参考資料

COSEL

TEST DATA OF SNDPF1000

(100V INPUT)

Regulated DC Power Supply
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COSEL CO.,LTD.

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(Final Page 19)

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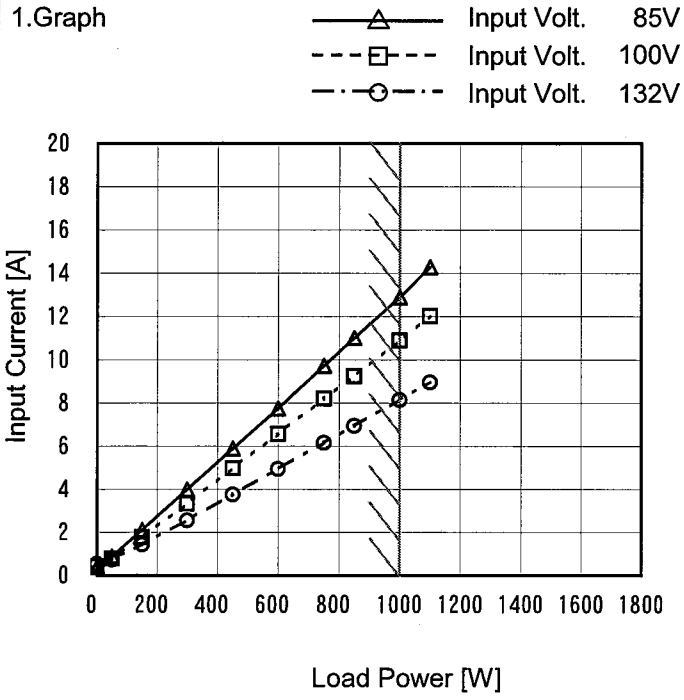
Model	SNDPF1000
Item	Input Current (by Load Power)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Input Current [A]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	0.380	0.418	0.547
50	0.889	0.782	0.740
150	2.113	1.782	1.431
300	4.001	3.338	2.560
450	5.897	4.980	3.763
600	7.737	6.562	4.942
750	9.731	8.198	6.153
850	11.017	9.234	6.945
1000	12.901	10.903	8.137
1100	14.292	12.023	8.953
--	-	-	-

BC-10648

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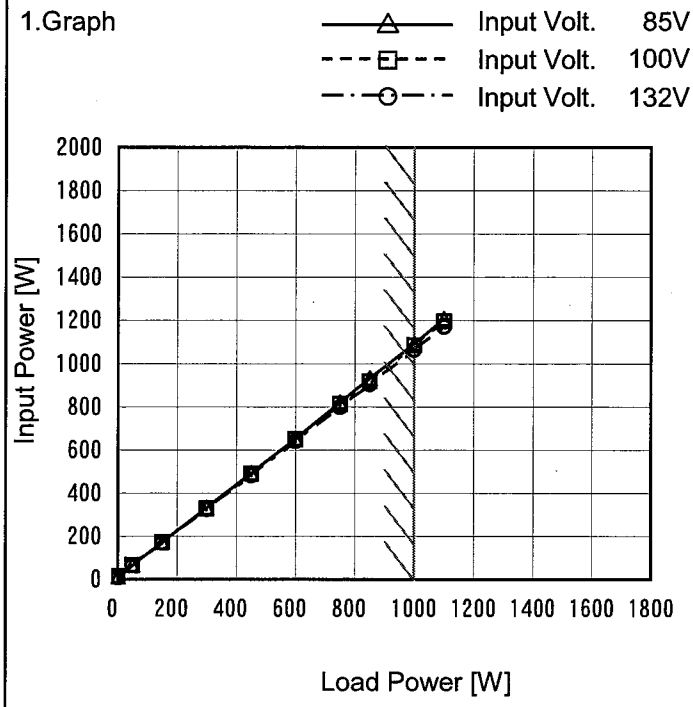
Model	SNDPF1000
Item	Input Power (by Load Power)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Input Power [W]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	13	14	9
50	67	66	65
150	173	171	171
300	333	328	326
450	495	490	483
600	653	650	641
750	822	813	800
850	932	917	905
1000	1092	1084	1064
1100	1208	1196	1171
--	-	-	-

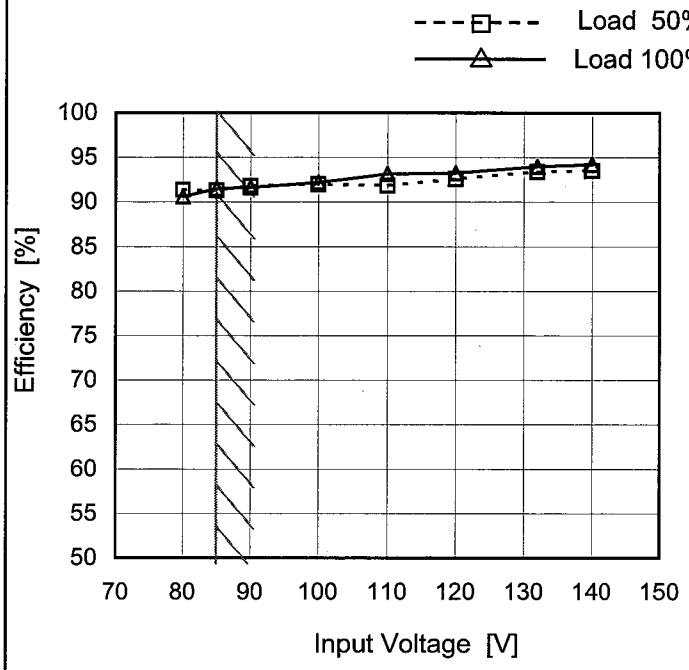
BC-10648

COSEL

Model	SNDPF1000
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%
80	91.4	90.6
85	91.3	91.5
90	91.8	91.7
100	92.0	92.2
110	91.8	93.2
120	92.6	93.3
132	93.4	94.0
140	93.5	94.2
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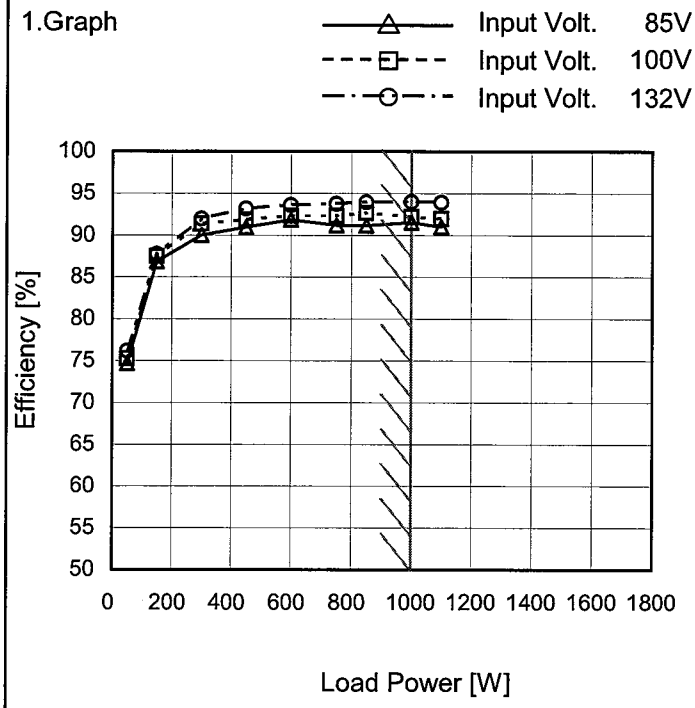
Model	SNDPF1000
Item	Efficiency (by Load Power)
Object	————————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Efficiency [%]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
50	74.7	75.3	76.2
150	86.9	87.5	87.8
300	90.0	91.4	92.0
450	91.0	91.8	93.2
600	91.9	92.3	93.6
750	91.2	92.3	93.8
850	91.2	92.7	94.0
1000	91.5	92.2	94.0
1100	91.0	92.0	93.9
--	-	-	-
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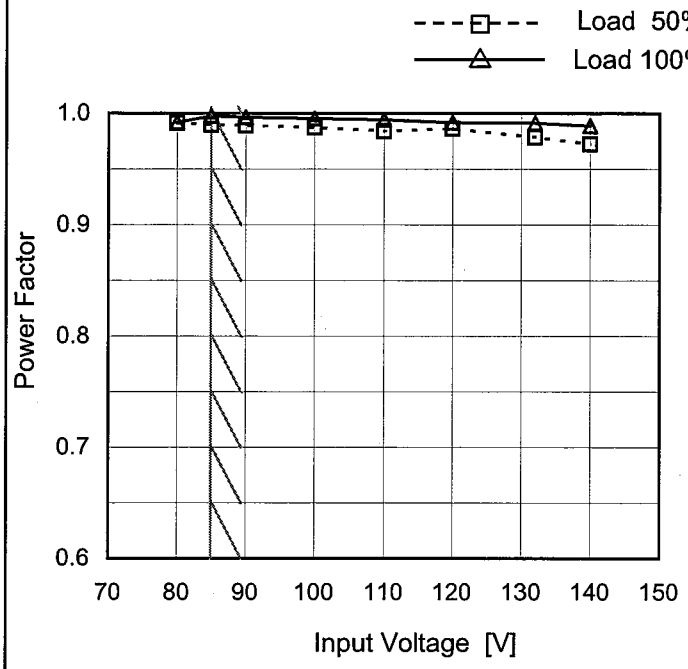
Model	SNDPF1000
Item	Power Factor (by Input Voltage)
Object	————————

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]	Power Factor	
	Load 50%	Load 100%
80	0.991	0.992
85	0.990	0.998
90	0.989	0.997
100	0.987	0.995
110	0.984	0.994
120	0.986	0.992
132	0.978	0.991
140	0.972	0.989
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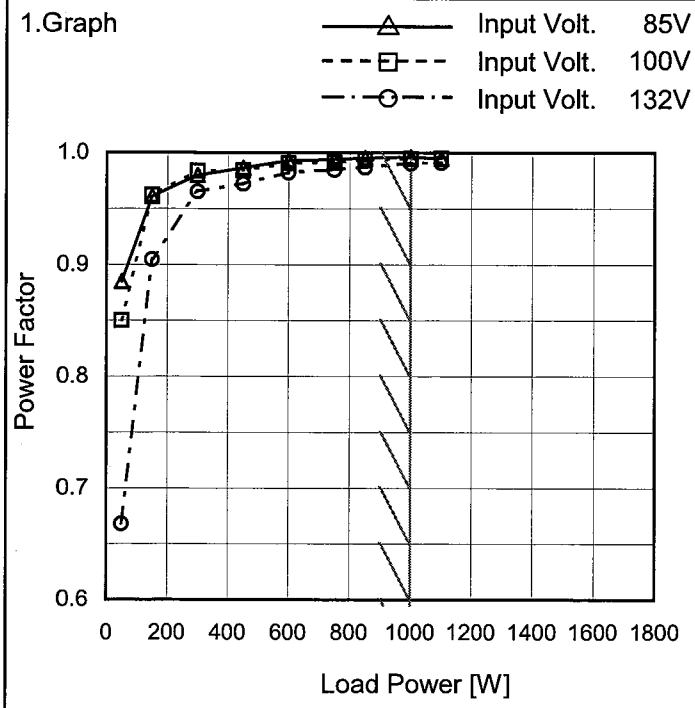
Model	SNDPF1000
Item	Power Factor (by Load Power)
Object	———————

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Power Factor Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
50	0.885	0.850	0.668
150	0.961	0.962	0.905
300	0.980	0.984	0.966
450	0.987	0.984	0.972
600	0.993	0.990	0.982
750	0.994	0.991	0.985
850	0.996	0.993	0.987
1000	0.996	0.995	0.991
1100	0.995	0.995	0.991
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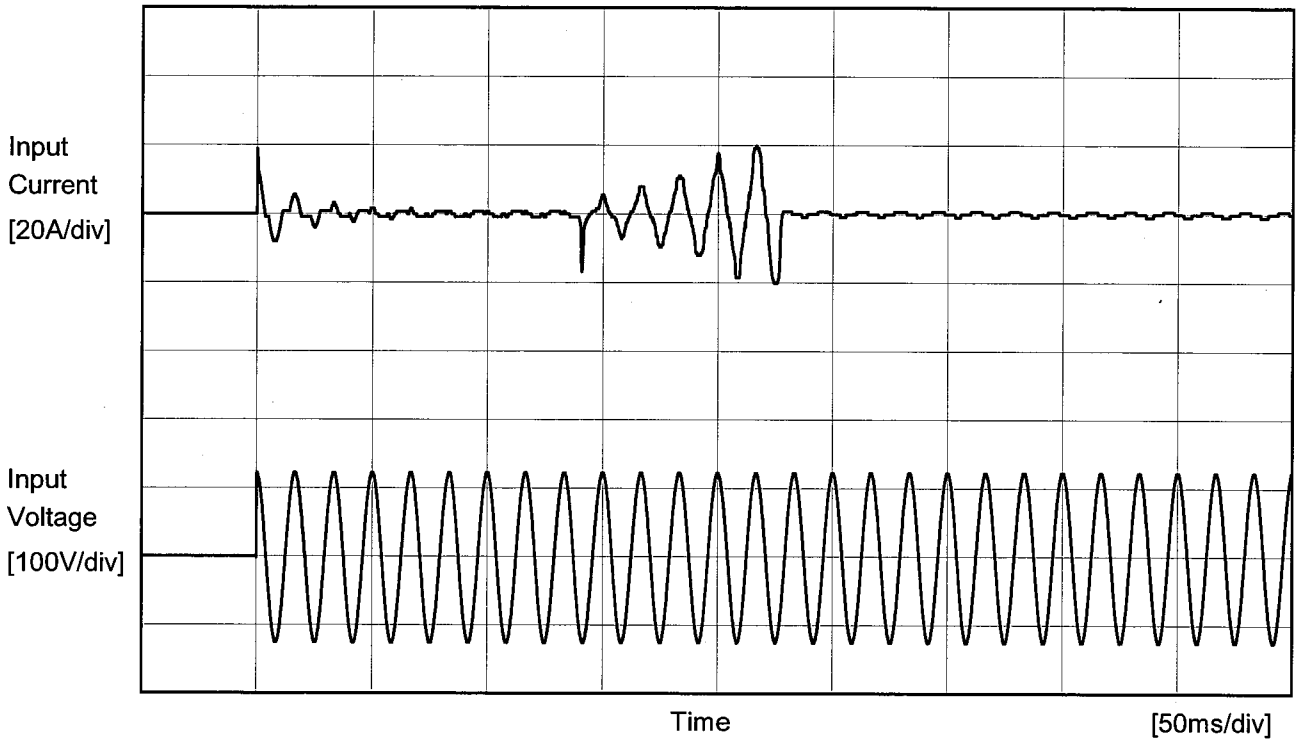
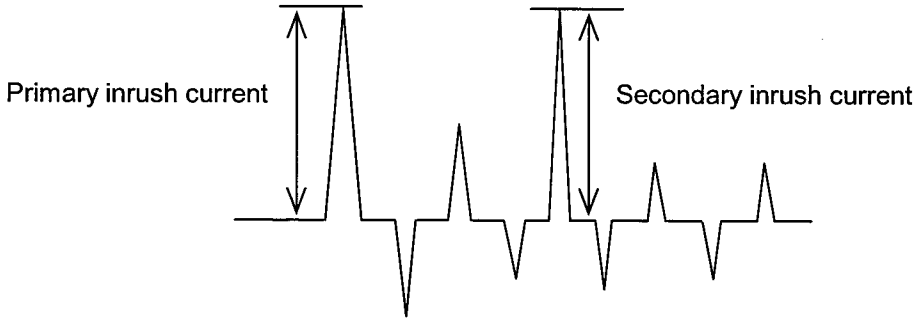
Model	SNDPF1000
Item	Inrush Current
Object	———————

Temperature 25°C
Testing Circuitry Figure A



Input Voltage	100 V
Frequency	60 Hz
Load	0 %
Primary inrush current	18.9 A
Secondary inrush current	20.1 A



Note:The current of the input surge to a built-in noise filter (0.2ms or less) is excluded.

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Model	SNDPF1000	
Item	Leakage Current	Temperature 25°C Testing Circuitry Figure B
Object	———————	

1.Results

Standards	Leakage Current [mA]		
	Input Volt. 85 [V]	Input Volt. 100 [V]	Input Volt. 132 [V]
(A)DEN-AN	0.08	0.09	0.12
(B)IEC60950-1	0.08	0.09	0.12

Standards	Leakage Current [mA]		
	Input Volt. 170 [V]	Input Volt. 240 [V]	Input Volt. 264 [V]
(B)IEC60950-1	-	-	-

2.Condition

Leakage current value is concluded after measuring both phases of AC input and by choosing the larger one.

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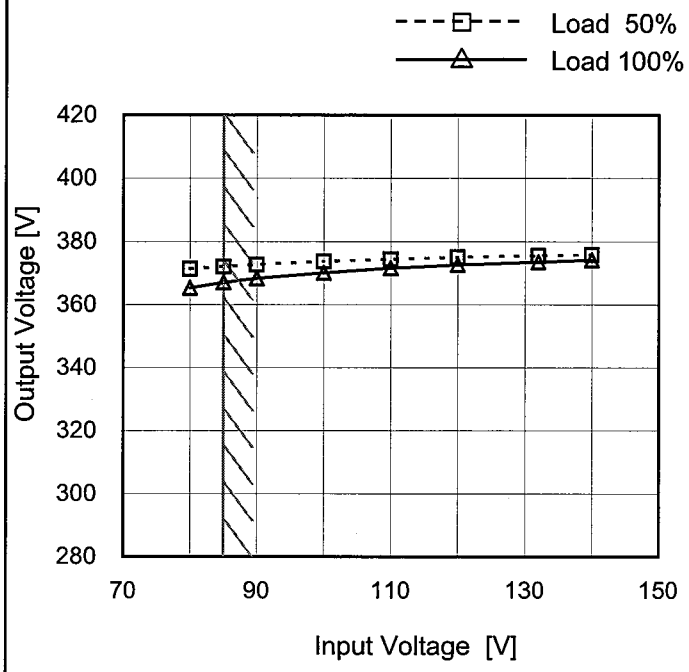
Model	SNDPF1000
Item	Line Regulation
Object	+360V 1000W

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%
80	371.339	365.332
85	372.044	367.044
90	372.654	368.365
100	373.717	370.150
110	374.421	371.601
120	374.960	372.643
132	375.503	373.615
140	375.771	374.136
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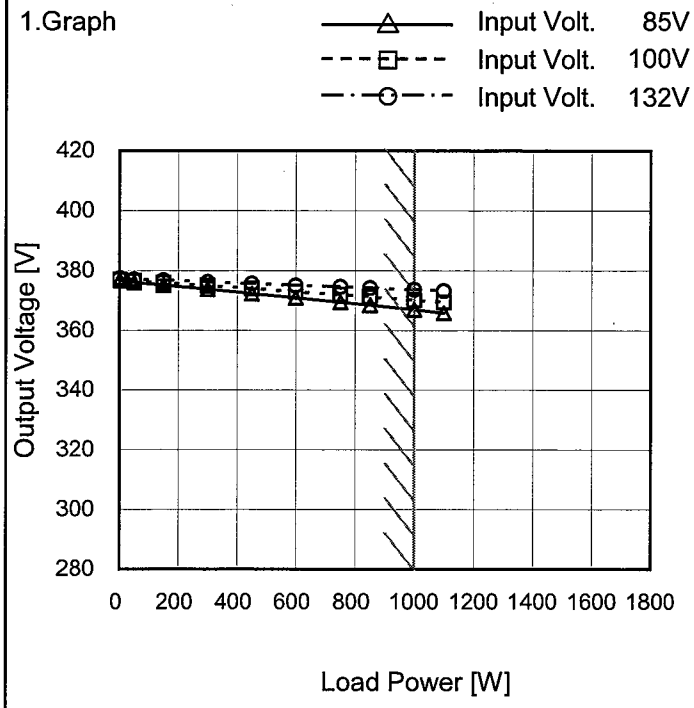
COSEL

Model	SNDPF1000
Item	Load Regulation
Object	+360V 1000W

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Power [W]	Output Voltage [V]		
	Input Volt. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
0	376.707	377.018	377.369
50	376.100	376.585	377.081
150	375.194	375.903	376.714
300	373.854	374.942	376.199
450	372.386	373.972	375.679
600	370.955	372.890	375.091
750	369.505	371.909	374.567
850	368.570	371.191	374.200
1000	367.044	370.150	373.615
1100	365.813	369.385	373.177
--	-	-	-

COSEL

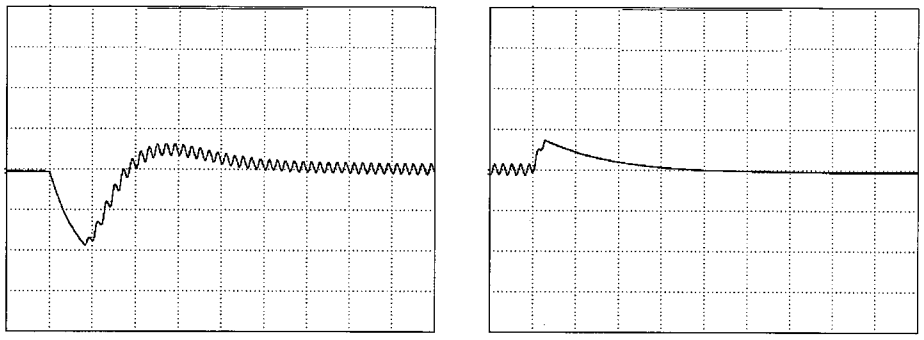
Model	SNDPF1000		
Item	Dynamic Load Response	Temperature Testing Circuitry	25°C Figure A
Object	+360V 1000W		

Input Volt. 100 V
Cycle 1000 ms

Load Current

2.78A/50μs

Min. Load (0A) ⟷
Load 100% (1000W)

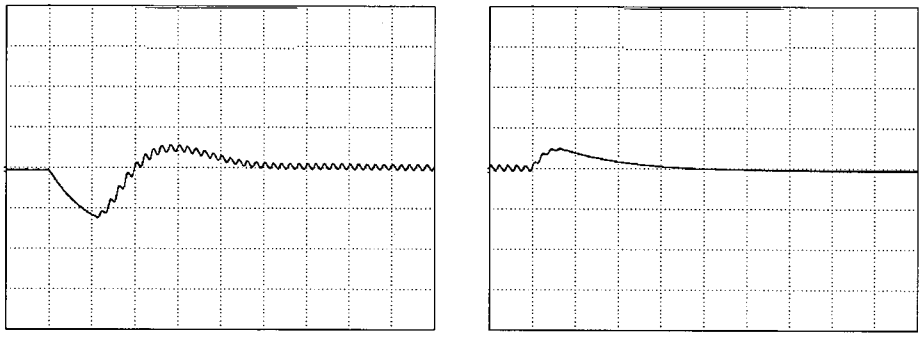


50 V/div

50 ms/div

50 ms/div

Min. Load (0A) ⟷
Load 50% (500W)



50 V/div

50 ms/div

50 ms/div

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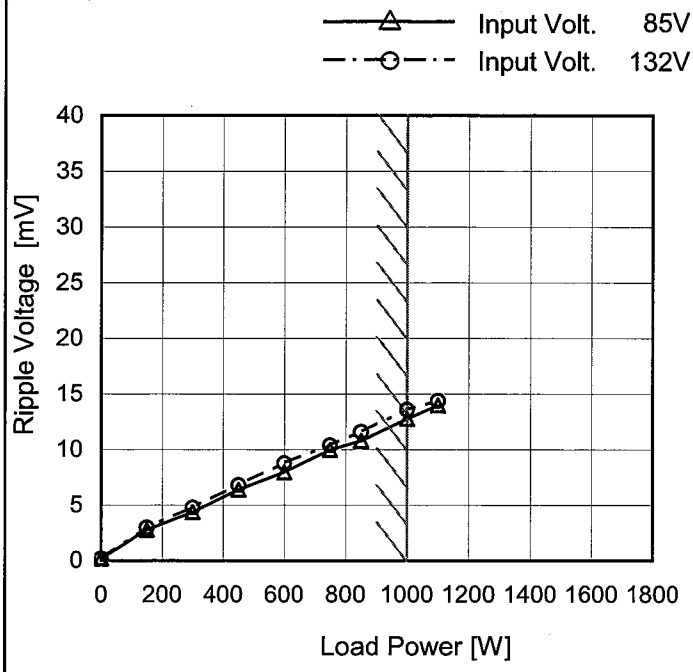
Model	SNDPF1000
Item	Ripple Voltage (by Load Current)
Object	+360V1000W

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 100 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

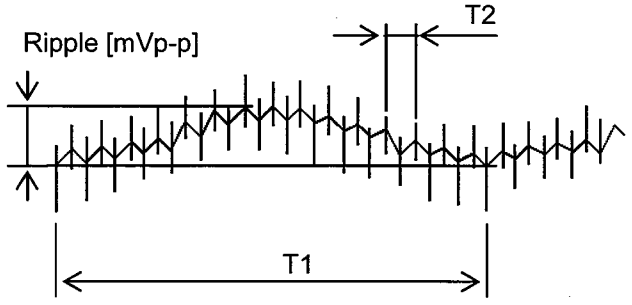


Fig. Complex Ripple Wave Form

2.Values

Load Power [W]	Ripple Voltage [mV] Input Volt. 85 [V]	Ripple Voltage [mV] Input Volt. 132 [V]
0	0.2	0.2
150	2.8	3.0
300	4.4	4.8
450	6.4	6.8
600	8.0	8.8
750	10.0	10.4
850	10.8	11.6
1000	12.8	13.6
1100	14.0	14.4
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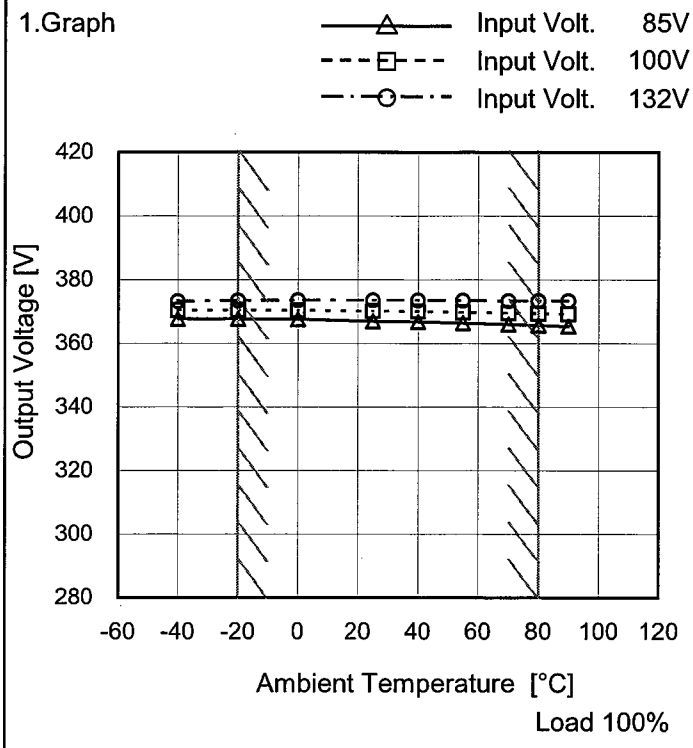
Model	SNDPF1000
Item	Ambient Temperature Drift
Object	+360V 1000W

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. 85[V]	Input Volt. 100[V]	Input Volt. 132[V]
-40	367.730	370.415	373.317
-20	367.750	370.427	373.437
0	367.591	370.389	373.542
25	367.044	370.150	373.615
40	366.872	370.032	373.561
55	366.467	369.764	373.462
70	365.999	369.503	373.397
80	365.706	369.355	373.375
90	365.437	369.214	373.374
--	-	-	-
--	-	-	-

COSEL

Model	SNDPF1000	
Item	Output Voltage Accuracy	Testing Circuitry Figure A
Object	+360V 1000W	

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 : -20 - 80°C
Input Voltage : 85 - 132V
Load Current : 0 - 1000W

* 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 [V]	Ration [%]
Maximum Voltage	80	132	0	377.633	±6	±0.1
Minimum Voltage	80	85	2.78	365.706		

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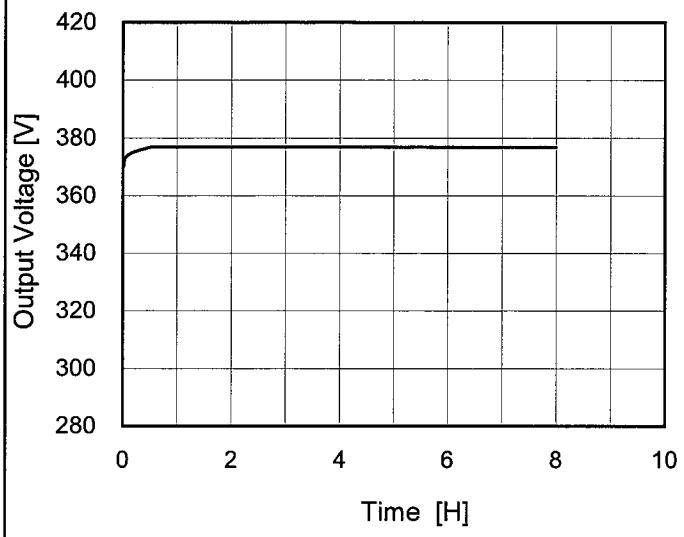
Model	SNDPF1000
Item	Time Lapse Drift
Object	+360V 1000W

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 100V
Load 100%

2.Values

Time since start [H]	Output Voltage [V]
0.0	370.125
0.5	376.875
1.0	376.875
2.0	376.867
3.0	376.869
4.0	376.871
5.0	376.869
6.0	376.871
7.0	376.872
8.0	376.870

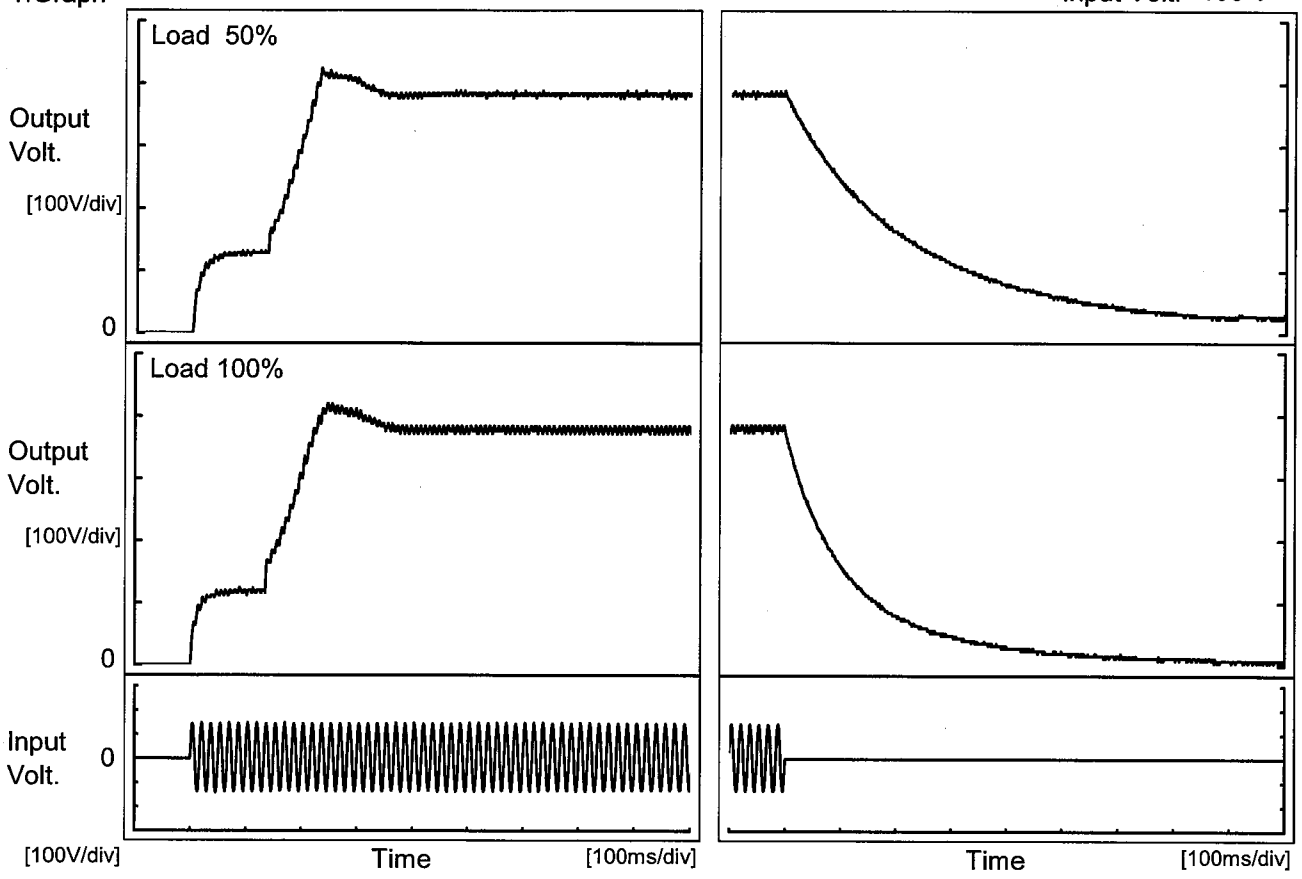
COSEL

Model	SNDPF1000
Item	Rise and Fall Time
Object	+360V 1000W

Temperature 25°C
Testing Circuitry Figure A

1.Graph

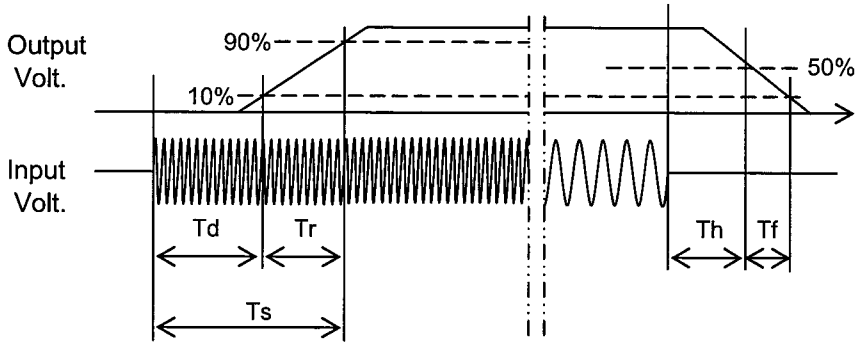
Input Volt. 100 V



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	3.0	201.0	204.0	174.0	491.0
100 %	2.6	201.4	204.0	85.0	285.0



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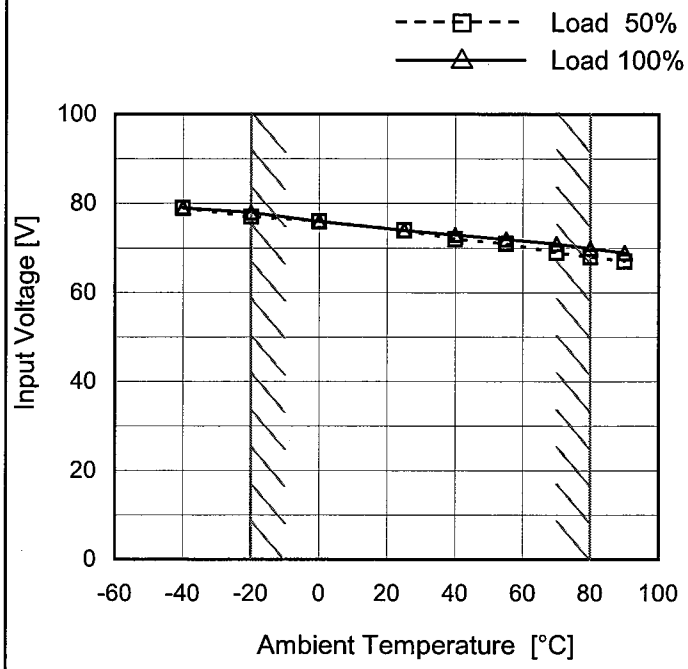
Model	SNDPF1000
Item	Minimum Input Voltage for Regulated Output Voltage
Object	+360V 1000W

Testing Circuitry Figure A

1.Graph



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

2.Values

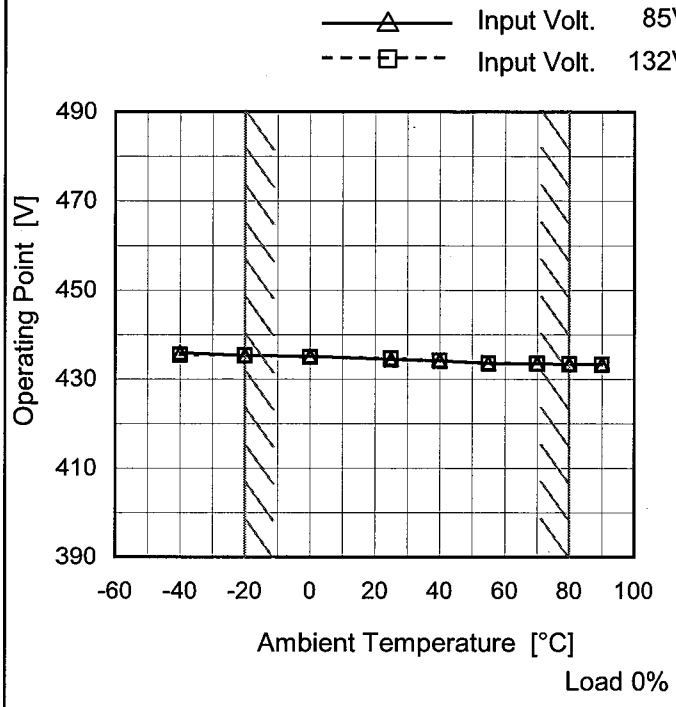
Ambient Temperature [°C]	Input Voltage [V]	
	Load 50%	Load 100%
-40	79	79
-20	77	78
0	76	76
25	74	74
40	72	73
55	71	72
70	69	71
80	68	70
90	67	69
--	-	-
--	-	-

COSEL

Model	SNDPF1000
Item	Overvoltage Protection
Object	+360V1000W

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. 85[V]	Input Volt. 132[V]
-40	436.0	435.5
-20	435.3	435.3
0	435.2	435.0
25	434.5	434.7
40	434.2	434.2
55	433.6	433.6
70	433.5	433.5
80	433.4	433.4
90	433.3	433.3
--	-	-
--	-	-

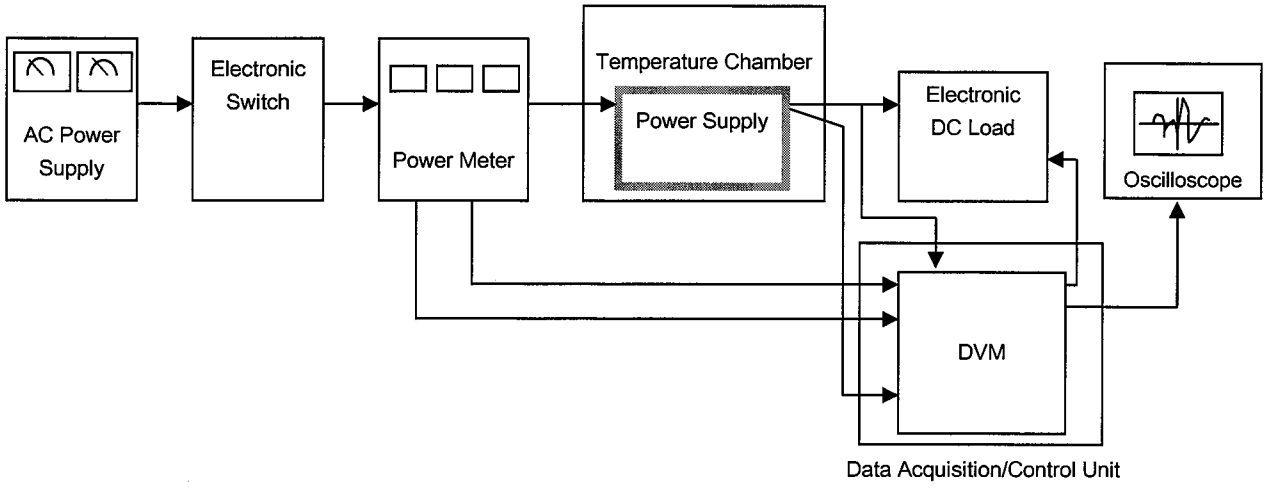


Figure A

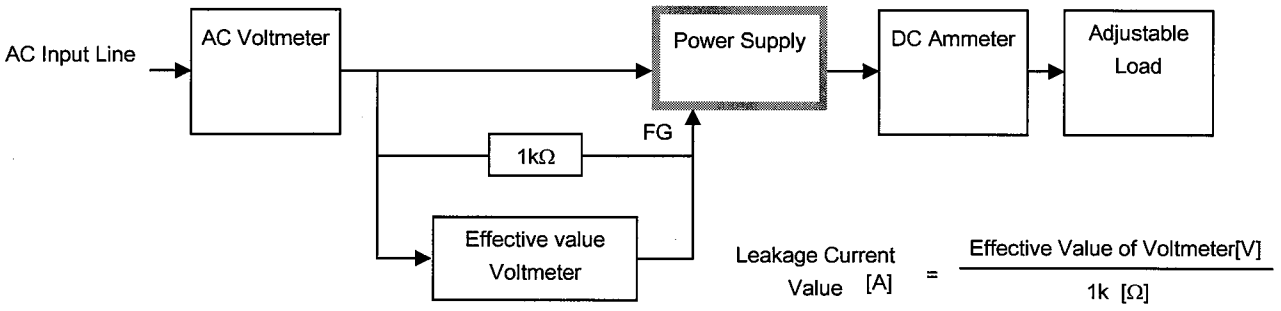


Figure B (DEN-AN)

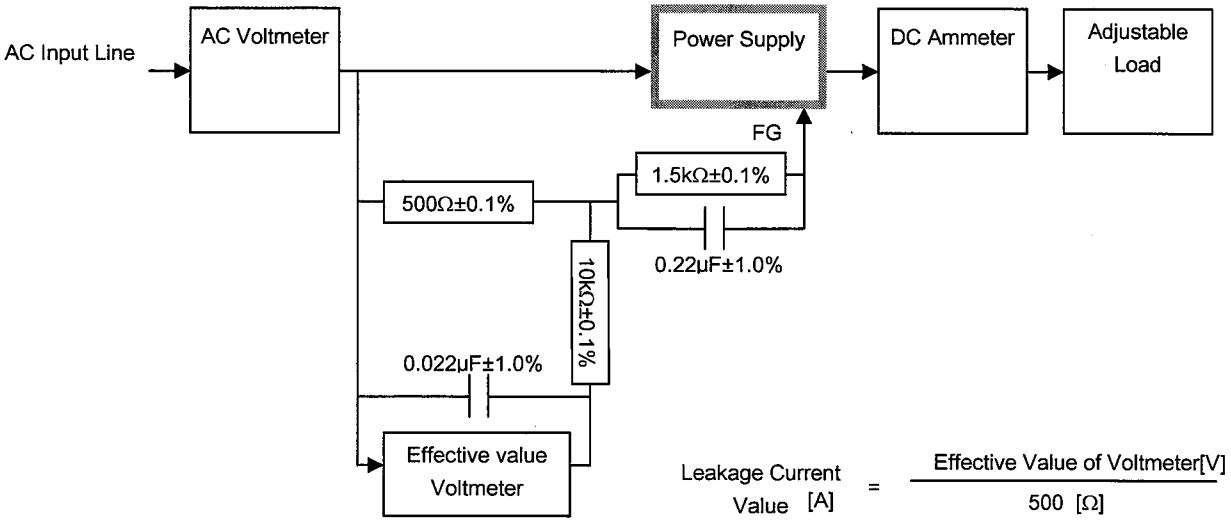


Figure B (IEC60950-1)