

AC/DC Converter**LAF75-220S54W****90Vac to 264Vac Input; 54Vdc Output****RoHS Compliant****Features**

- Compliance with RoHS EU Directive 2011/65/EU & (EU)2015/863
- Universal input 90Vac to 264Vac
- Low noise output
- Open frame design
- Output over voltage protection
- Output over current protection
- Output short circuit protection
- Meets IEC 60950-1&IEC/UL/EN 62368-1

Applications

- Telecommunication networks

Description

The LAF75-220S54W power supply is an AC/DC converter which provides high efficiency single output. It can operate from 90~264Vac input voltage range, +54V/1.4A output. The power supply provides output over voltage, output overload, and output short circuit protection.

Electrical Specifications

Unless otherwise indicated, specifications apply over all operating nominal line, full load, and room temperature conditions.

Input Characteristics

Parameter	Units	Specifications			Notes & conditions
		Min.	Typ.	Max.	
Input Voltage Range	Vac	90	110/220	264	/
Input Current	A	-	-	2	At 90Vac
Input Frequency Range	Hz	47	50/60	63	/
Holdup Time	ms	10	-	-	At 110Vac full load
Inrush Current	A	-	-	60	At 220Vac & Cold start
AC leakage Current	mA	-	-	3.5	/
Input harmonics	EN61000-3-2, class A				
Input Fuse	Replace input line fuse with same type rating Recommended 5A/250Vac slow blow fuse				

Output Characteristics

Parameter	Units	Specifications			Notes & conditions
		Min.	Typ.	Max.	
Output Voltage Set Point	Vdc	52.92	54	55.08	Measured at output
Output Current	A	0	-	1.4	See derating curve
Output Voltage Tolerance	%Vo	-	-	±2	Measured at output
Line regulation	%Vo	-	-	±1	Measured from 90~264Vac
Load Regulation	%Vo	-	-	±2	Measured at output
Temperature Coefficient	%/°C	-	-	±0.05	Measured at output
Ripple and Noise	mVp-p	-	-	300	20MHz bandwidth, with 10uF E.L. and 0.1uF ceramic capacitors to the output cable

AC/DC Converter Open Frame

Technical Specification LAF75-220S54W

Dynamic Response	Recovery Time	μS	-	-	500	Recovery to within 1% in 500μs for 50%-75%-50% load change
	Overshoot	%Vo	-	-	5	
Max. Capacitive Load		μF	-	-	470	-
Drift		%Vo	-	-	±0.2	After 20 min warm up
Turn-on Rise Time		ms	0.2	-	80	-
Turn-on Delay Time		s	-	-	5	-
Over/Under shoot at Turn-on/off		%Vo	-	-	5	-

Protection Characteristics

Parameter	Units	Specifications			Notes & conditions
		Min.	Typ.	Max.	
Output Over Voltage Protection	V	57	-	63	Recycle input to reset
Output Overload Protection	A	1.54	-	2.1	Automatic recovery Hiccup
Short Circuit Protection	-	Continuous			Automatic recovery Hiccup

General Specifications

Parameter	Units	Specifications			Notes & conditions
		Min.	Typ.	Max.	
Efficiency	%	87	88	-	220Vac, full load, 25°C
MTBF	Hour	850,000	-	-	Telcordia SR332, Issue 4, 25°C
Weight	g	-	160	-	
Safety	Compliant to IEC 60950-1& IEC 62368-1, UL 62368-1, EN 62368-1 and GB4943				

EMC Specifications

Parameter	Notes & conditions
Conducted Emission	EN55032 3dB margin, test with adding an aluminum bottom base and good grounding (for PSU alone)
Radiated Emission	EN55032, tested with customer's system
Conducted Immunity	EN61000-4-6, level 3 Perf Criteria A
Radiated Immunity	EN61000-4-3, level 3 Perf Criteria A
Surge	EN61000-4-5, level 4, CM±4kV, DM±4kV, Perf Criteria B
EFT	EN61000-4-4, level 3 Perf Criteria A
Harmonic current	EN 61000-3-2 ,class A
Voltage Flicker	EN 61000-3-3
Dips & Interruptions	EN61000-4-11,30% 10 ms, 60% 100 ms,100% 5000 ms, Perf Criteria A, B, B, EN60601-1-2, 30% 500 ms, 60% 100 ms,100% 10 ms, 100% 5000 ms, Perf Criteria A, A, A, B - 230 VAC. Consult long form datasheet for 115 V operation.

Environmental Specifications

Parameter	Units	Specifications			Notes & conditions
		Min.	Typ.	Max.	
Operating Temperature Range	°C	-40	-	85	See derating curve
Storage Temperature	°C	-40	-	85	/
Operating Humidity	RH(%)	5	-	95	/
Storage Humidity	RH(%)	5	-	95	/
Operating Altitude	m	0	3000	-	/
Storage Altitude	m	0	3000	-	/

AC/DC Converter Open Frame

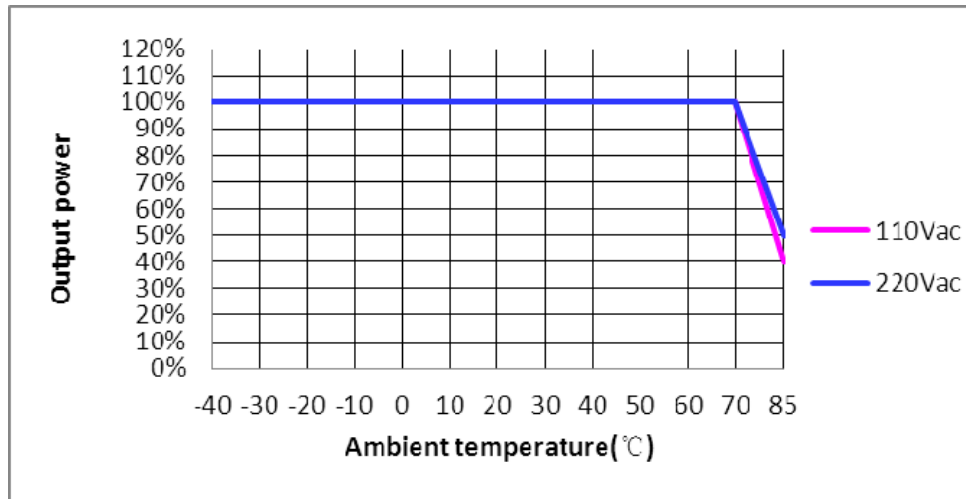
Technical Specification LAF75-220S54W

Vibration	2 g rms, 5 Hz to 500 Hz, 3 axes
shock	30 g pk, half sine, 6 axes

Isolation Specifications

Parameter		Units	Specifications			Notes & conditions
			Min.	Typ.	Max.	
Isolation Voltage	Input-Output	Vac	3000	-	-	50Hz, 3000Vac test duration 1 minute, leakage current is less than 10mA, no arcing or breakdown
	Input-PE	Vac	1500	-	-	50Hz, 1500Vac test duration 1 minute, leakage current is less than 10mA, no arcing or breakdown
	Output-PE	Vdc	500	-	-	500Vdc test duration 1 minute, leakage current is less than 5mA, no arcing or breakdown
Isolation Resistance		MΩ	10	-	-	Nominal pressure, 90% humidity, 500Vdc test voltage

Derating Curves



Outline Diagram and Pin Designation

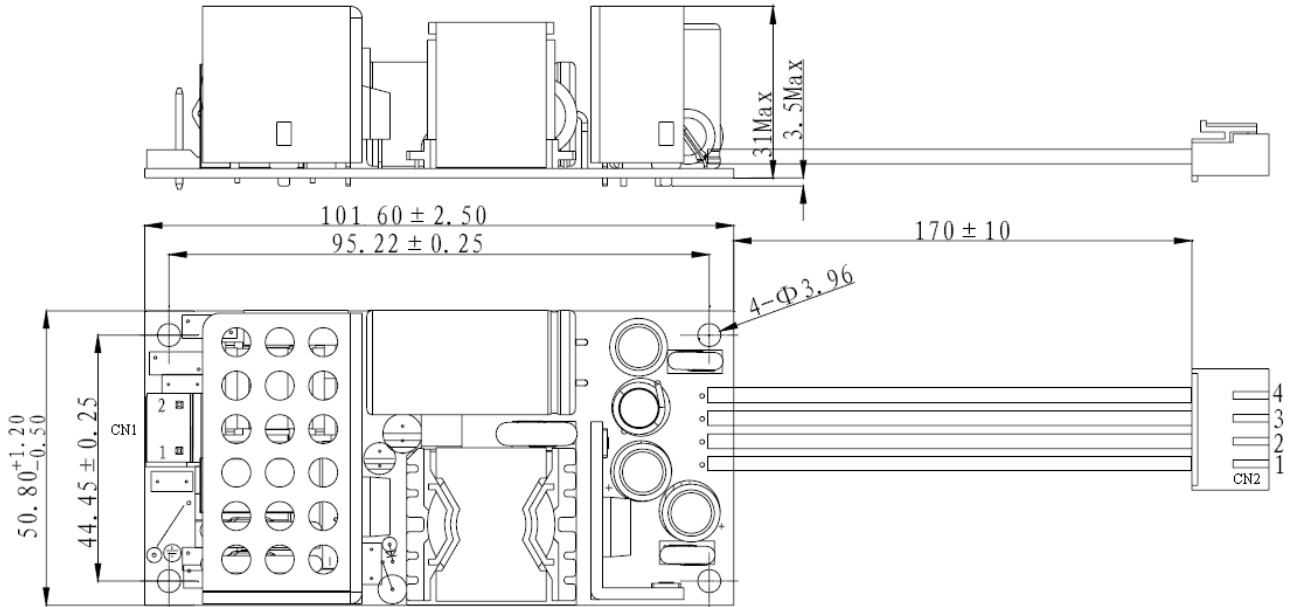


Figure 1. Outline Diagram

Dimensions are in millimeters

Connector Definition

CN1 input connector A3961WV-3P with second pin removed or equivalent	
Pin	Definition
1	Line
2	Neutral
CN2 output connector A3963H-4P or equivalent	
Pin	Definition
1	+54V
2	+54V
3	GND
4	GND

CJT A3963 SERIES

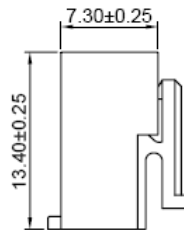
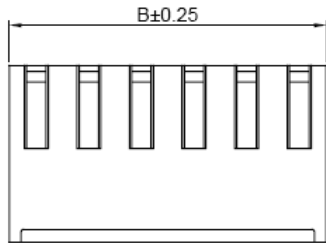
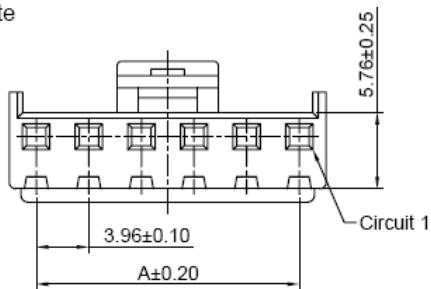
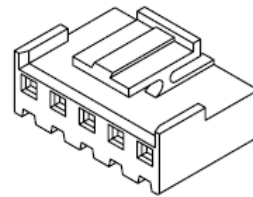
3.96mm pitch wire to board connector

A3963H

3.96mm pitch Housing

Reference Informations:

- *Material: Nylon 66, UL94V-0
- *Suitable CJT A3963 series Terminal
- *Mates with CJT A3963 series Wafer
- *Color: White

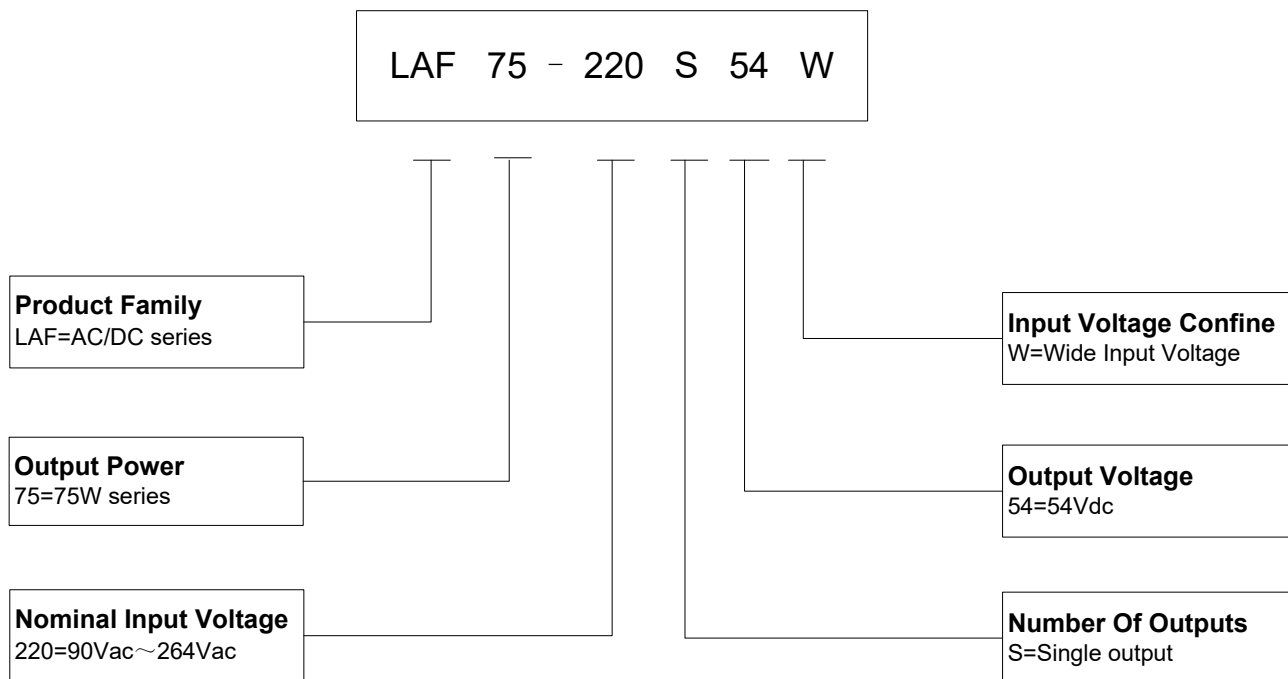


Ordering Information & Dimensions:

PART NO.	Dimensions	
	A	B
A3963H-2P	3.96	8.02
A3963H-3P	7.92	11.98
A3963H-4P	11.88	15.94
A3963H-5P	15.84	19.90
A3963H-6P	19.80	23.86
A3963H-7P	23.76	27.82
A3963H-8P	27.72	31.78
A3963H-9P	31.68	35.74
A3963H-10P	35.64	39.70
A3963H-11P	39.60	43.66
A3963H-12P	43.56	47.62
A3963H-13P	47.52	51.58
A3963H-14P	51.48	55.54
A3963H-15P	55.44	59.50

Unit: mm

Naming Rules On Models



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