参考資料

COSEL

TEST DATA OF LDA75F-24-H

Regulated DC Power Supply
Dec.27. 2004

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COSEL CO.,LTD.

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CONTENTS

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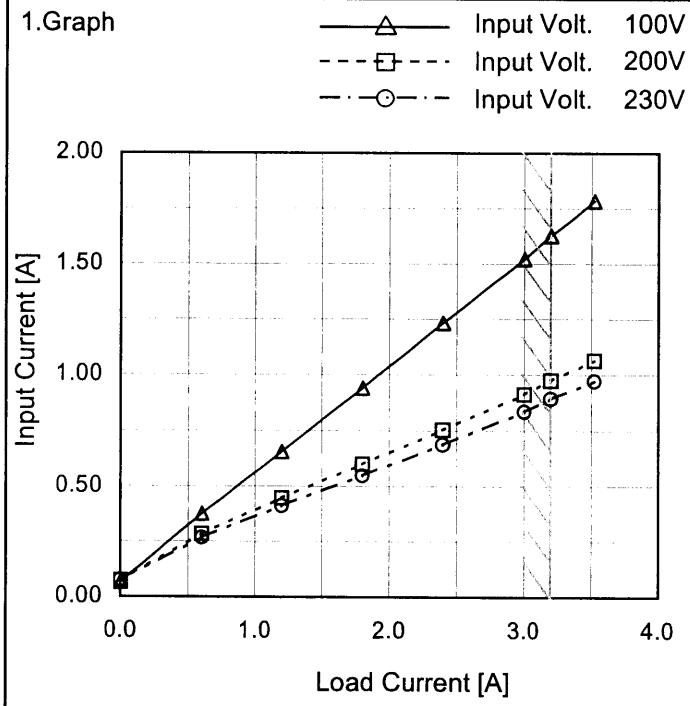
Model	LDA75F-24-H
Item	Input Current (by Load Current)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Input Current [A]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0.00	0.066	0.074	0.075
0.60	0.377	0.284	0.267
1.20	0.657	0.447	0.412
1.80	0.941	0.600	0.549
2.40	1.233	0.754	0.688
3.00	1.523	0.914	0.836
3.20	1.628	0.975	0.893
3.52	1.784	1.065	0.972
--	-	-	-
--	-	-	-
--	-	-	-

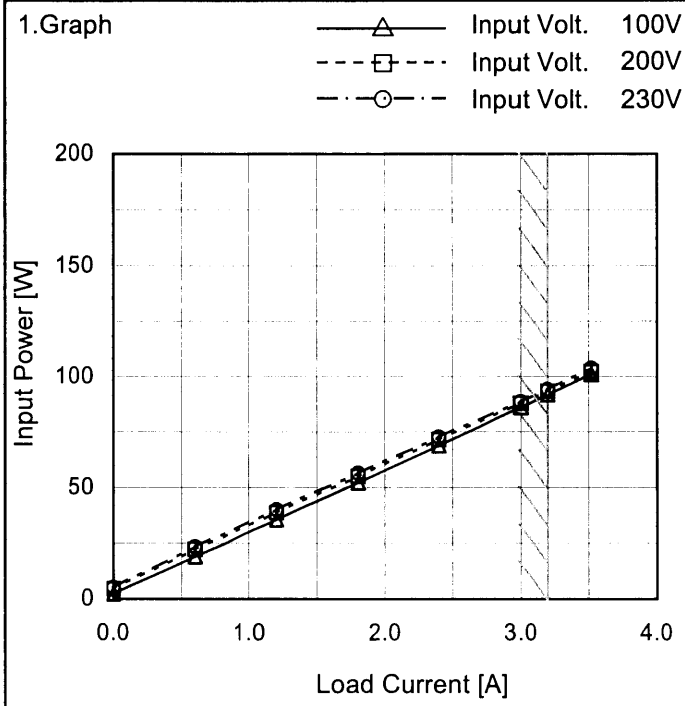
BC-0892

COSEL

Model	LDA75F-24-H
Item	Input Power (by Load Current)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated load current.

2.Values

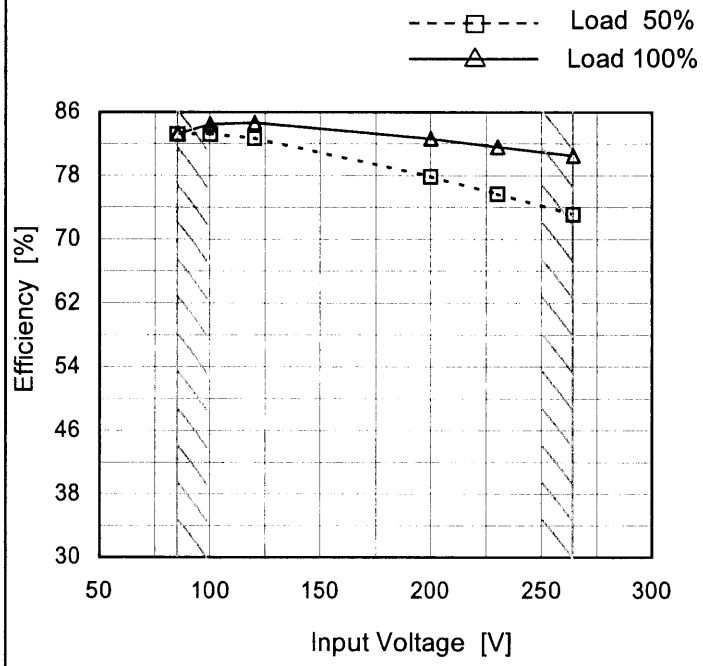
Load Current [A]	Input Power [W]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0.00	2.4	4.4	5.1
0.60	19.0	22.2	23.4
1.20	35.6	38.8	40.1
1.80	52.1	55.1	56.4
2.40	68.8	71.5	72.7
3.00	86.1	88.0	88.7
3.20	91.8	93.4	94.3
3.52	101.0	102.2	103.7
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	LDA75F-24-H
Item	Efficiency (by Input Voltage)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated input voltage.

2.Values

Input Voltage [V]	Efficiency [%]	
	Load 50%	Load 100%
85	83.2	83.3
100	83.2	84.5
120	82.7	84.7
200	77.9	82.7
230	75.7	81.6
264	73.1	80.5
--	-	-
--	-	-
--	-	-

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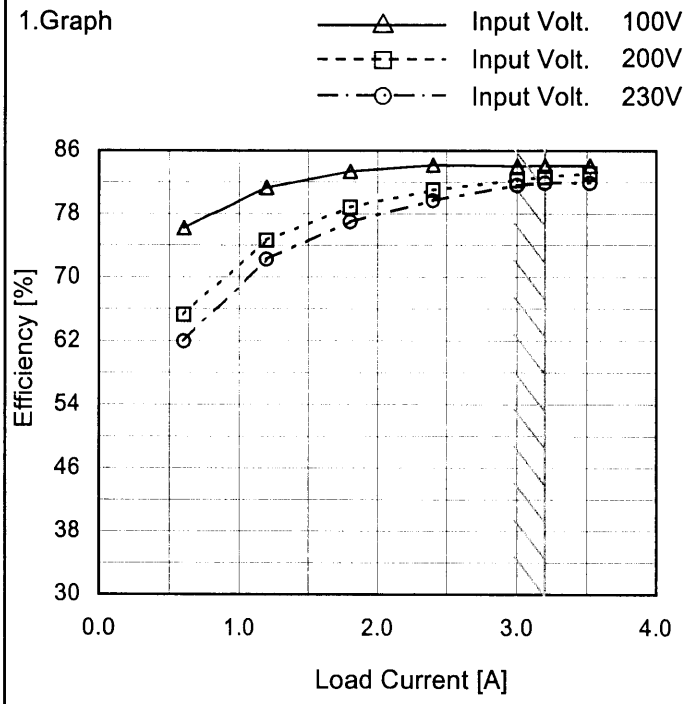
Model	LDA75F-24-H
Item	Efficiency (by Load Current)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Efficiency [%]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0.00	-	-	-
0.60	76.2	65.3	61.9
1.20	81.4	74.6	72.2
1.80	83.4	78.8	77.0
2.40	84.2	81.0	79.7
3.00	84.1	82.3	81.6
3.20	84.1	82.7	81.9
3.52	84.1	83.1	81.9
--	-	-	-
--	-	-	-
--	-	-	-

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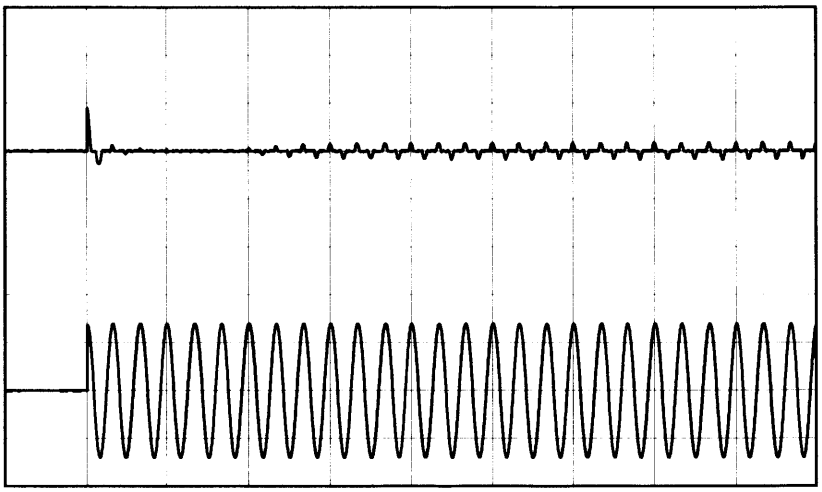
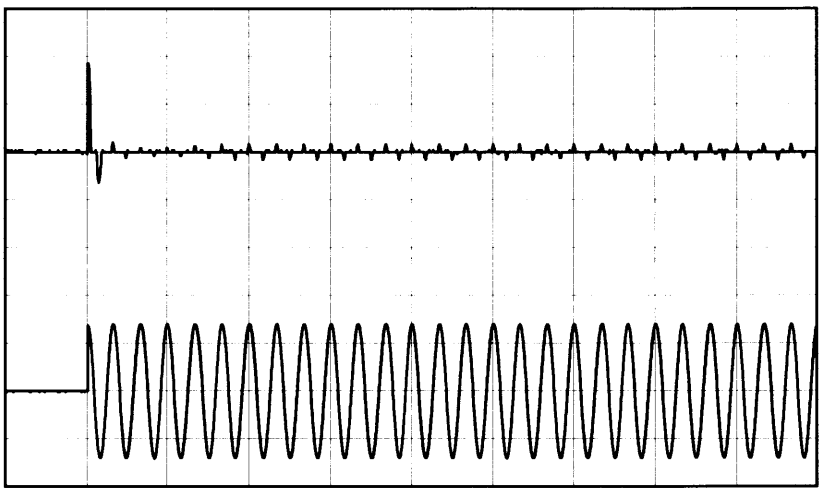
Model	LDA75F-24-H		
Item	Inrush Current	Temperature	25°C
		Testing Circuitry	Figure A
Object	———————		



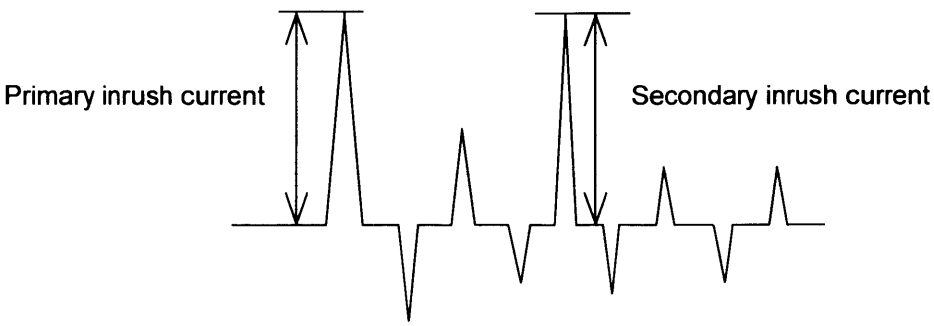
Input Voltage 100 V
Frequency 60 Hz
Load 100 %

Primary inrush current :
17.9 A
Secondary inrush current :
5.2A



Input Voltage 200 V
Frequency 60 Hz
Load 100 %

Primary inrush current :
36.5A
Secondary inrush current :
12.8A



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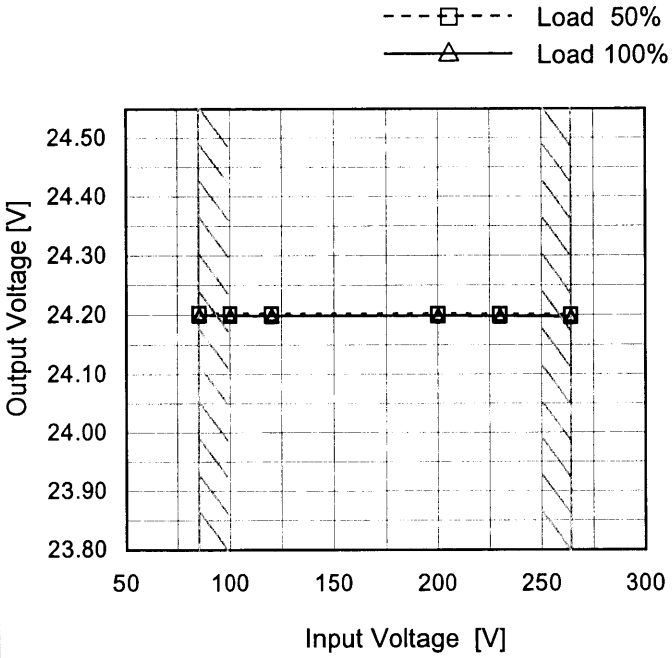
Model	LDA75F-24-H
Item	Line Regulation
Object	+24V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated input voltage.

2.Values

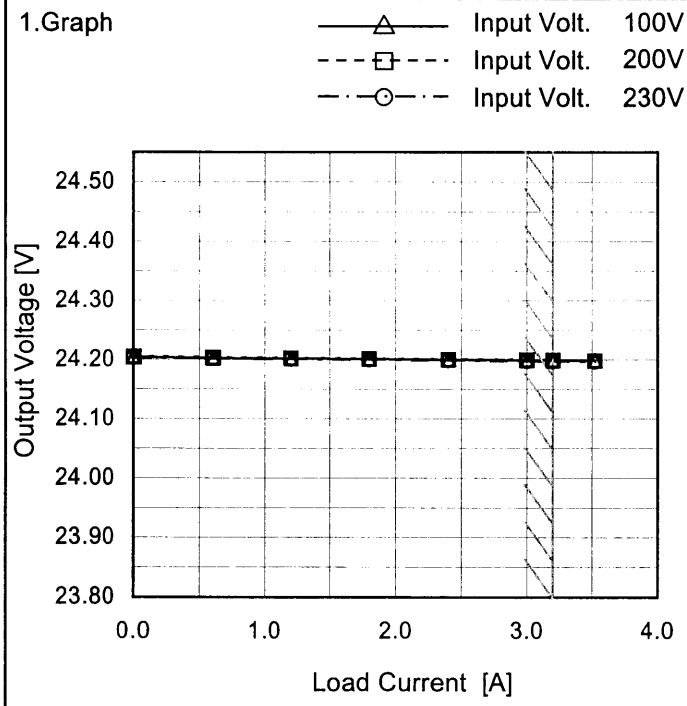
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
85	24.203	24.200
100	24.203	24.200
120	24.202	24.199
200	24.202	24.199
230	24.201	24.198
264	24.200	24.198
--	-	-
--	-	-
--	-	-

COSEL

Model	LDA75F-24-H
Item	Load Regulation
Object	+24V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0.00	24.205	24.205	24.204
0.60	24.203	24.204	24.202
1.20	24.202	24.203	24.201
1.80	24.201	24.202	24.200
2.40	24.201	24.201	24.199
3.00	24.200	24.200	24.198
3.20	24.199	24.199	24.197
3.52	24.199	24.198	24.197
--	-	-	-
--	-	-	-
--	-	-	-

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Model	LDA75F-24-H		
Item	Dynamic Load Response 動的負荷変動	Temperature Testing Circuitry	25℃ Figure A
Object	+24V3.2A		

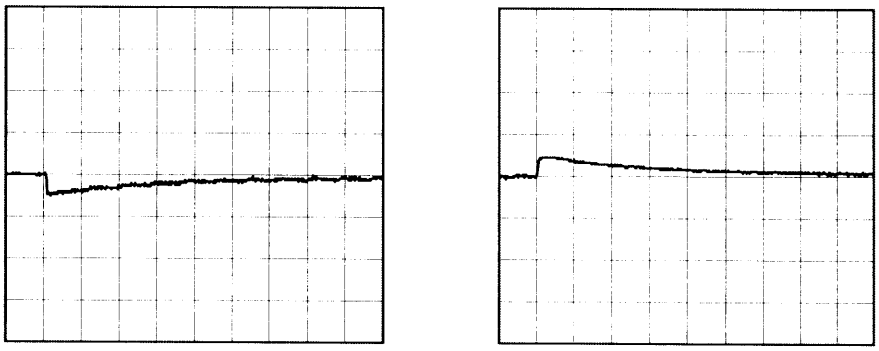
Input Volt. 100 V

Cycle 1000 ms

Load Current

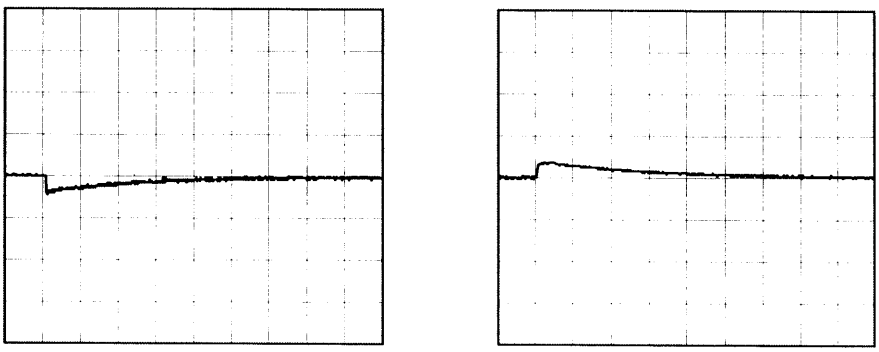
Min. Load (0A) ⟷

Load 100% (3.2A)



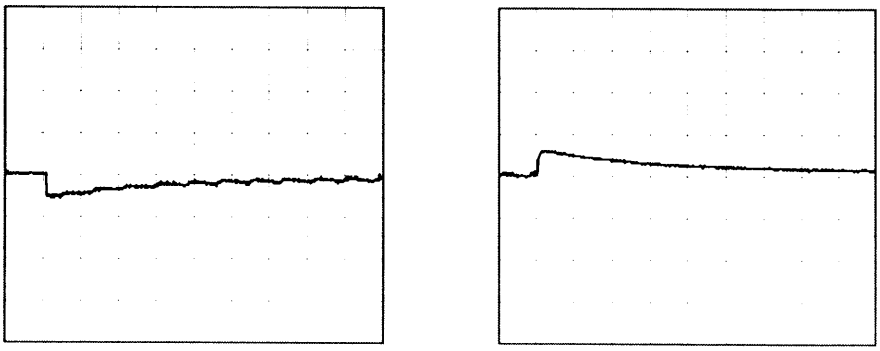
Min. Load (0A) ⟷

Load 50% (1.6A)



Load 0% (0A) ⟷

Peak(4.5A)



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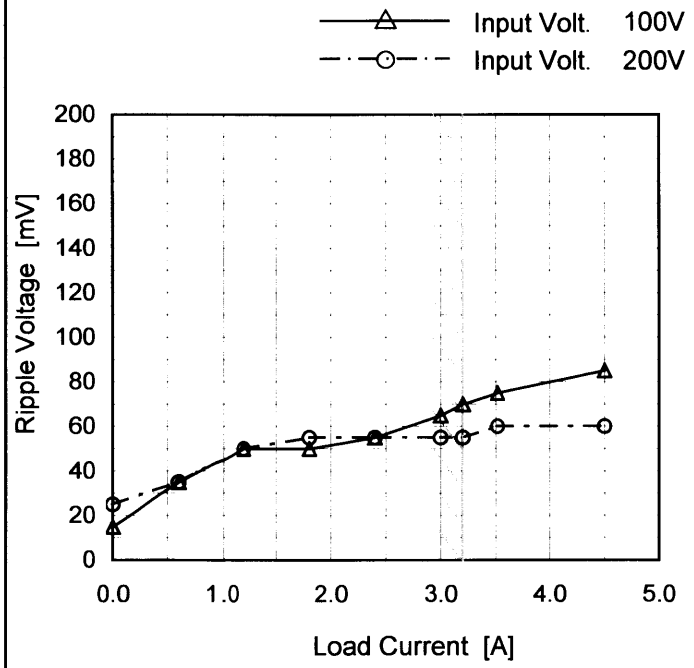
Model	LDA75F-24-H
Item	Ripple Voltage (by Load Current)
Object	+24V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Ripple Voltage is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 100 [V]	Input Volt. 200 [V]
0.00	15	25
0.60	35	35
1.20	50	50
1.80	50	55
2.40	55	55
3.00	65	55
3.20	70	55
3.52	75	60
4.50	85	60
--	-	-
--	-	-

T1: Due to AC Input Line
T2: Due to Switching

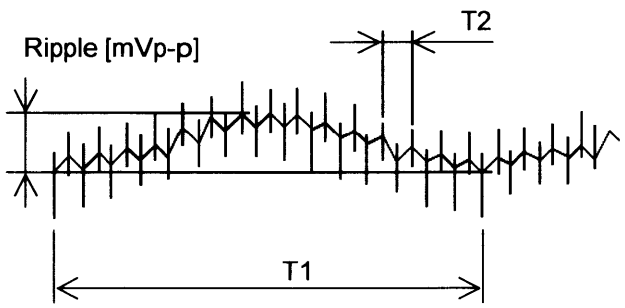


Fig. Complex Ripple Wave Form

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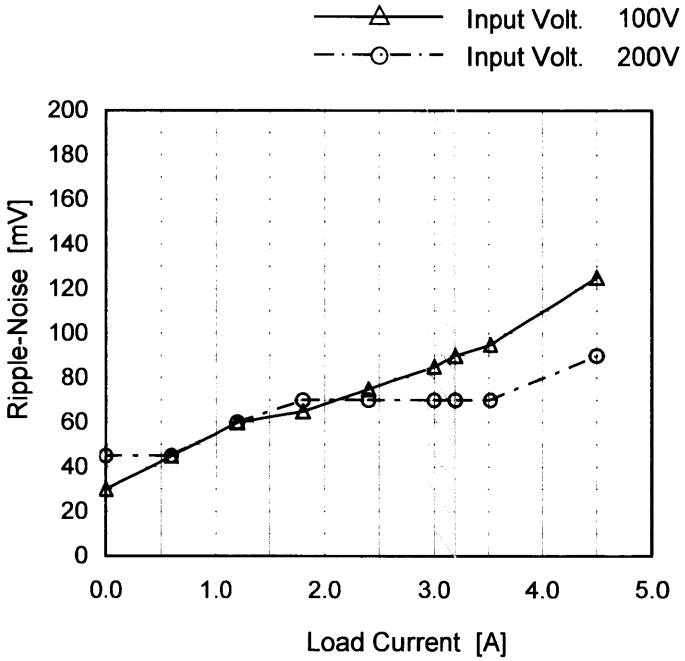
Model	LDA75F-24-H
Item	Ripple-Noise
Object	+24V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Ripple-Noise is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

T1: Due to AC Input Line
T2: Due to Switching

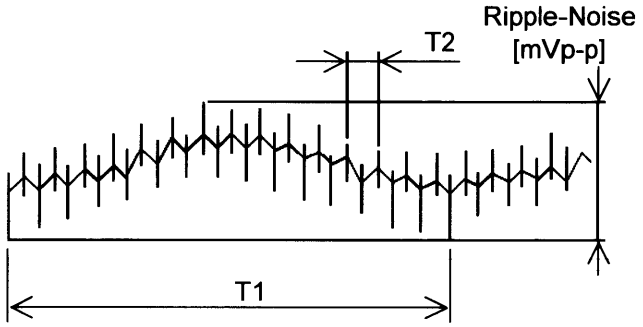


Fig. Complex Ripple Wave Form

2.Values

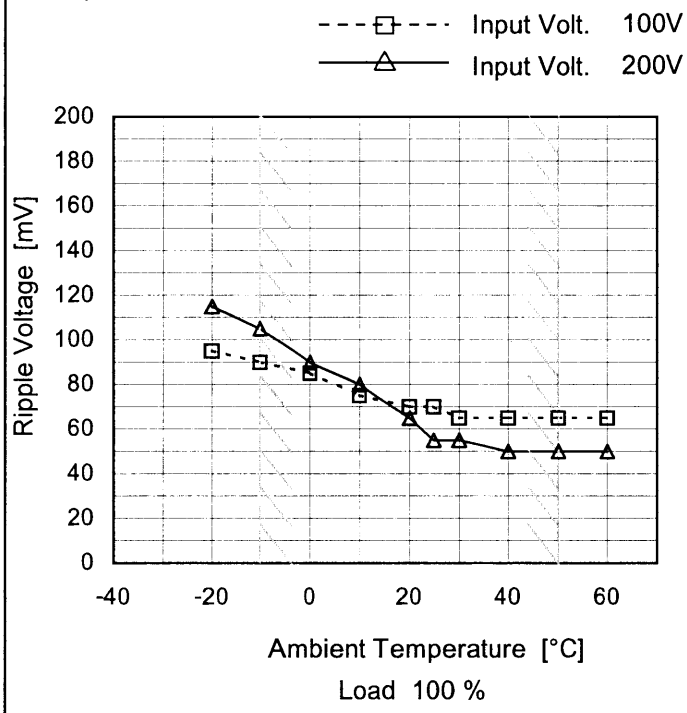
Load Current [A]	Ripple-Noise [mV]	
	Input Volt. 100 [V]	Input Volt. 200 [V]
0.00	30	45
0.60	45	45
1.20	60	60
1.80	65	70
2.40	75	70
3.00	85	70
3.20	90	70
3.52	95	70
4.50	125	90
--	-	-
--	-	-

COSEL

Model	LDA75F-24-H
Item	Ripple Voltage (by Ambient Temp.)
Object	+24V3.2A

Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.

Note: Slanted line shows the range of the rated ambient temperature.

2.Values

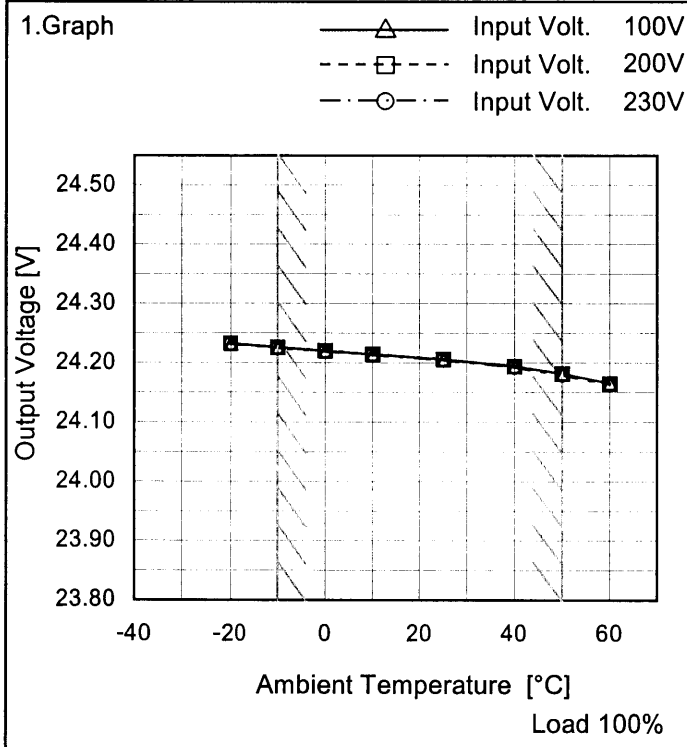
Ambient Temperature [°C]	Ripple Voltage [mV]	
	Input Volt. 100 [V]	Input Volt. 200 [V]
-20	95	115
-10	90	105
0	85	90
10	75	80
20	70	65
25	70	55
30	65	55
40	65	50
50	65	50
60	65	50
--	-	-

COSEL

Model	LDA75F-24-H
Item	Ambient Temperature Drift
Object	+24V3.2A

Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated ambient temperature.

2.Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
-20	24.233	24.233	24.232
-10	24.226	24.226	24.225
0	24.220	24.220	24.219
10	24.215	24.214	24.213
25	24.206	24.206	24.205
40	24.194	24.194	24.193
50	24.182	24.181	24.180
60	24.166	24.165	24.164
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	LDA75F-24-H	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+24V3.2A	

1.Output Voltage Accuracy

This is defined as the value of the output voltage, regulation load, ambient temperature and input voltage varied at random in the range as specified below.

Temperature : -10 - 50°C
Input Voltage : 85 - 264V
Load Current : 0 - 3.2A

* Output Voltage Accuracy = ±(Maximum of Output Voltage - Minimum of Output Voltage) / 2

$$\text{* Output Voltage Accuracy (Ration)} = \frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$$

2.Values

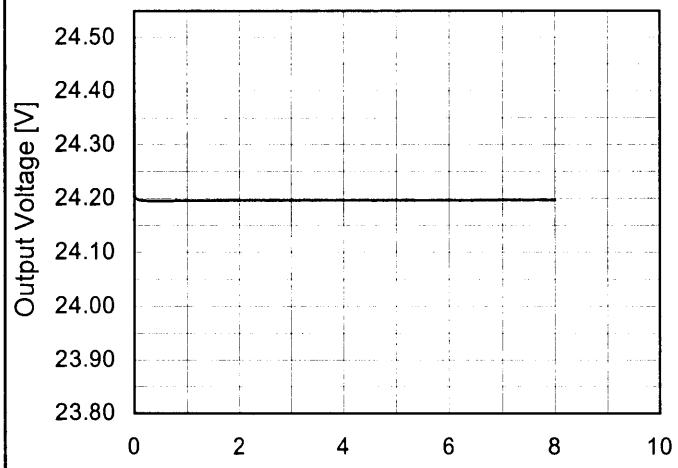
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	-10	85	0	24.230	±27	±0.1
Minimum Voltage	50	264	3.2	24.177		

COSEL

Model	LDA75F-24-H
Item	Time Lapse Drift
Object	+24V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 100V
Load 100%

* The characteristic of AC200V is equal.

2.Values

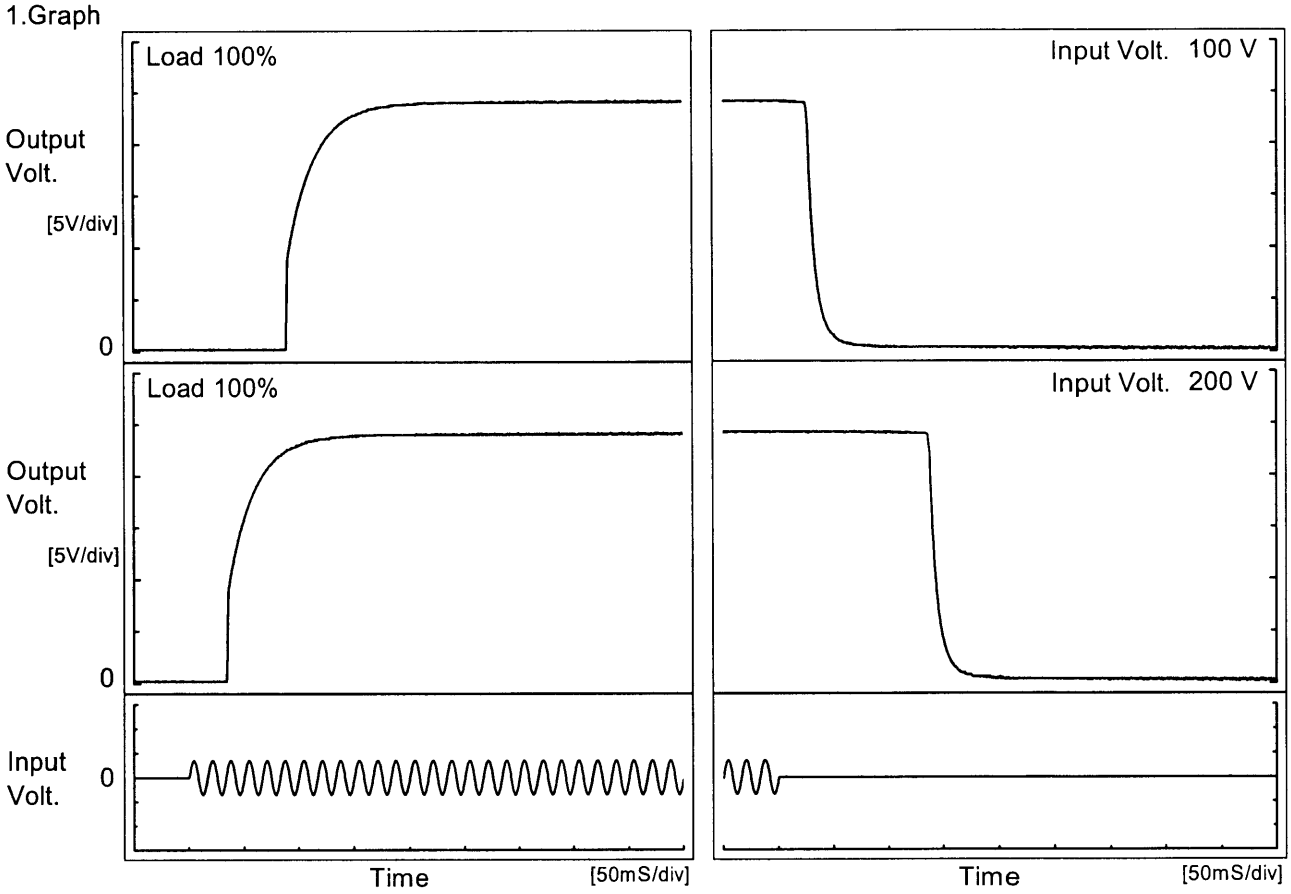
Time since start [H]	Output Voltage [V]
0.0	24.208
0.5	24.195
1.0	24.196
2.0	24.196
3.0	24.196
4.0	24.197
5.0	24.197
6.0	24.197
7.0	24.197
8.0	24.197

COSEL

Model	LDA75F-24-H
Item	Rise and Fall Time
Object	+24V3.2A

Temperature 25°C
Testing Circuitry Figure A

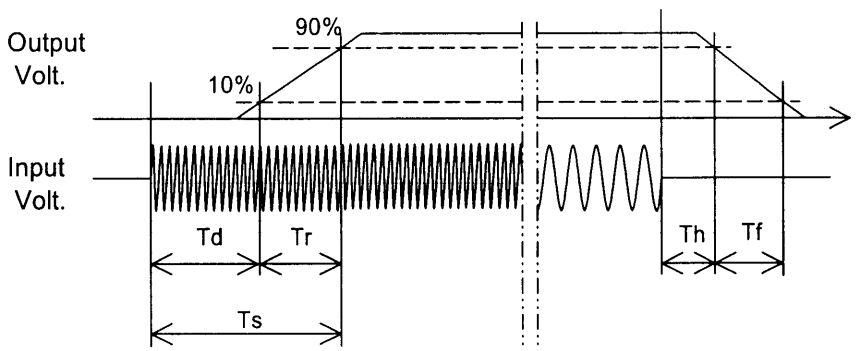
1.Graph



2.Values

[mS]

Input Volt. \ Time	Td	Tr	Ts	Th	Tf
100 V	89.8	46.5	136.3	26.8	17.3
200 V	34.8	45.8	80.6	137.8	17.0

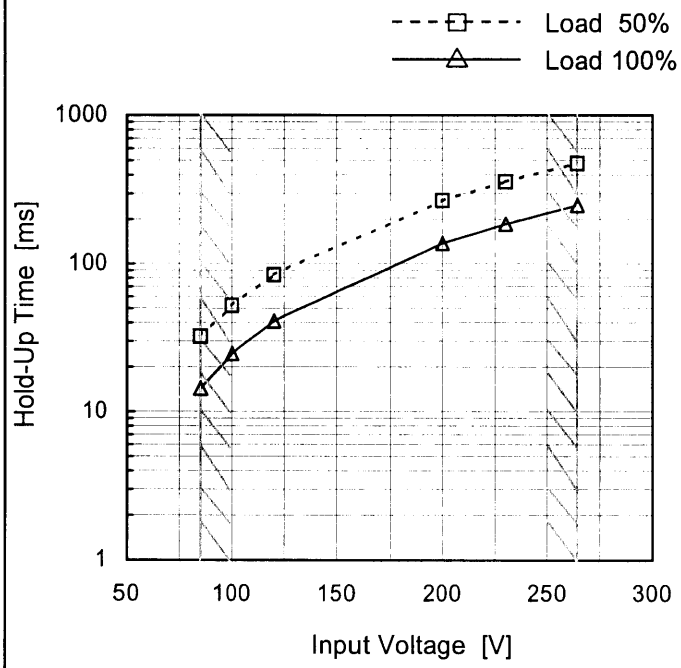


COSEL

Model	LDA75F-24-H
Item	Hold-Up Time
Object	+24V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.
Note: Slanted line shows the range of the rated input voltage.

2.Values

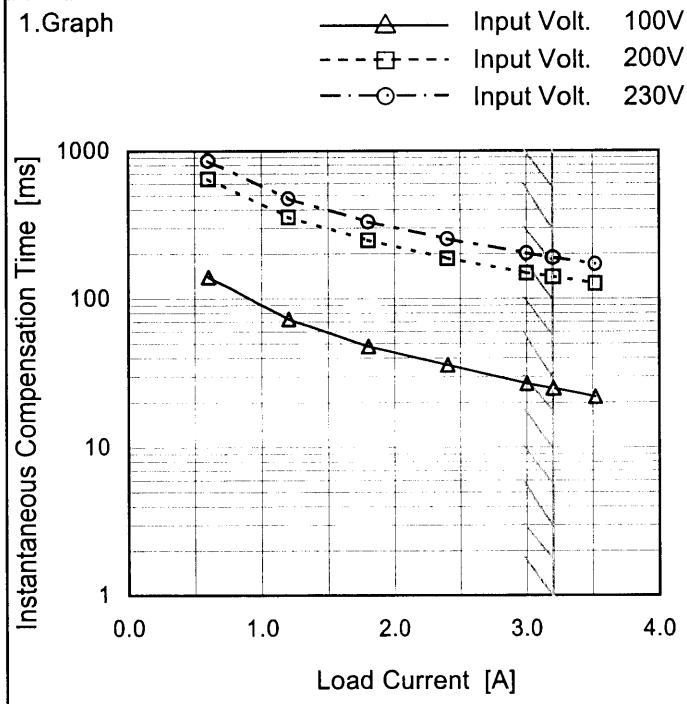
Input Voltage [V]	Hold-Up Time [ms]	
	Load 50%	Load 100%
85	32	14
100	52	25
120	84	41
200	269	137
230	360	186
264	479	250
--	-	-
--	-	-
--	-	-

COSEL

Model	LDA75F-24-H
Item	Instantaneous Interruption Compensation
Object	+24V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Time [ms] Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0.00	-	-	-
0.60	140	646	856
1.20	73	356	476
1.80	48	248	331
2.40	36	187	253
3.00	27	149	202
3.20	25	140	189
3.52	22	126	171
--	-	-	-
--	-	-	-
--	-	-	-

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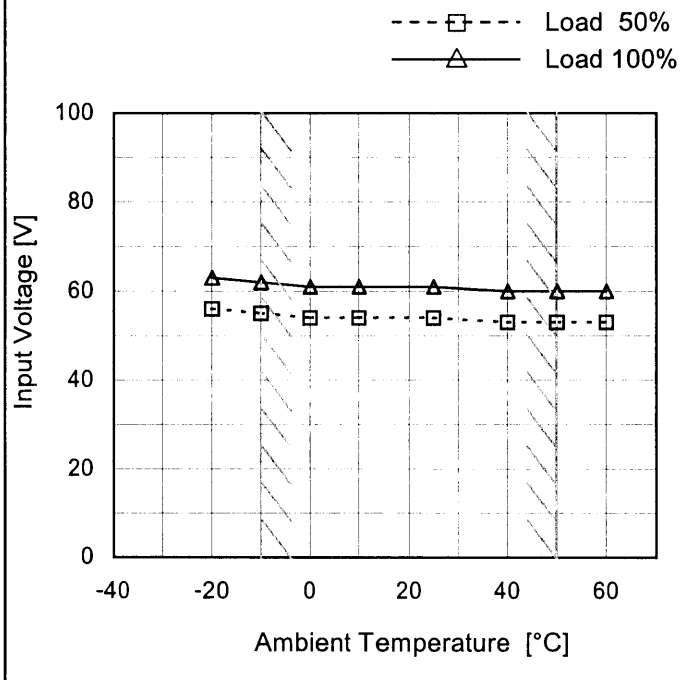
Model	LDA75F-24-H
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+24V3.2A

Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated ambient temperature.

2.Values

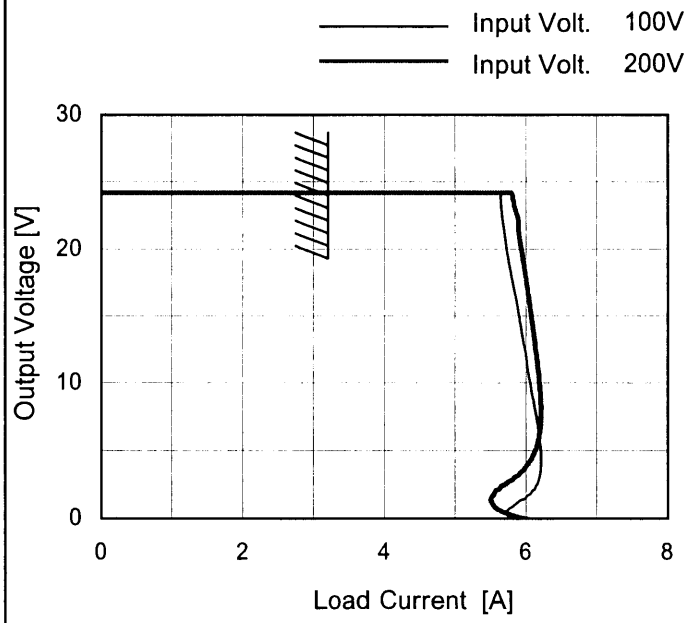
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-20	56	63
-10	55	62
0	54	61
10	54	61
25	54	61
40	53	60
50	53	60
60	53	60
--	-	-
--	-	-
--	-	-

COSEL

Model	LDA75F-24-H
Item	Overcurrent Protection
Object	+24V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated load current.

2.Values

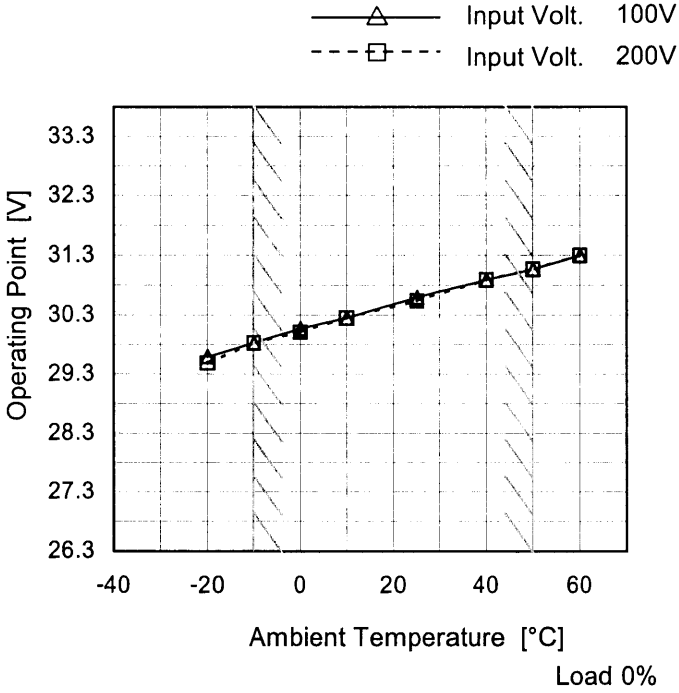
Output Voltage [V]	Load Current [A]	
	Input Volt. 100[V]	Input Volt. 200[V]
24.0	5.64	5.80
22.8	5.65	5.85
21.6	5.68	5.89
19.2	5.75	5.96
16.8	5.83	6.03
14.4	5.92	6.09
12.0	6.00	6.15
9.6	6.07	6.20
7.2	6.15	6.21
4.8	6.21	6.11
2.4	6.14	5.65
0.0	5.90	6.17

COSEL

Model	LDA75F-24-H
Item	Overvoltage Protection
Object	+24V3.2A

Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated ambient temperature.

2.Values

Ambient Temperature [°C]	Operating Point [V]	
	Input Volt. 100[V]	Input Volt. 200[V]
-20	29.59	29.48
-10	29.82	29.82
0	30.06	30.00
10	30.24	30.24
25	30.59	30.53
40	30.88	30.88
50	31.06	31.06
60	31.29	31.29
--	-	-
--	-	-
--	-	-

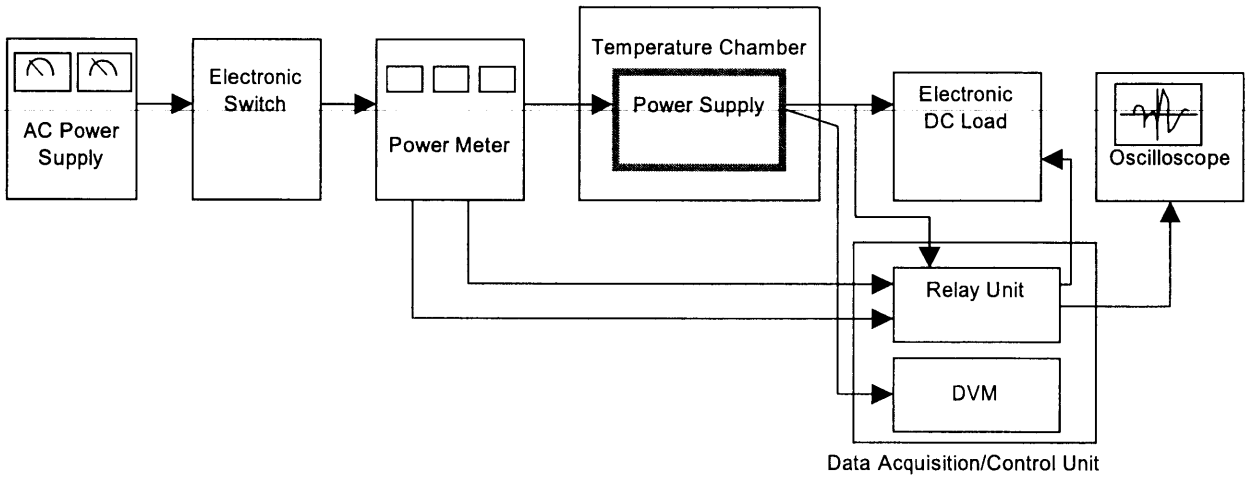


Figure A

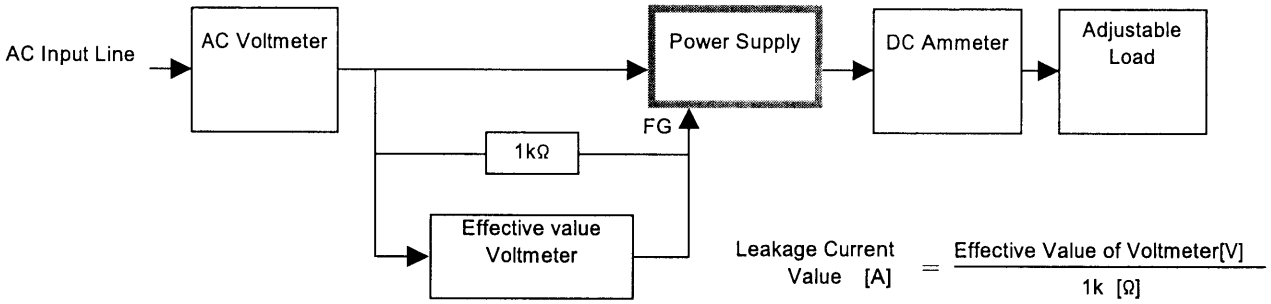


Figure B (DEN-AN)

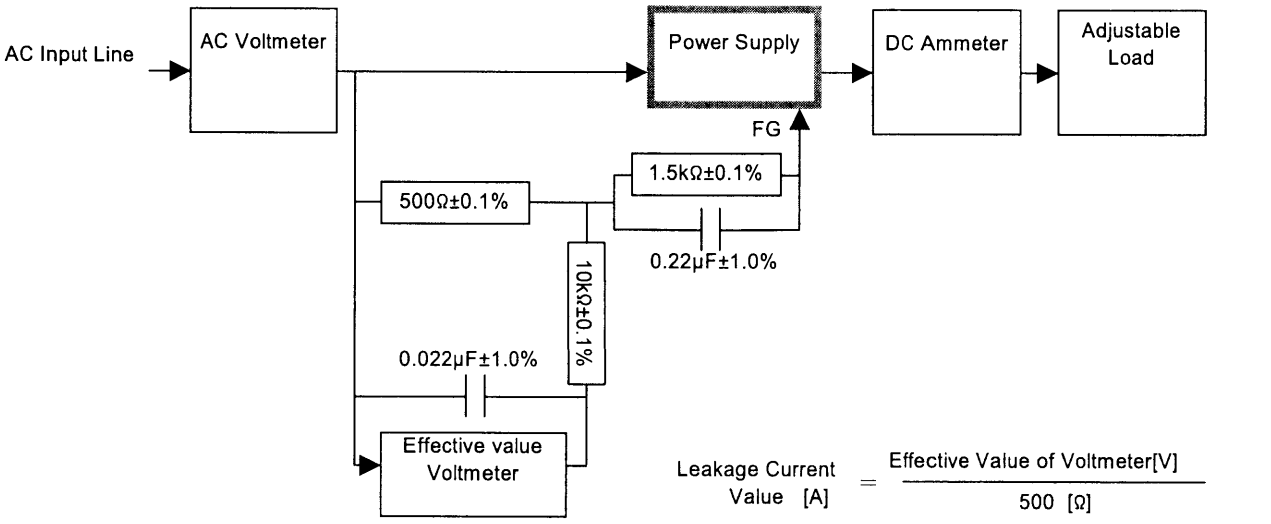


Figure B (IEC60950)