

Series name  
Single output  
Output wattage  
Universal input  
Output voltage  
Optional  
C: with Coating  
G: Low leakage current  
J1: VH(J.S.T.)connector type  
S: with Chassis  
SN: with Chassis & cover  
Y: with Potentiometer

Specification is changed at option, refer to Instruction Manual.



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

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

### SPECIFICATIONS

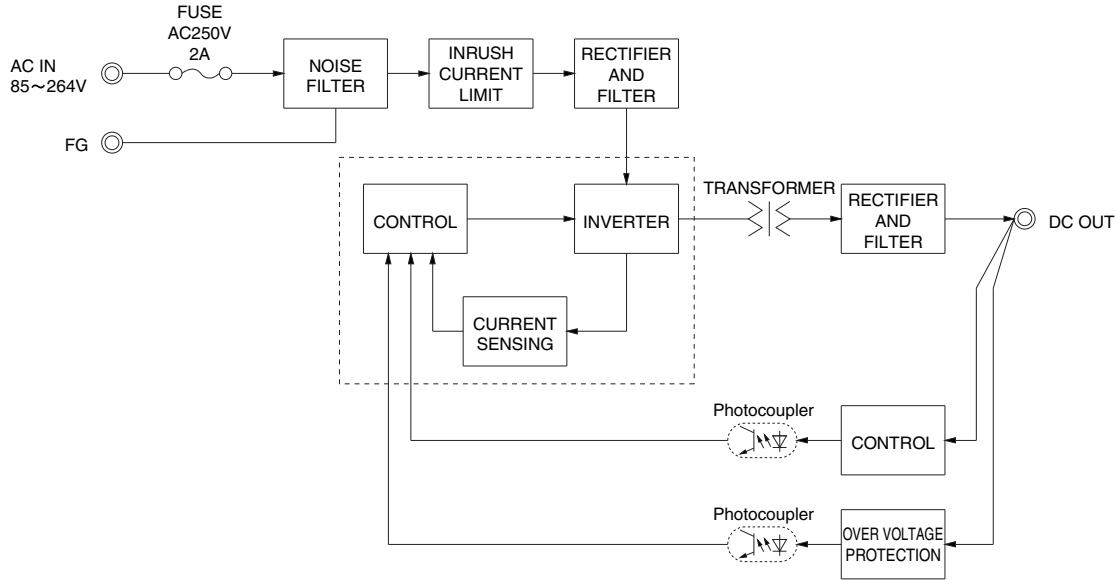
	MODEL	LFA10F-3R3-Y	LFA10F-5	LFA10F-12	LFA10F-15	LFA10F-24	
INPUT	VOLTAGE[V]	AC85 - 264 1 φ (Refer to Instruction Manual 1.1 and 3.2) *3					
	CURRENT[A]	ACIN 100V	0.18typ (Io=100%)	0.26typ (Io=100%)			
		ACIN 200V	0.11typ (Io=100%)	0.16typ (Io=100%)			
	FREQUENCY[Hz]	50 / 60 (47 - 440)					
	EFFICIENCY[%]	ACIN 100V	68.0typ	74.0typ	76.5typ	77.5typ	79.5typ
		ACIN 200V	68.5typ	76.0typ	79.0typ	80.0typ	83.0typ
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%)				
ACIN 200V		30typ (Io=100%)					
LEAKAGE CURRENT[mA]	0.15/0.30max (ACIN 100V / 240V 60Hz, Io=100%, According to IEC60950-1 and DEN-AN)						
OUTPUT	VOLTAGE[V]	3.3	5	12	15	24	
	CURRENT[A]	2.0	2.0	0.9	0.7	0.5	
	LINE REGULATION[mV]	20max	20max	48max	60max	96max	
	LOAD REGULATION[mV]	40max	40max	100max	120max	150max	
	RIPPLE[mVp-p]	0 to +50°C	80max	80max	120max	120max	120max
		-10 - 0°C	140max	140max	160max	160max	160max
		Io=0 - 35%	190max	160max	240max	240max	280max
	RIPPLE NOISE[mVp-p]	0 to +50°C	120max	120max	150max	150max	150max
		-10 - 0°C	160max	160max	180max	180max	180max
		Io=0 - 35%	240max	240max	300max	300max	320max
	TEMPERATURE REGULATION[mV]	0 to +50°C	50max	50max	120max	150max	240max
		-10 to +50°C	60max	60max	150max	180max	290max
	DRIFT[mV]	20max	20max	48max	60max	96max	
	START-UP TIME[ms]	200typ (ACIN 100V, Io=100%) *Start-up time is 700ms typ for less than 1minute of applying input again from turning off the input voltage.					
HOLD-UP TIME[ms]	20typ (ACIN 100V, Io=100%)						
OUTPUT VOLTAGE ADJUSTMENT RANGE[V]	2.85 to 3.63	Fixed ( "Y" option is available for adjusting output voltage between ±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		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically					
	OVERVOLTAGE PROTECTION	4.00 to 5.25	5.75 to 7.00	13.80 to 16.80	17.25 to 21.00	27.60 to 33.60	
	OPERATING INDICATION	Not provided					
	REMOTE SENSING	Not provided					
	REMOTE ON/OFF	Not provided					
ISOLATION	INPUT-OUTPUT	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)					
	INPUT-FG	AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)					
	OUTPUT-FG	AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)					
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-10 to +70°C, 20 - 90%RH (Non condensing) (Refer to DERATING CURVE), 3,000m (10,000 feet) max *3					
	STORAGE TEMP., HUMID. AND ALTITUDE	-20 to +75°C, 20 - 90%RH (Non condensing), 9,000m (30,000 feet) max					
	VIBRATION	10 - 55Hz, 19.6m/s <sup>2</sup> (2G), 3minutes period, 60minutes each along X, Y and Z axis					
	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis					
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)	UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178 Complies with DEN-AN					
	CONDUCTED NOISE	Complies with FCC-B, VCCI-B, CISPR-B, EN55011-B, EN55022-B					
	CE MARKING	Low Voltage Directive, EMC Directive					
	HARMONIC ATTENUATOR	Complies with IEC61000-3-2 (Not built-in to active filter *4)					
OTHERS	CASE SIZE/WEIGHT	50×22×73.5mm (W×H×D) / 55g max (without chassis and cover)					
	COOLING METHOD	Convection					

\*1 This is the value that measured on measuring board with capacitor of 22 μF at 150mm from output terminal. Measured by 20MHz oscilloscope or Ripple-Noise meter (Equivalent to KEISOKU-GIKEN: RM103). A circuit reducing standby power is built in this unit. Therefore, the internal switch element is intermittent operated, and the Ripple/Ripple Noise specification in

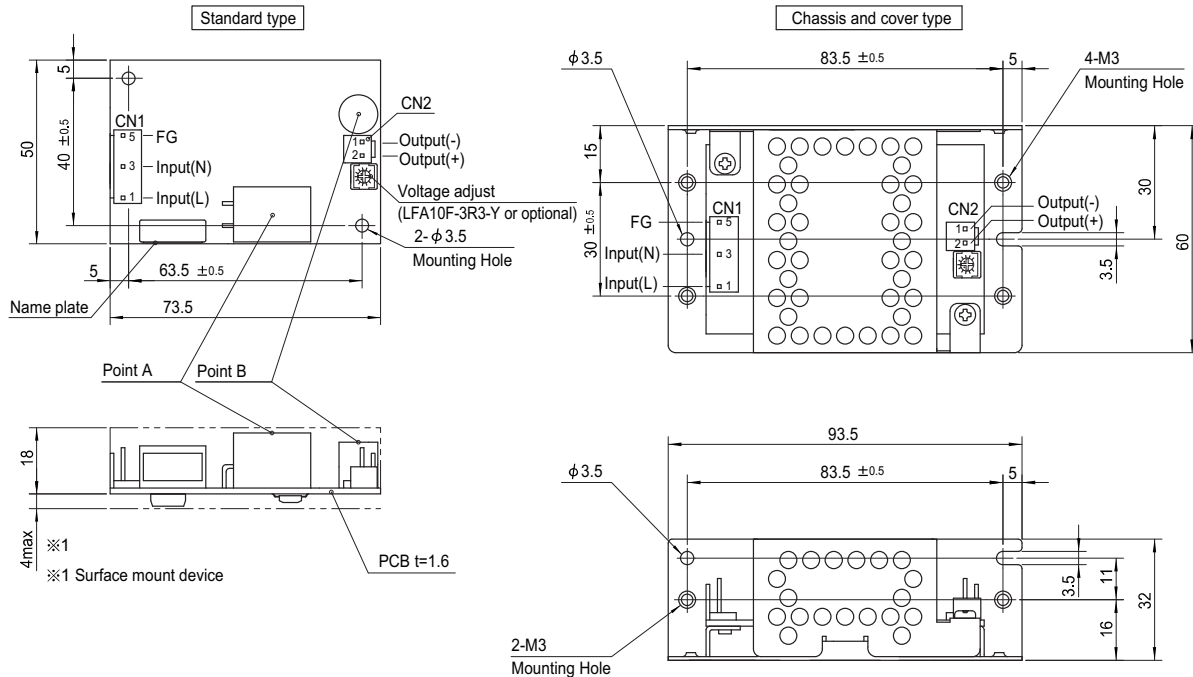
load factor Io=0-35% is different. Please refer to the Instruction Manual 1.7.  
\*2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C, with the input voltage held constant at the rated input/output.  
\*3 Derating is required.  
\*4 When two or more units are operating it may not

comply with the IEC61000-3-2. Please contact us for details.  
\* 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.

### Block diagram



### External view



- ※ The back side of P.C.B. of the power supply is assembled some SMDs.  
Be attention not to bump against the attached area by vibration.
- ※ Use the spacer of 8mm length or more regarding insulation.  
And do not use press-fitting bush.
- ※ Point A, Point B are thermometry points. Please refer to Instruction Manual 3.

I/O Connector	Mating connector	Terminal
CN1	1-1123724-3	Chain 1123721-1
		Loose 1318912-1
CN2	1-1123722-2	Chain 1123721-1
		Loose 1318912-1

(Mfr:Tyco Electronics AMP)

- ※ I/O Connector is Mfr. Tyco Electronics AMP
- ※ Option:-J1:(J.S.T) connector type. Refer to Instruction Manual 5.

#### <PIN CONNECTION>

Pin No.	Input
1	AC(L)
2	
3	AC(N)
4	
5	FG

Pin No.	Output
1	-V
2	+V

- ※ Tolerance : ±1
- ※ Weight : 55g max (without chassis and cover)
- ※ PCB material / thickness : CEM3 / 1.6mm
- ※ Optional chassis and cover material : Electric galvanizing steel board.
- ※ Dimensions in mm
- ※ Mounting torque (Mounting hole of chassis) : 0.6N · m (6.3kgf · cm) max