参考資料

COSEL

TEST DATA OF LDA100W-30

(200V　INPUT)

Regulated DC Power Supply
Mar.4. 2005

Approved by : J. Uchida
J.Uchida　Design Manager

Prepared by : A. Kawai
A.Kawai　Design Engineer

COSEL CO.,LTD.

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参考資料

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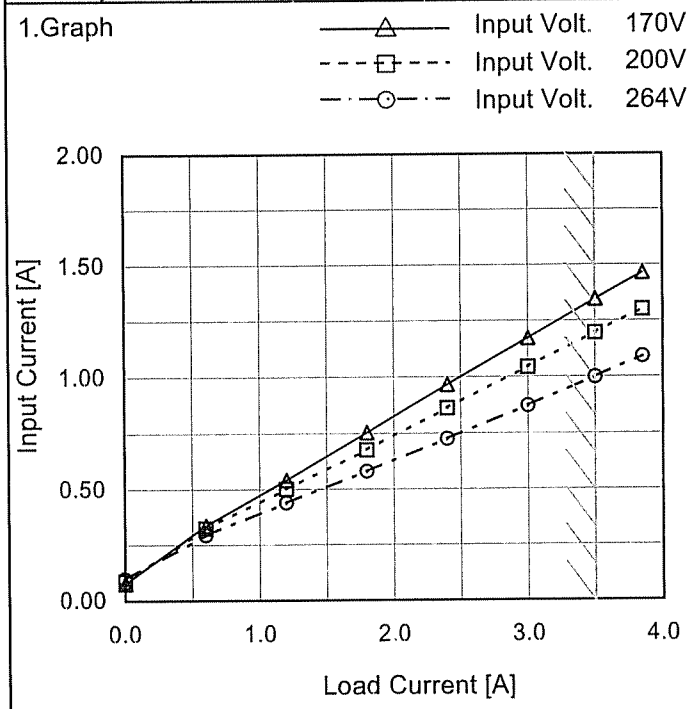
Model	LDA100W-30
Item	Input Current (by Load Current)
Object	————————

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. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.00	0.078	0.086	0.098
0.60	0.338	0.325	0.295
1.20	0.542	0.501	0.439
1.80	0.754	0.677	0.580
2.40	0.967	0.862	0.725
3.00	1.173	1.043	0.872
3.50	1.346	1.195	0.999
3.85	1.464	1.301	1.090
--	-	-	-
--	-	-	-
--	-	-	-

BC-0990

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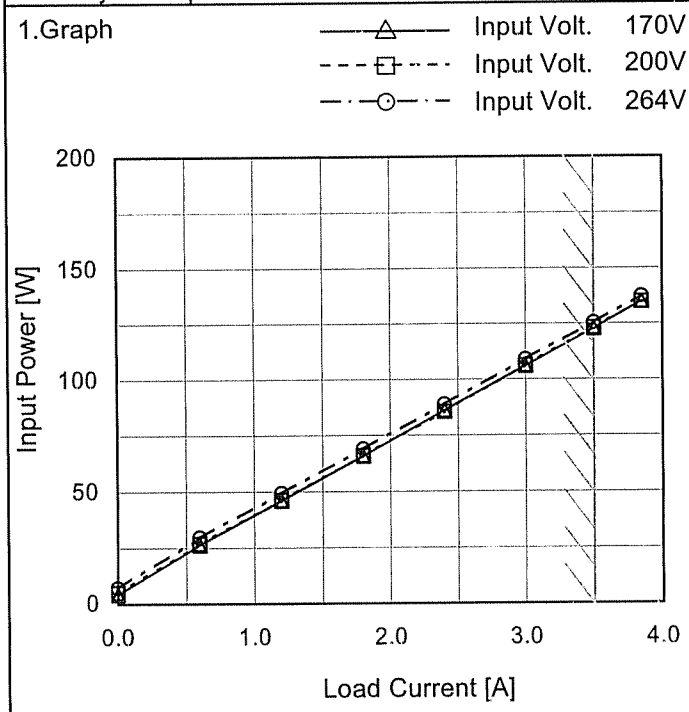
Model	LDA100W-30
Item	Input Power (by Load Current)
Object	————————

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. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.00	4.3	5.1	7.2
0.60	26.5	26.9	29.7
1.20	46.1	46.3	49.4
1.80	66.0	66.1	69.1
2.40	86.2	85.7	88.9
3.00	106.1	106.3	109.0
3.50	122.9	123.1	125.5
3.85	135.0	134.9	137.3
--	-	-	-
--	-	-	-
--	-	-	-

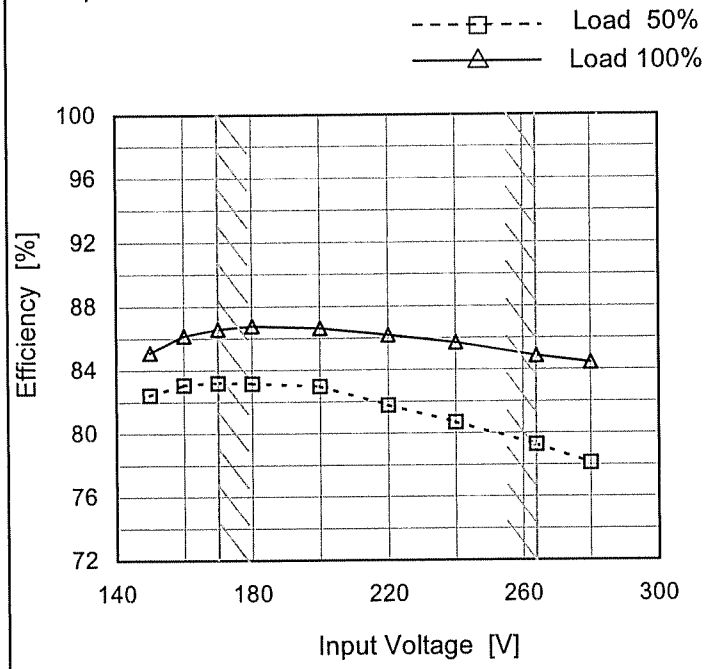
BC-0990

COSEL

Model	LDA100W-30
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%
150	82.4	85.1
160	83.1	86.2
170	83.2	86.6
180	83.2	86.8
200	83.0	86.6
220	81.8	86.2
240	80.7	85.7
264	79.3	84.9
280	78.1	84.4

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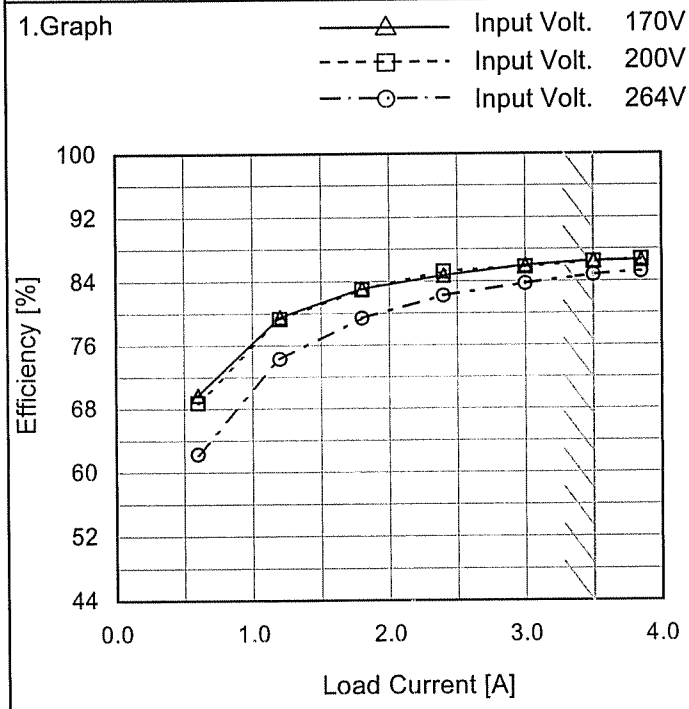
Model	LDA100W-30
Item	Efficiency (by Load Current)
Object	————————

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. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.00	-	-	-
0.60	69.8	68.8	62.3
1.20	79.5	79.3	74.3
1.80	83.1	83.0	79.4
2.40	84.8	85.2	82.2
3.00	86.0	85.8	83.7
3.50	86.6	86.4	84.8
3.85	86.6	86.7	85.2
--	-	-	-
--	-	-	-
--	-	-	-

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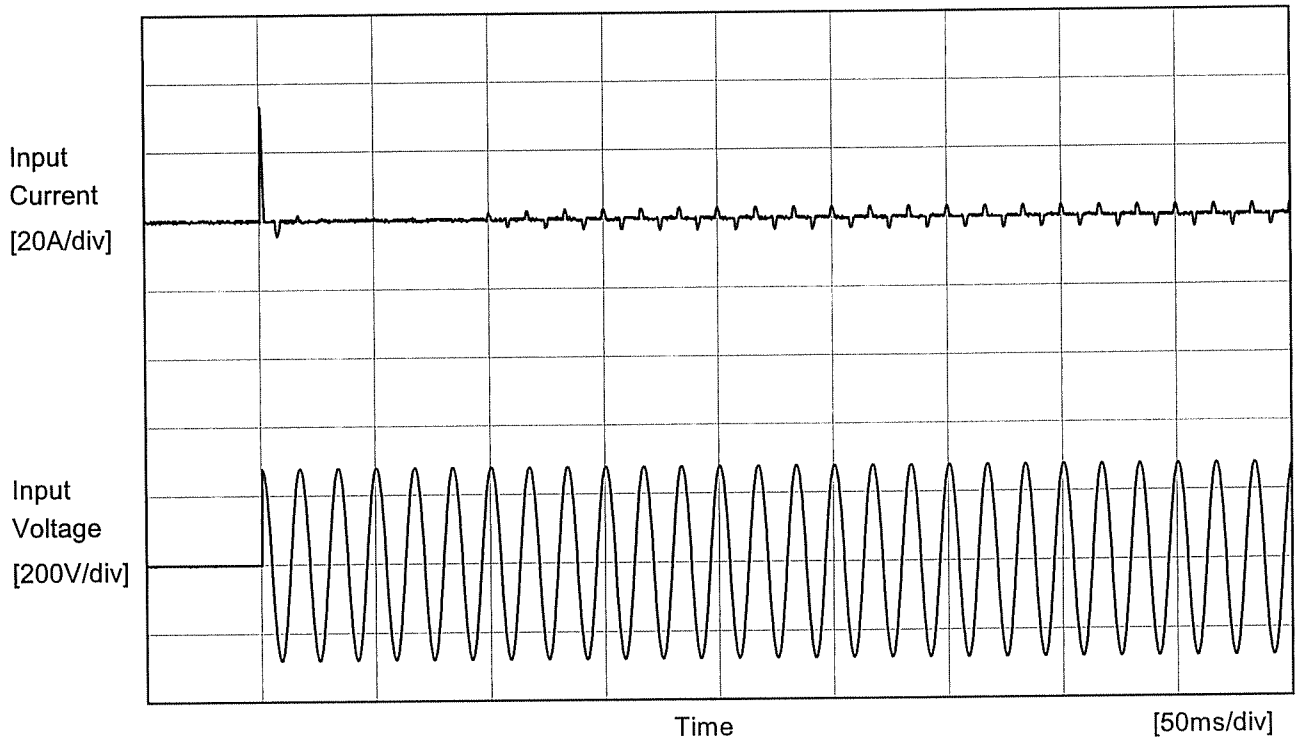
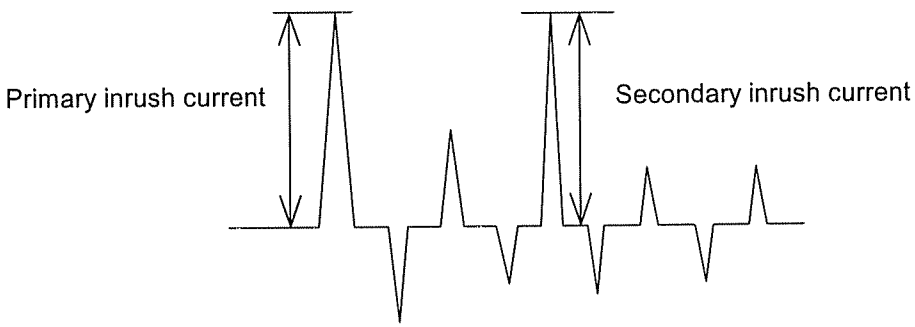
Model	LDA100W-30
Item	Inrush Current
Object	————————

Temperature 25°C
Testing Circuitry Figure A



Input Voltage	200 V
Frequency	60 Hz
Load	100 %
Primary inrush current	33.1 A
Secondary inrush current	3.3 A

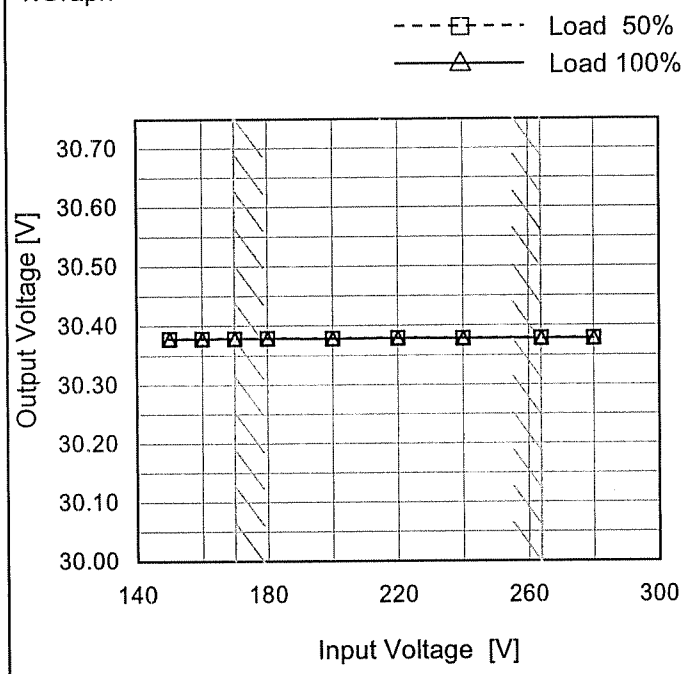


COSEL

Model	LDA100W-30
Item	Line Regulation
Object	+30V3.5A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

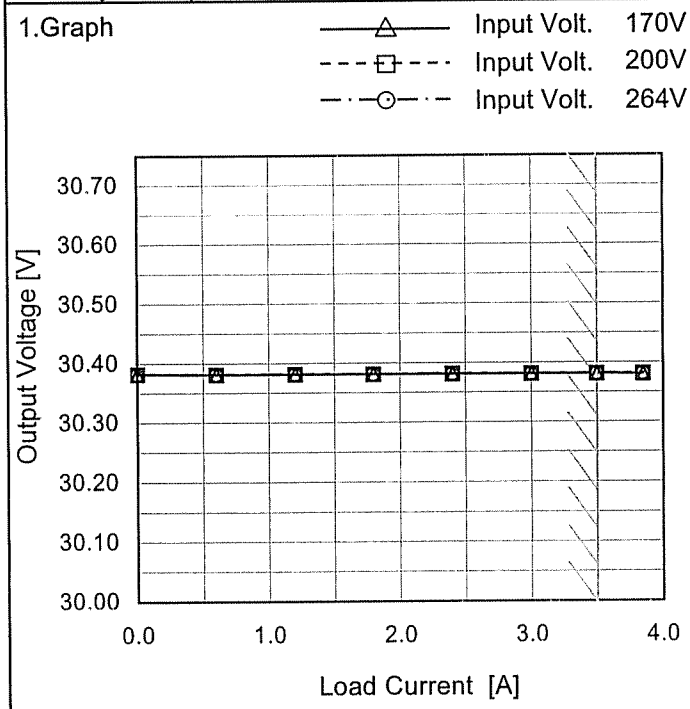
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
150	30.379	30.379
160	30.379	30.379
170	30.379	30.379
180	30.379	30.379
200	30.379	30.379
220	30.379	30.379
240	30.379	30.379
264	30.379	30.379
280	30.379	30.379

COSEL

Model	LDA100W-30
Item	Load Regulation
Object	+30V3.5A

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. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.00	30.382	30.382	30.382
0.60	30.381	30.381	30.381
1.20	30.381	30.381	30.381
1.80	30.382	30.381	30.381
2.40	30.381	30.381	30.381
3.00	30.382	30.381	30.381
3.50	30.381	30.381	30.381
3.85	30.381	30.381	30.381
--	-	-	-
--	-	-	-
--	-	-	-

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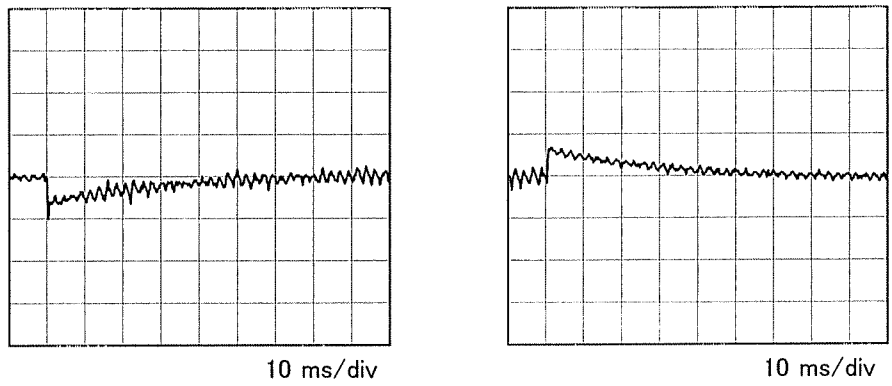
Model	LDA100W-30		
Item	Dynamic Load Response	Temperature Testing Circuitry	25°C Figure A
Object	+30V3.5A		

Input Volt. 200 V

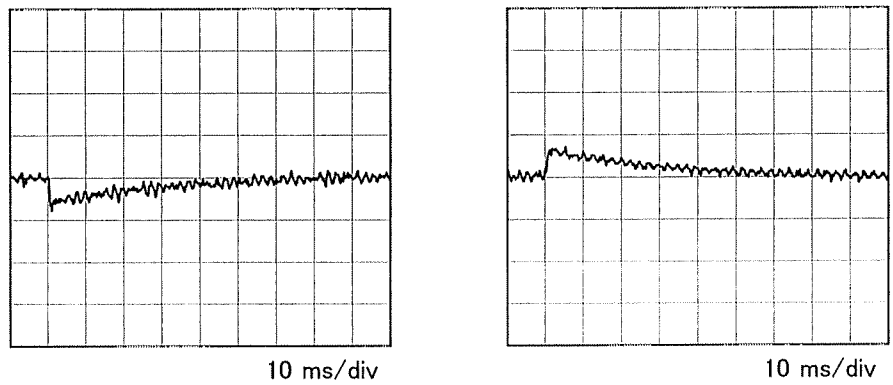
Cycle 1000 ms

Load Current

Min. Load (0A) ⟷
Load 100% (3.5A)



Min. Load (0A) ⟷
Load 50% (1.75A)



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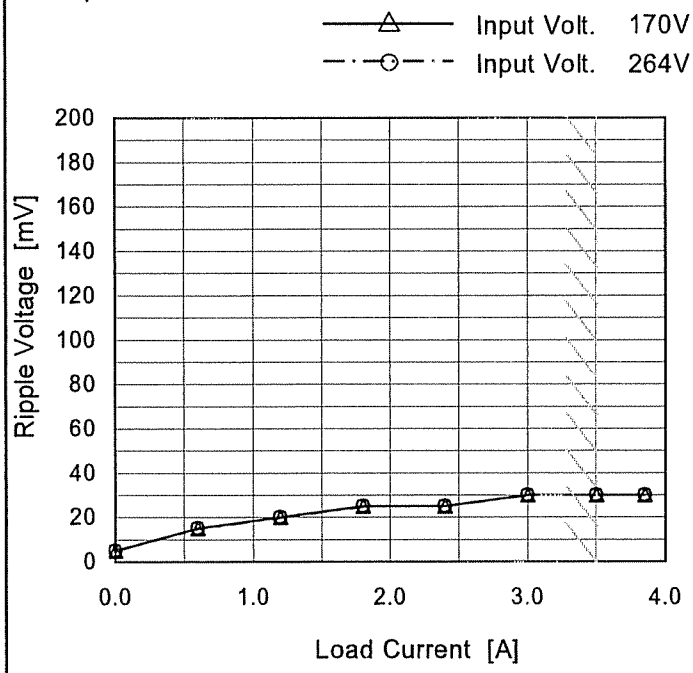
Model	LDA100W-30
Item	Ripple Voltage (by Load Current)
Object	+30V3.5A

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.

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

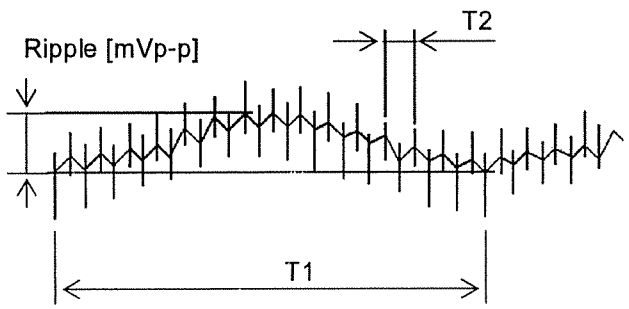


Fig. Complex Ripple Wave Form

2.Values

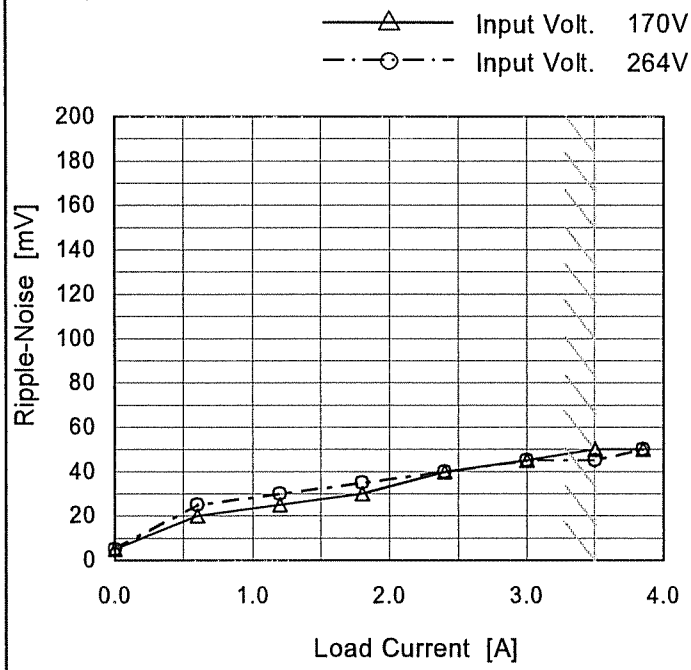
Load Current [A]	Ripple Voltage [mV] Input Volt. 170 [V]	Ripple Voltage [mV] Input Volt. 264 [V]
0.00	5	5
0.60	15	15
1.20	20	20
1.80	25	25
2.40	25	25
3.00	30	30
3.50	30	30
3.85	30	30
--	-	-
--	-	-
--	-	-

COSEL

Model	LDA100W-30
Item	Ripple-Noise
Object	+30V3.5A

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.

2.Values

Load Current [A]	Ripple-Noise [mV] Input Volt. 170 [V]	Ripple-Noise [mV] Input Volt. 264 [V]
0.00	5	5
0.60	20	25
1.20	25	30
1.80	30	35
2.40	40	40
3.00	45	45
3.50	50	45
3.85	50	50
--	-	-
--	-	-
--	-	-

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

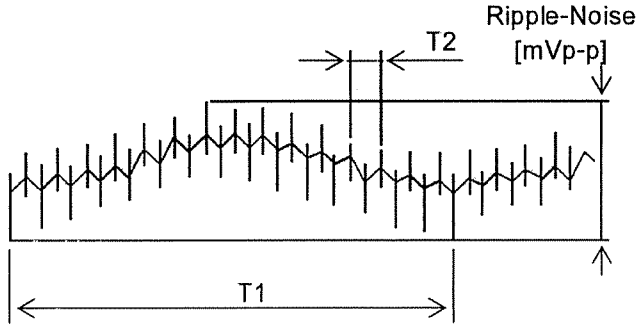


Fig. Complex Ripple Wave Form

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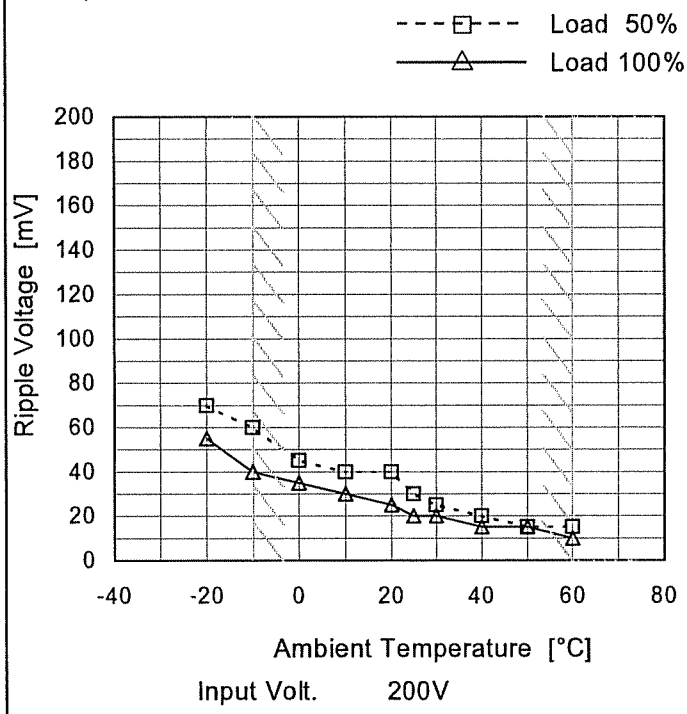
Model	LDA100W-30
Item	Ripple Voltage (by Ambient Temp.)
Object	+30V3.5A

Testing Circuitry Figure A

1.Graph



Input Volt. 200V

Measured by 20 MHz Oscilloscope.

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

2.Values

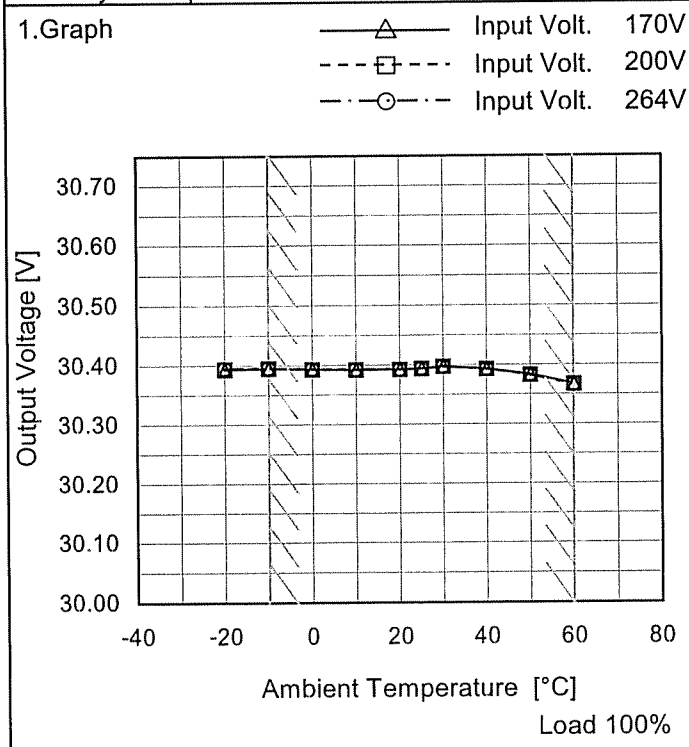
Ambient Temperature [°C]	Ripple Voltage [mV]	
	Load 50%	Load 100%
-20	70	55
-10	60	40
0	45	35
10	40	30
20	40	25
25	30	20
30	25	20
40	20	15
50	15	15
60	15	10
--	-	-

COSEL

Model	LDA100W-30
Item	Ambient Temperature Drift
Object	+30V3.5A

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. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
-20	30.393	30.394	30.394
-10	30.395	30.395	30.395
0	30.393	30.393	30.393
10	30.392	30.392	30.392
20	30.393	30.392	30.392
25	30.394	30.394	30.394
30	30.397	30.397	30.397
40	30.393	30.393	30.393
50	30.384	30.383	30.382
60	30.368	30.367	30.366
--	-	-	-

COSEL

Model	LDA100W-30	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+30V3.5A	

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 - 60°C
Input Voltage : 170 - 264V
Load Current : 0 - 3.5A

* 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

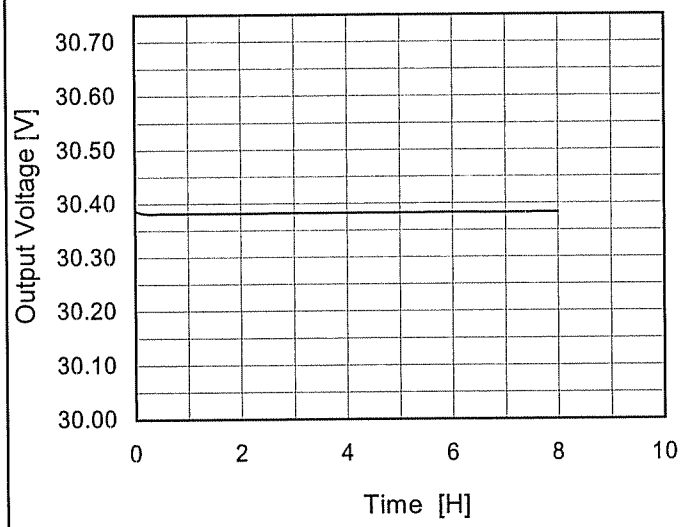
Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	25	264	3.5	30.398	±18	±0.1
Minimum Voltage	60	170	3.5	30.362		

COSEL

Model	LDA100W-30
Item	Time Lapse Drift
Object	+30V3.5A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 200V
Load 100%

2.Values

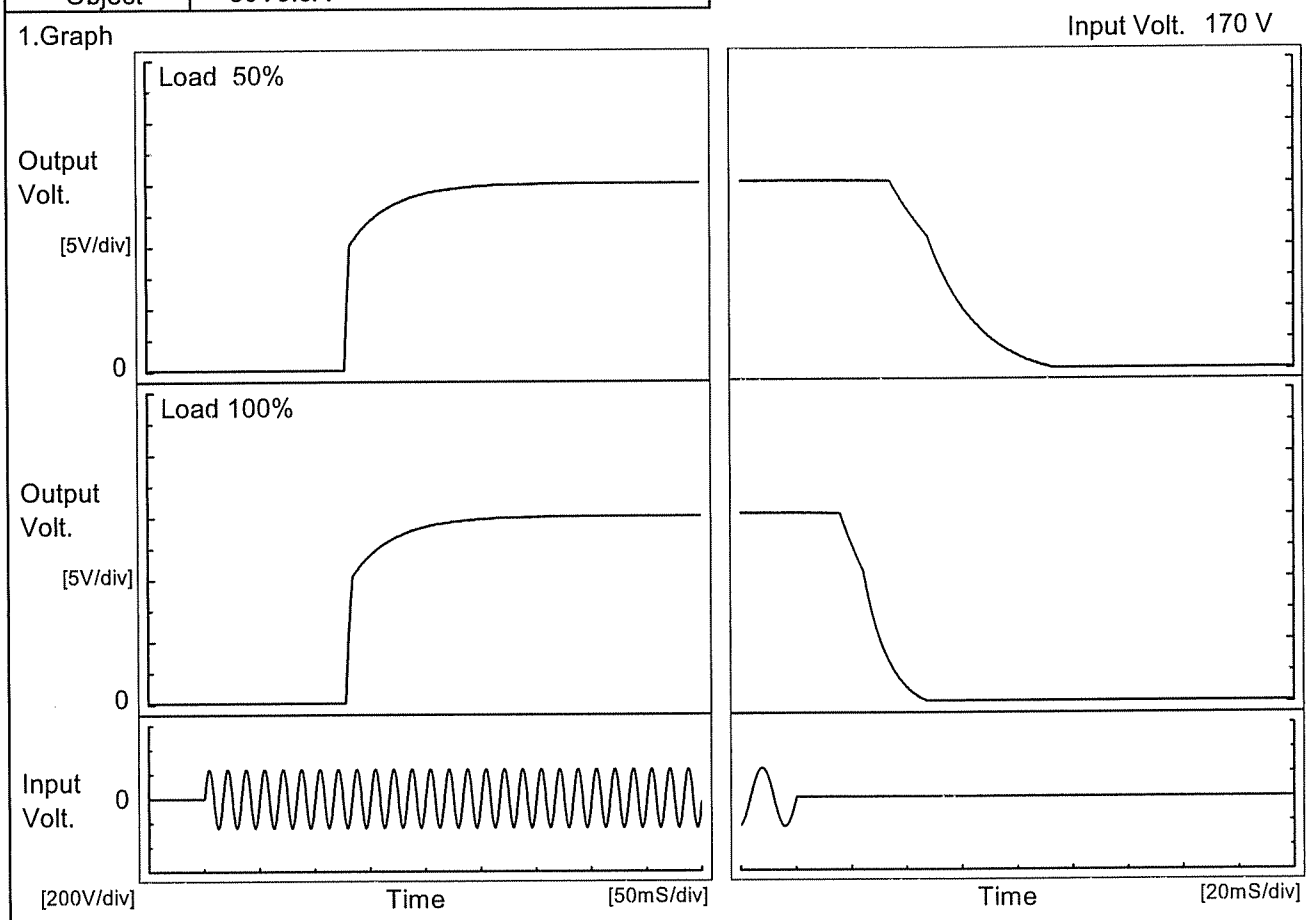
Time since start [H]	Output Voltage [V]
0.0	30.389
0.5	30.382
1.0	30.382
2.0	30.382
3.0	30.383
4.0	30.383
5.0	30.383
6.0	30.383
7.0	30.383
8.0	30.383

COSEL

Model	LDA100W-30
Item	Rise and Fall Time
Object	+30V3.5A

Temperature 25°C
Testing Circuitry Figure A

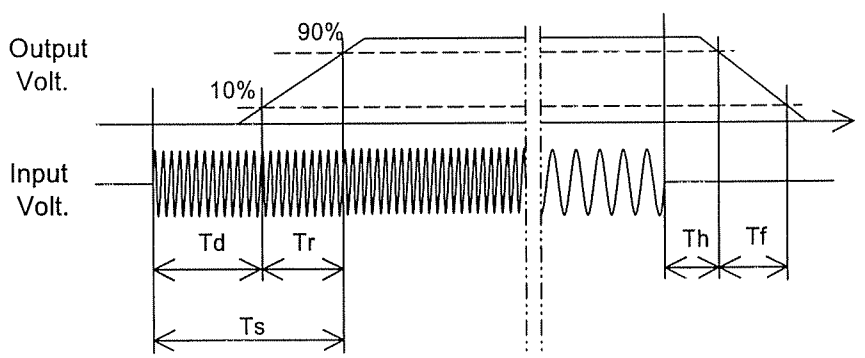
1.Graph



2.Values

[mS]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	128.8	48.0	176.8	38.1	38.0
100 %	129.0	48.8	177.8	18.4	20.2

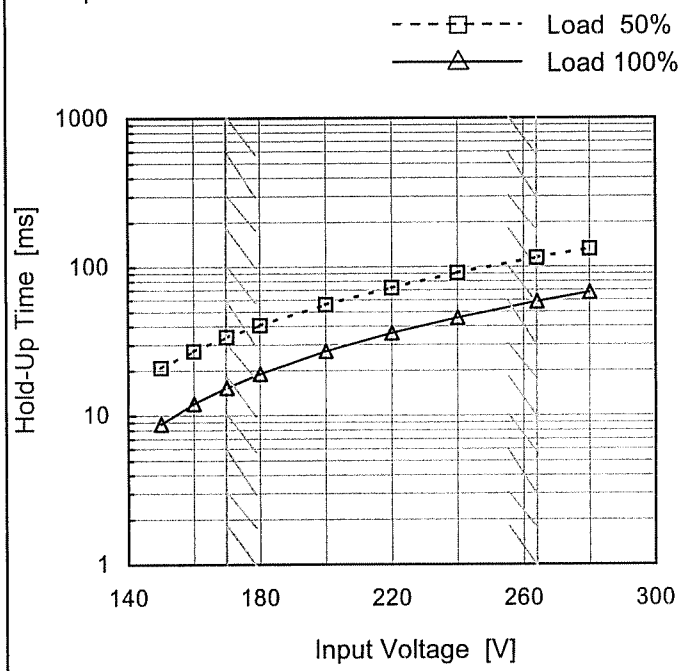


COSEL

Model	LDA100W-30
Item	Hold-Up Time
Object	+30V3.5A

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

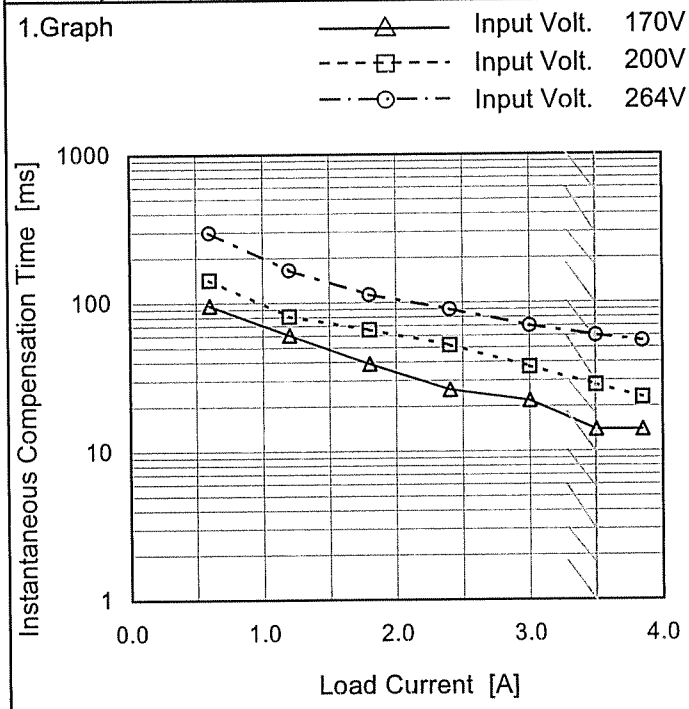
Input Voltage [V]	Hold-Up Time [ms]	
	Load 50%	Load 100%
150	21	9
160	27	12
170	34	15
180	41	19
200	56	27
220	73	36
240	91	46
264	115	58
280	132	68

COSEL

Model	LDA100W-30
Item	Instantaneous Interruption Compensation
Object	+30V3.5A

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. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
0.00	-	-	-
0.60	96	143	298
1.20	61	81	166
1.80	39	66	113
2.40	26	52	90
3.00	22	37	70
3.50	14	28	60
3.85	14	23	55
--	-	-	-
--	-	-	-
--	-	-	-

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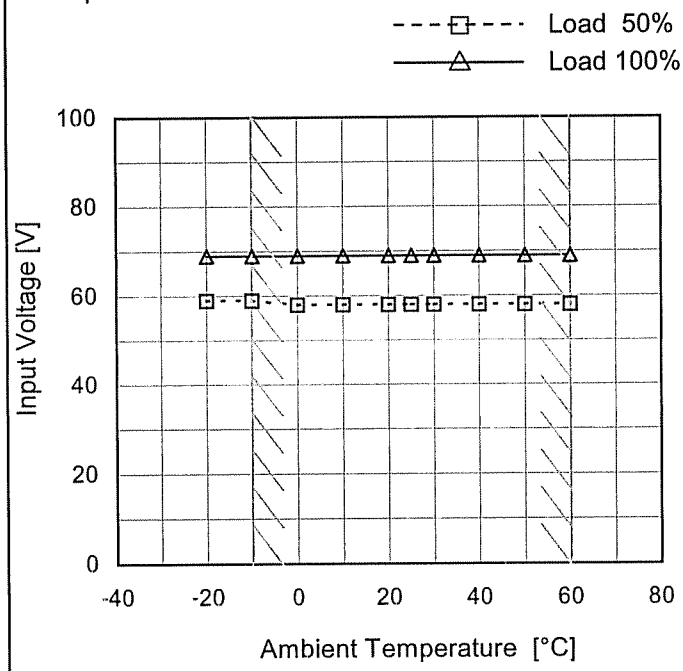
Model	LDA100W-30
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+30V3.5A

Testing Circuitry Figure A

1.Graph



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

2.Values

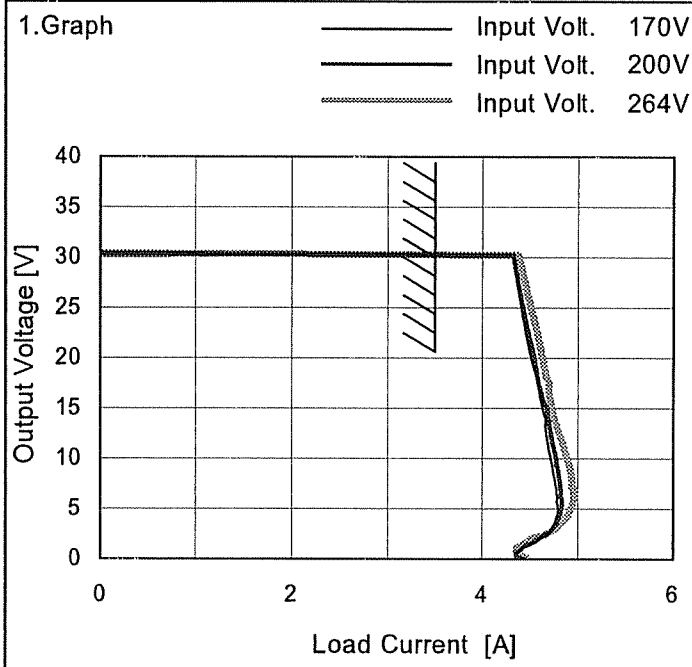
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-20	59	69
-10	59	69
0	58	69
10	58	69
20	58	69
25	58	69
30	58	69
40	58	69
50	58	69
60	58	69
--	-	-

COSEL

Model	LDA100W-30
Item	Overcurrent Protection
Object	+30V3.5A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

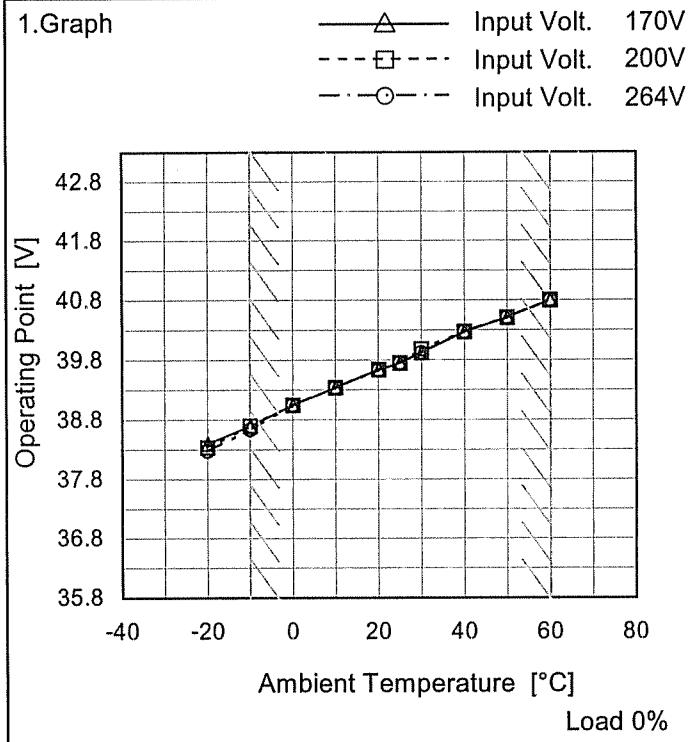
Output Voltage [V]	Load Current [A]		
	Input Volt. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
30.0	4.33	4.33	4.38
28.5	4.35	4.35	4.42
27.0	4.37	4.38	4.45
24.0	4.42	4.44	4.53
21.0	4.48	4.52	4.60
18.0	4.56	4.58	4.68
15.0	4.62	4.68	4.72
12.0	4.67	4.72	4.82
9.0	4.73	4.79	4.92
6.0	4.78	4.83	4.95
3.0	4.72	4.73	4.76
0.0	4.55	4.50	4.58

COSEL

Model	LDA100W-30
Item	Overvoltage Protection
Object	+30V3.5A

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. 170[V]	Input Volt. 200[V]	Input Volt. 264[V]
-20	38.43	38.37	38.31
-10	38.73	38.73	38.67
0	39.08	39.08	39.08
10	39.37	39.37	39.37
20	39.67	39.67	39.66
25	39.78	39.78	39.78
30	39.95	40.01	39.95
40	40.30	40.30	40.30
50	40.54	40.54	40.54
60	40.83	40.83	40.83
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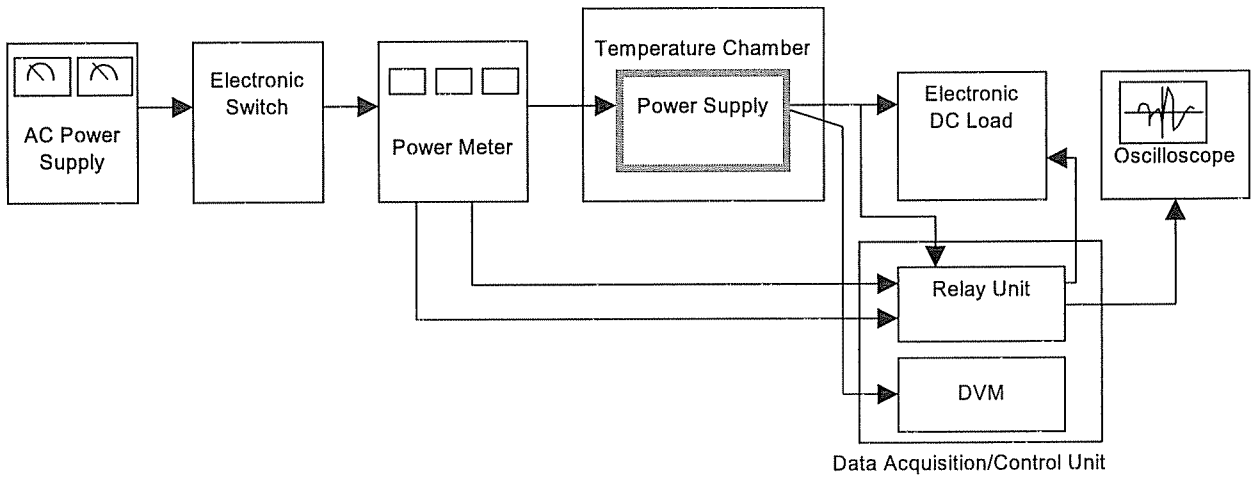

Figure A

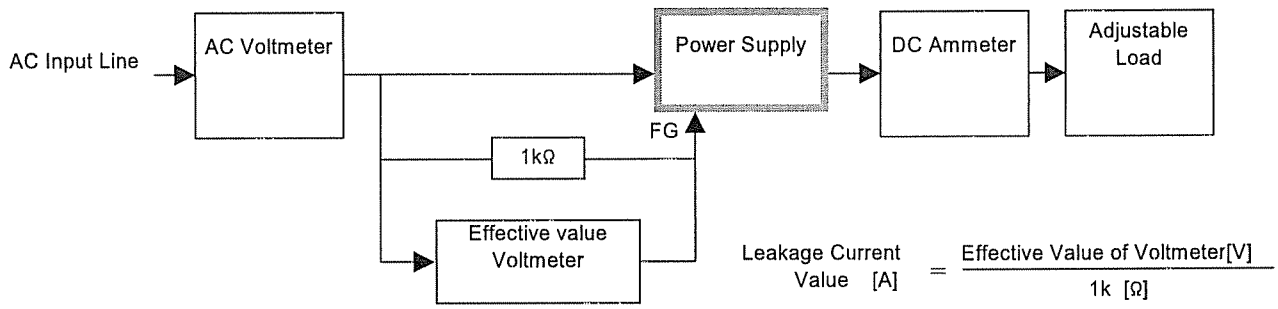

Figure B (DEN-AN)

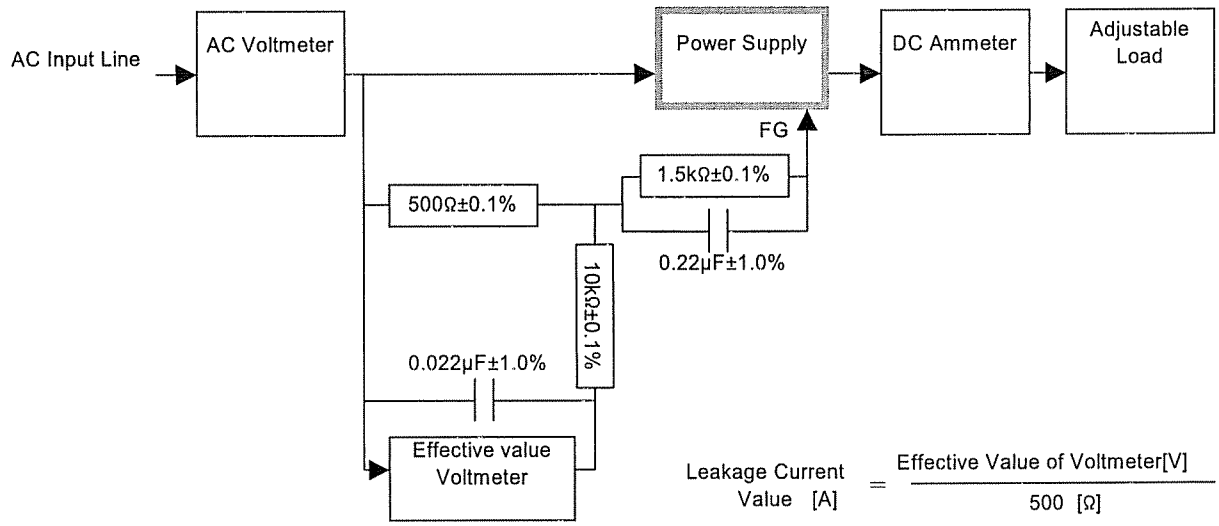

Figure B (IEC60950)