5

Connector type

RC(+)

RC(-)

CN4 Option (Mfr:J.S.T)

PIN No. Contents

Barrier strip type

Mating Connector (Terminal) XHP-2

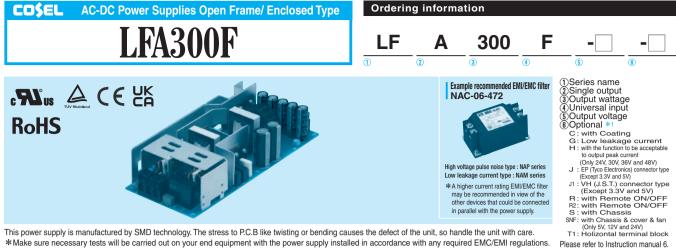
1

2

Model B2B-XH-A

BXH-001T-P0.6

or SXH-001T-P0.6



* 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 WATTAGE[W] *		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

SPECIFICATIONS

	MODEL		LFA300F-3R3-TY	LFA300F-5-TY	LFA300F-12-TY	LFA300F-15-TY	LFA300F-24-TY	LFA300F-24-HTY	LFA300F-30-1 Y	LFA300F-36-TY	LFA300F-48-T		
	VOLTAGE[V]		AC85 - 264	1 φ (Refer to	o "Derating", I	nstruction Ma	anual 1 and 3) *4					
INPUT		2.7typ (lo=100%) 4.1typ (lo=100%)											
	CURRENT[A]	ACIN 200V											
	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		
	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 (Io=100%)	ACIN 200V	0.92typ	0.95typ									
	INRUSH CURRENT[A]		15 / 30typ (lo=100%) (Primary inrush current /Secondary inrush current) (More than 3 sec. to re-start)										
			30 / 30typ (lo=100%) (Primary inrush current /Secondary inrush current) (More than 3 sec. to re-start)										
	LEAKAGE CURREN		21. (00V/240V 6			, , ,		,			
	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		20max	20max	48max	60max	96max	96max	144max	144max	, 192max		
	LOAD REGULATION		40max	40max	100max	120max	150max	150max	240max	240max	240max		
	LOAD HEADEAHON	0 to +40°C *2		80max	120max	120max	120max	240max	150max	150max	150max		
	RIPPLE[mVp-p]	-10-0°C *2		140max	160max	160max	160max	320max	200max	200max	200max		
											-		
DUTPUT	RIPPLE NOISE[mVp-p]	0 to +40°C *2		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°C	50max	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]			1 100V, lo=10			r	(1			
	OUTPUT VOLTAGE ADJUSTMENT		2.85 to 3.63	4.50 to 5.50	10.80 to 13.20		21.60 to 27.50			32.40 to 39.60	39.60 to 52.		
	OUTPUT VOLTAGE SETTING[V]		3.30 to 3.40	5.00 to 5.15			24.00 to 24.96			1			
	OVERCURRENT PROTECTION		Works over 105% of rating (works over 101% of peak current at option -H) and recovers automatically										
ROTECTION	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 67.20										
IRCUIT AND	OPERATING INDICA	Not provided											
DTHERS	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)										
SOLATION	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50M Ω min (At Room Temperature)										
SOLATION	OUTPUT·RC-FG	*6	AC500V 1minute, Cutoff current = 25mA, DC500V 50M Ω 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) 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 period, 60minutes each along X, Y and Z axis										
	IMPACT		196.1m/s ² (20G), 11ms, once each X, Y and Z axis										
AFETY AND	AGENCY APPROVA	LS	UL60950-1, C-UL (CSA60950-1), EN62368-1 Complies with DEN-AN										
IOISE	CONDUCTED NOISE		Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B										
EGULATIONS	HARMONIC ATTENU	JATOR	Complies w	ith IEC61000)-3-2 (Class A	A) *8							
	CASE SIZE/WEIGHT		95×52.5×22	22mm [3.74×2	2.07 × 8.74 inche	es] (W×H×D)	(without termin	al block) / 810	g max (with ch	assis & cover	: 1,270g max		
DTHERS	COOLING METHOD				(Refer to "De				<u> </u>		, 0		
*2 This is the capacitor of Measured	on is changeed at option, refer e value that measured on i of 22 µ F at 150mm from output d by 20MHz oscilloscope o t to KEISOKU-GIKEN: RM103	n Manual. board with **	at the rated in Derating is rec () means pea	put/output. quired. ak current. There naged when the s	is a possibility t	hat an internal	 *8 Please cont * To meet the condition. * Parallel ope 	tact us about anot the specification eration is not poss required when op	ns. Do not open ible.				

half-hour warm-up at 25°C, with the input voltage held constant **LFA-18**

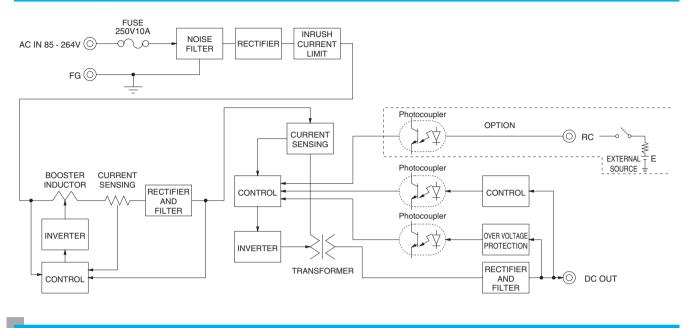
*7 Please contact us about dynamic load and input response.

pulse load.

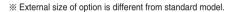
Please refer to Instruction manual 6.



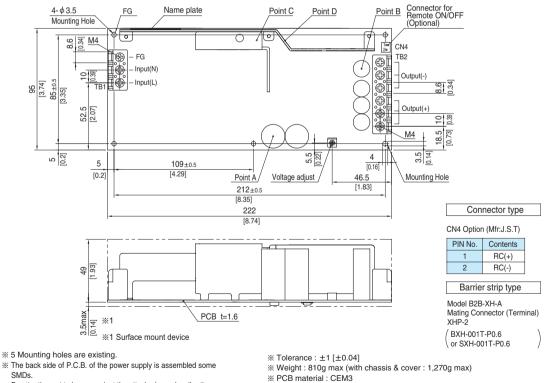
Block diagram



External view



Standard type



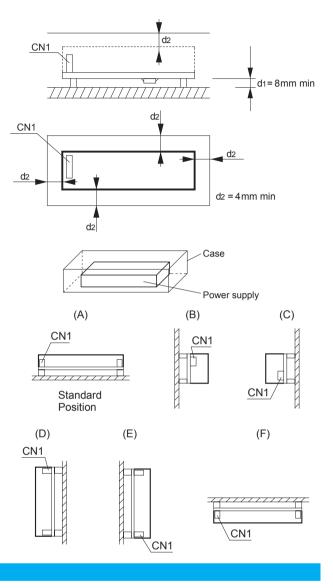
- % The back side of P.C.B. of the power supply is assembled some SMDs.
- Be attention not to bump against the attached area by vibration. % Use the spacer of 8mm length or more regarding insulation.
- And do not use press-fitting bush.
- * Point A, Point B, Point C, Point D are thermometry points.
-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

COȘEL | LFA-series

Assembling and Installation Method

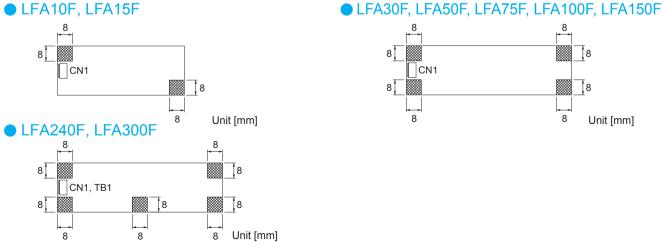
Installation method

- 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.

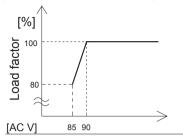


- If metallic fi ttings are used on the component side of the board, ensure there is no contact with surface mounted components.
- This product uses SMD technology.Please avoid the PCB installation method which includes the twisting stress or the bending stress. *Recommendation to electrically connect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

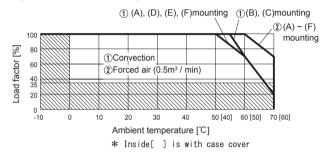
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Derating

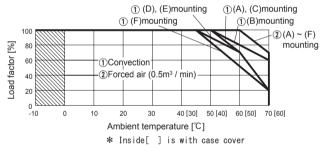




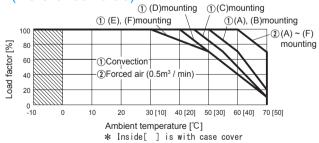
LFA10F Ambient temperature derating curve (Reference value)



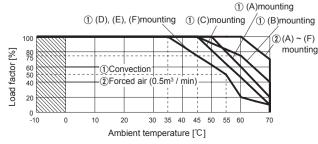
LFA30F Ambient temperature derating curve (Reference value)



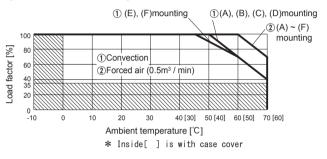
LFA75F Ambient temperature derating curve (Reference value)



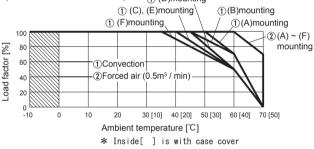
LFA100F Ambient temperature derating curve (Reference value)



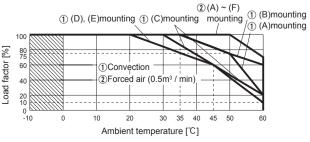
LFA15F Ambient temperature derating curve (Reference value)



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



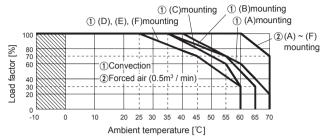
●LFA100F-□-SN Ambient temperature derating curve (Reference value)



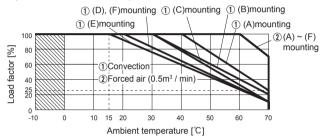
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Derating

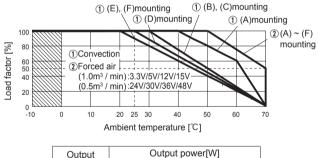
LFA150F Ambient temperature derating curve (Reference value)



LFA240F Ambient temperature derating curve (Reference value)



LFA300F Ambient temperature derating curve (Reference value)



 Convection 	 Forced 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.

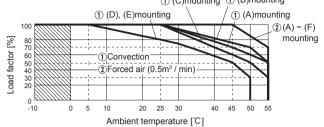
The ambient temperature should be measured 5 to 10 cm away from the power supply so that it won't be influenced by the heat from the power supply. Please consult us for more details.

Instruction Manual

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

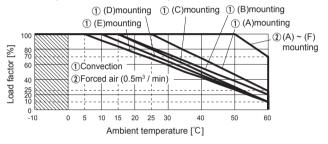
Instruction Manual https://www.cosel.co.jp/redirect/catalog/en/LFA/ Before using our produc https://en.cosel.co.jp/technical/caution/index.html

Curve (Reference value) ① (C)mounting ① (B)mounting ② (D) (C)mounting ① (A)mounting



●LFA150F-□-SN Ambient temperature derating

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





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Basic	Characteristics Da	ata							
Madal	Circuit method	Switching	Input	Inrush	PCB/Pattern			Series/Parallel operation availability *2	
Model		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
LFADUF	Flyback converter	130			CEIVI-3			tes	INO
LFA75F	Active filter	60-440	- 1.0	Thermistor	CEM-3	Yes		Yes	No
LIA/JI	Flyback converter	130	1.0					165	NO
LFA100F	Active filter	60	4.0	Thermistor	CEM-3		Yes	Yes	No
LFATUUF	Forward converter	140	1.3		CEIVI-3		res	res	INO
LFA150F	Active filter	60	2.0	Thormistor	CEM-3		Yes	Yes	No
LFAIDUF	Forward converter	140	2.0	Thermistor	CEIVI-3		res	res	INO
	Active filter	60	0.0	SCR	CEM-3		Maria	No	No
LFA240F	Forward converter	140	3.3		GEIVI-3		Yes	Yes	No
	Active filter	60	4.4	000			Yes	Yes	NL
LFA300F	Forward converter	140	4.1	SCR	CEM-3				No

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