Reference

COSEL

TEST DATA OF PJMA1500F-36

Regulated DC Power Supply
September 20, 2022

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COSEL CO.,LTD.

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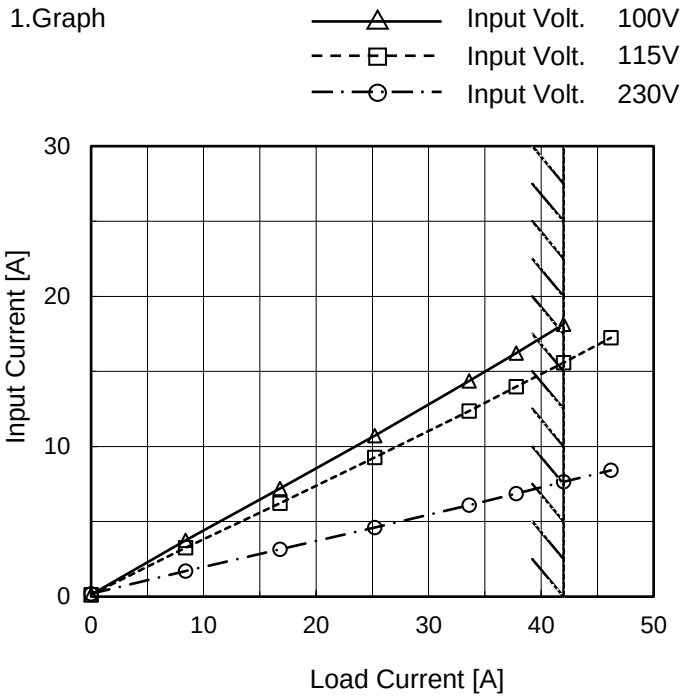
Model	PJMA1500F-36
Item	Input Current (by Load Current)
Object	———————

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. 115[V]	Input Volt. 230[V]
0.0	0.129	0.132	0.193
8.4	3.755	3.267	1.700
16.8	7.199	6.227	3.148
25.2	10.722	9.261	4.611
33.6	14.357	12.363	6.103
37.8	16.227	13.973	6.858
42.0	18.145	15.577	7.642
46.2	-	17.240	8.407
--	-	-	-
--	-	-	-
--	-	-	-

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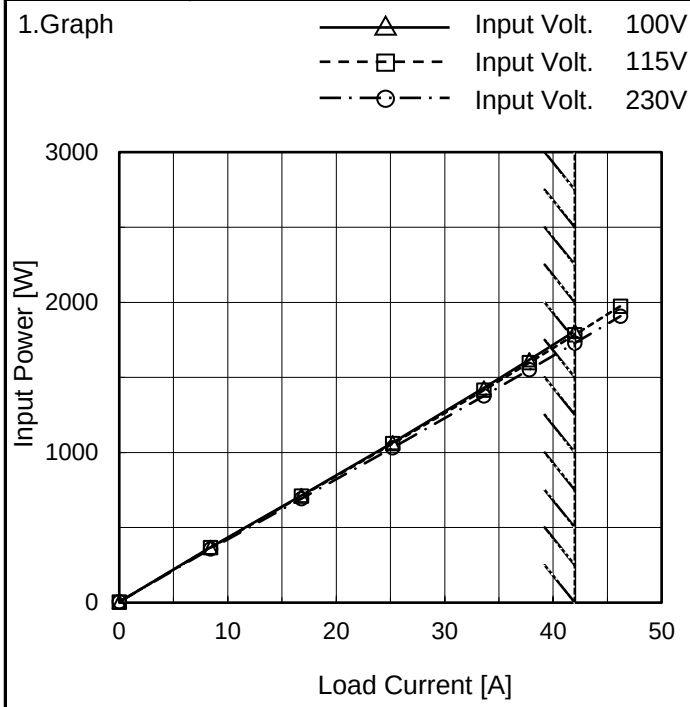
Model	PJMA1500F-36
Item	Input Power (by Load Current)
Object	———————

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. 115[V]	Input Volt. 230[V]
0.0	5	5	5
8.4	368	366	358
16.8	714	709	693
25.2	1066	1058	1032
33.6	1429	1416	1376
37.8	1617	1599	1551
42.0	1808	1785	1728
46.2	-	1975	1908
--	-	-	-
--	-	-	-
--	-	-	-

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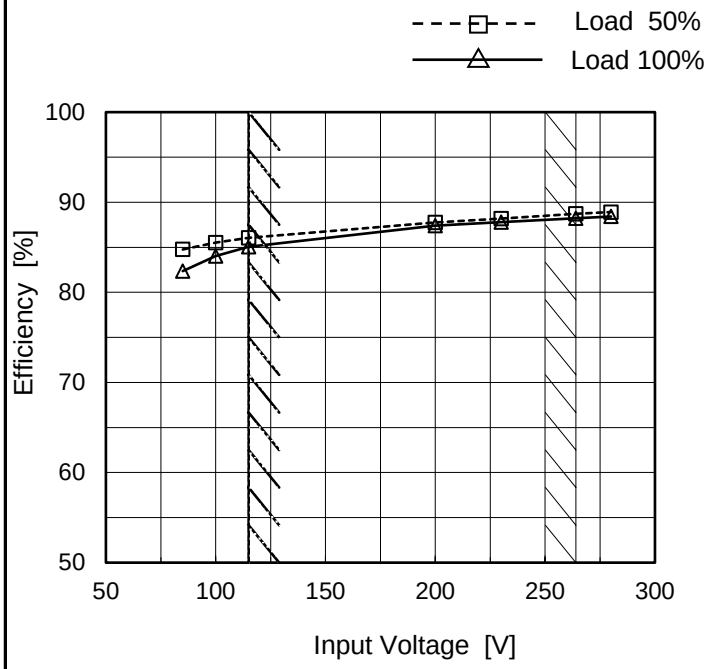
Model	PJMA1500F-36
Item	Efficiency (by Input Voltage)
Object	————————

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	84.8	82.4 ※1
100	85.5	84.0 ※2
115	86.1	85.1
200	87.8	87.4
230	88.2	87.8
264	88.7	88.2
280	88.9	88.4
--	-	-
--	-	-

※1 : Load 80%
※2 : Load 90%

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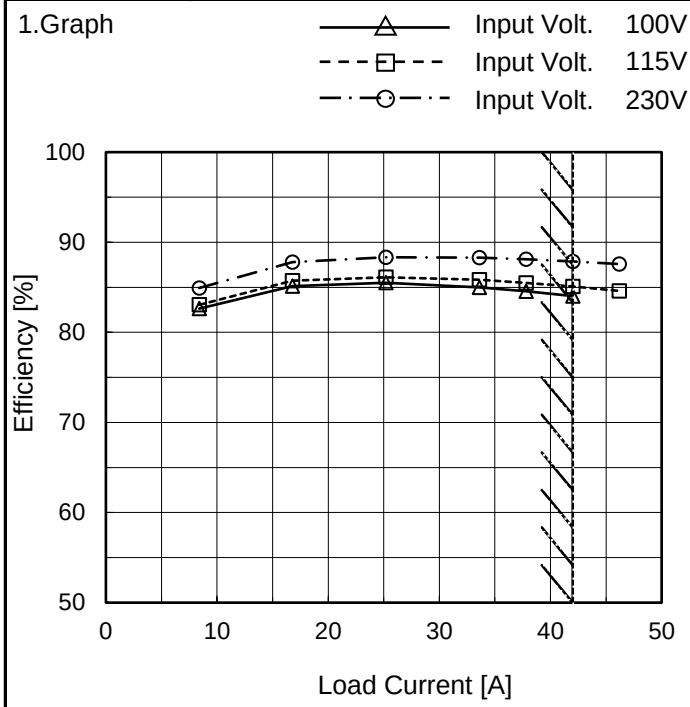
Model	PJMA1500F-36
Item	Efficiency (by Load Current)
Object	————————

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. 115[V]	Input Volt. 230[V]
0.0	-	-	-
8.4	82.6	83.1	84.9
16.8	85.1	85.7	87.8
25.2	85.5	86.1	88.3
33.6	85.0	85.8	88.3
37.8	84.6	85.5	88.1
42.0	84.0	85.1	87.9
46.2	-	84.6	87.6
--	-	-	-
--	-	-	-
--	-	-	-

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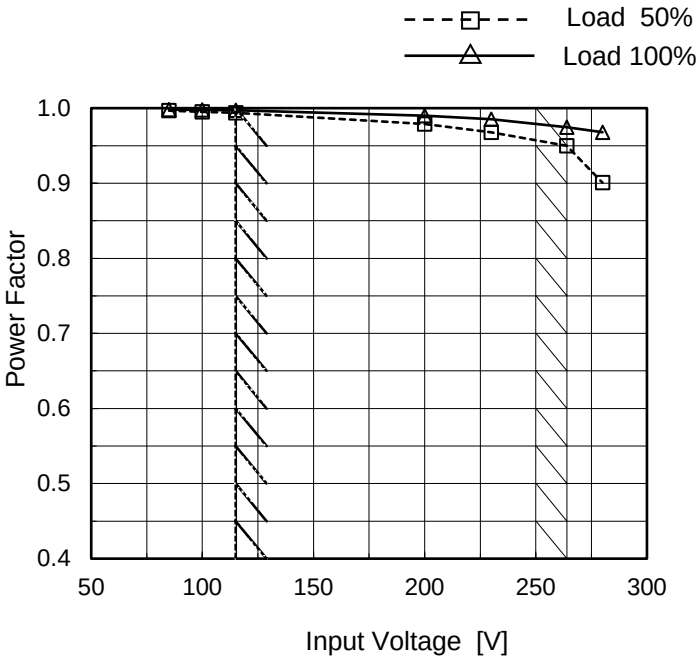
Model	PJMA1500F-36
Item	Power Factor (by Input Voltage)
Object	――――――――――

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%
85	0.997	0.998 ※1
100	0.995	0.998 ※2
115	0.994	0.997
200	0.979	0.990
230	0.968	0.985
264	0.950	0.975
280	0.901	0.968
--	-	-
--	-	-

※1 : Load 80%
※2 : Load 90%

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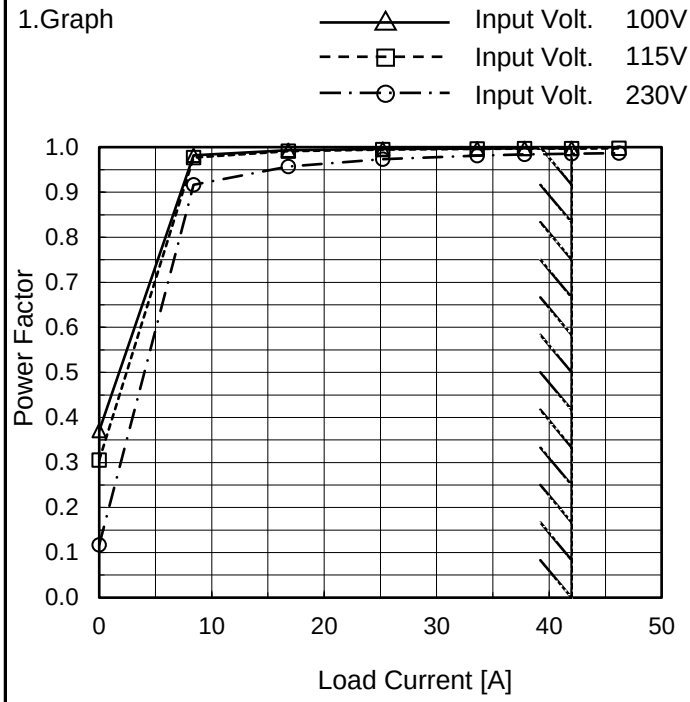
Model	PJMA1500F-36
Item	Power Factor (by Load Current)
Object	————————

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]	Power Factor Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]
0.0	0.371	0.305	0.117
8.4	0.982	0.977	0.916
16.8	0.993	0.991	0.957
25.2	0.996	0.995	0.973
33.6	0.997	0.996	0.981
37.8	0.997	0.997	0.984
42.0	0.998	0.997	0.986
46.2	-	0.997	0.987
--	-	-	-
--	-	-	-
--	-	-	-

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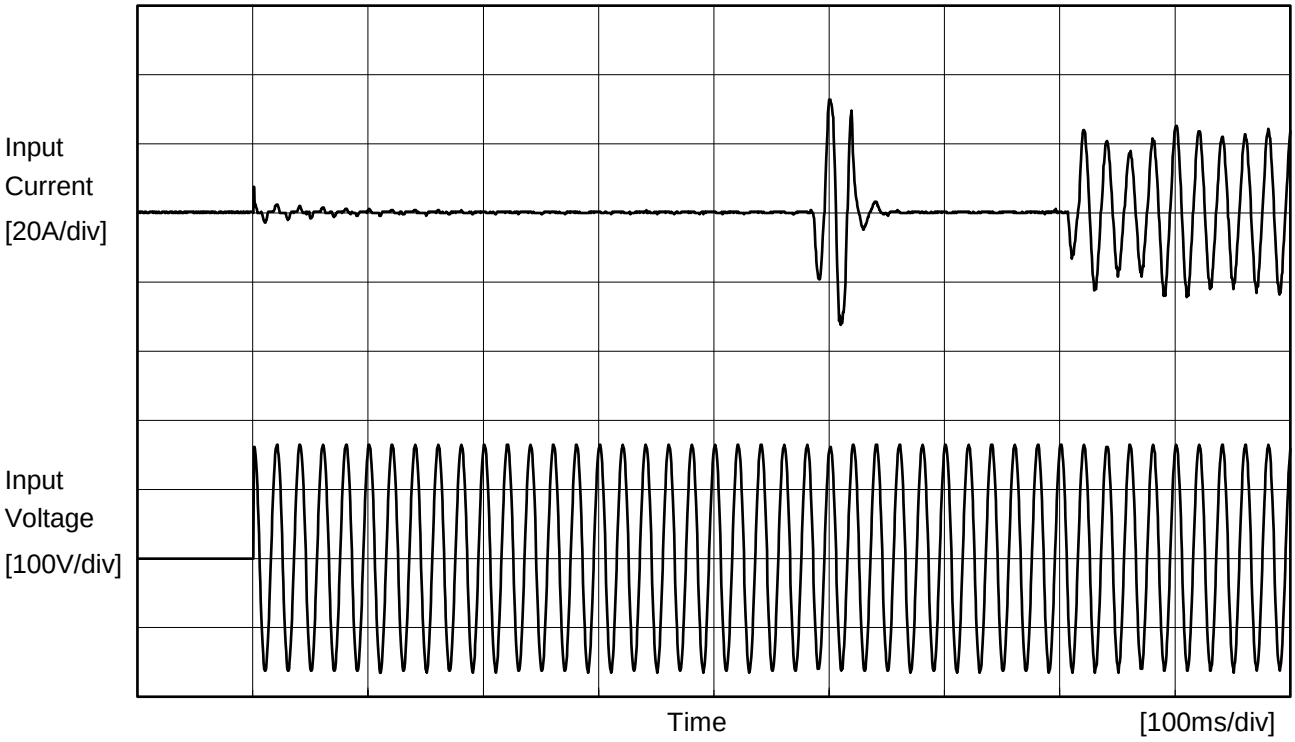
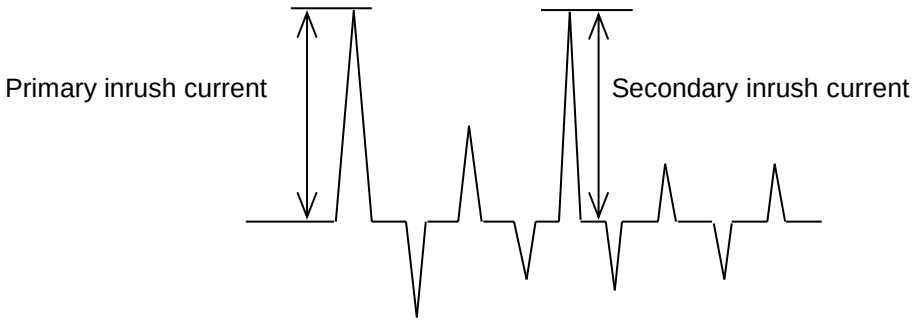
Model	PJMA1500F-36
Item	Inrush Current
Object	————————

Temperature 25°C
Testing Circuitry Figure A



Input Voltage	115 V
Frequency	50 Hz
Load	100 %
Primary inrush current	7.6 A
Secondary inrush current	32.8 A



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Model	PJMA1500F-36	
Item	Leakage Current	Temperature 25°C Testing Circuitry Figure C
Object	――――――――――――	

1.Results

[mA]

Standards		Input Volt.			Note
		230 [V]	240 [V]	264 [V]	
IEC60601-1	Both phases	0.21	0.24	0.27	Operation
	One of phases	0.39	0.40	0.45	Stand by

The value for "One of phases" is the reference value only.

2.Condition

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

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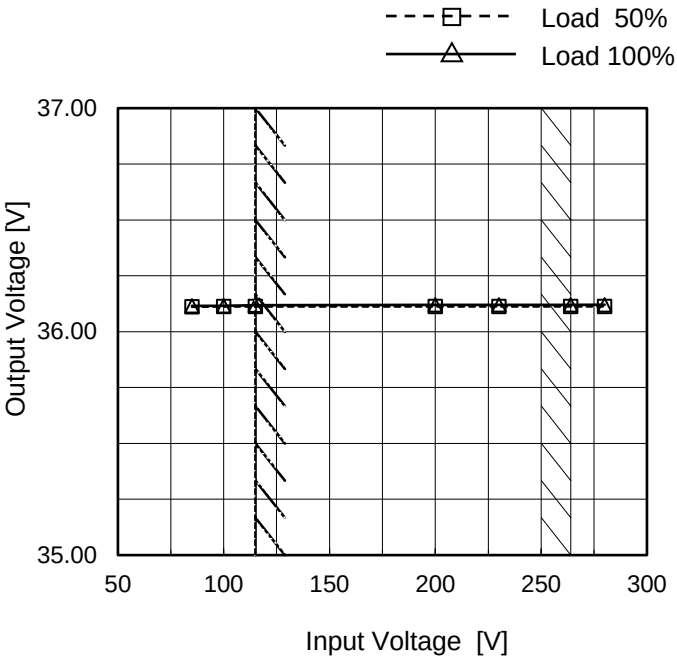
Model	PJMA1500F-36
Item	Line Regulation
Object	+36V42A

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	36.111	36.115 ※1
100	36.112	36.116 ※2
115	36.113	36.118
200	36.113	36.119
230	36.112	36.120
264	36.113	36.119
280	36.113	36.120
--	-	-
--	-	-

※1 : Load 80%
※2 : Load 90%

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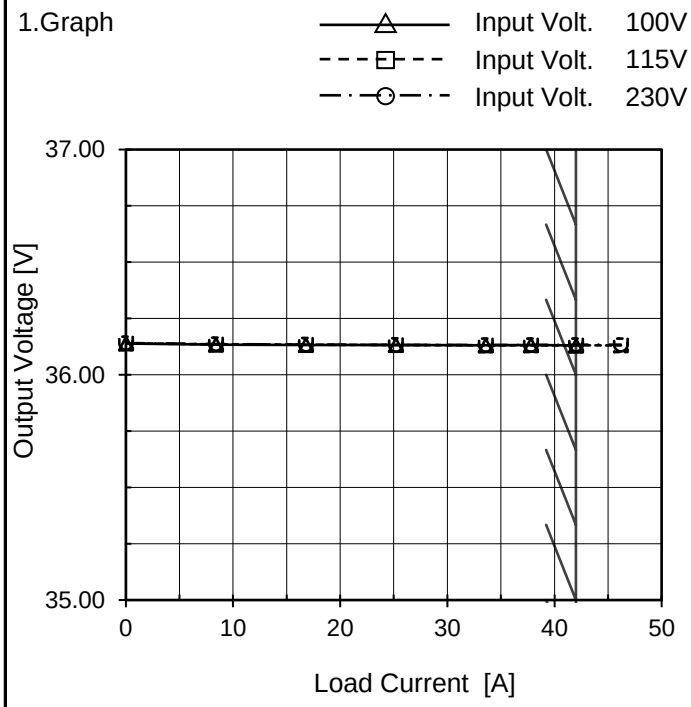
Model	PJMA1500F-36
Item	Load Regulation
Object	+36V42A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

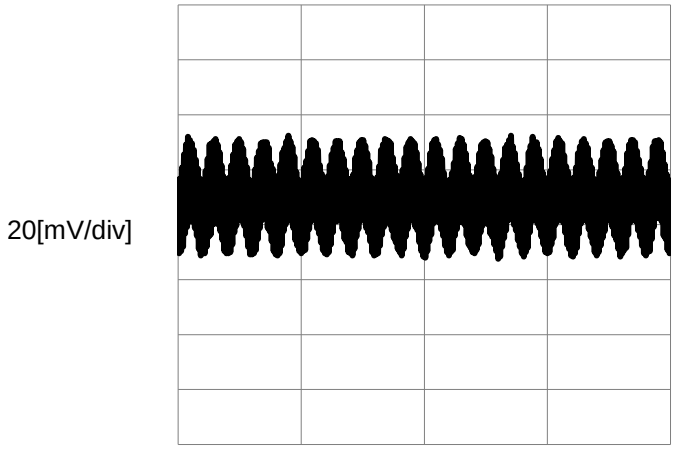
Load Current [A]	Output Voltage [V]		
	Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]
0.0	36.139	36.140	36.141
8.4	36.133	36.135	36.136
16.8	36.133	36.134	36.134
25.2	36.133	36.133	36.133
33.6	36.131	36.132	36.133
37.8	36.132	36.131	36.133
42.0	36.130	36.131	36.134
46.2	--	36.130	36.134
--	--	--	--
--	--	--	--
--	--	--	--

Item	Ripple-Noise
Object	+36V42A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 115V
Load 100%



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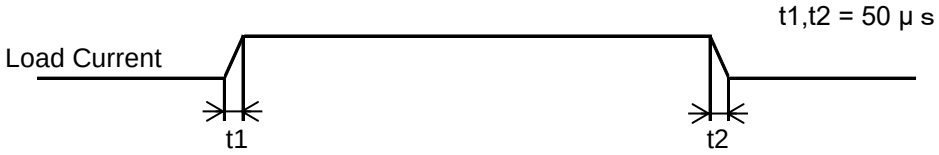
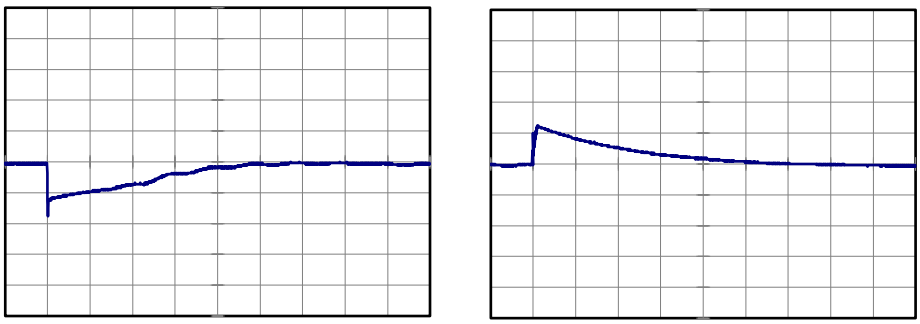
Model	PJMA1500F-36		
Item	Dynamic Load Response	Temperature Testing Circuitry	25°C Figure A
Object	+36V42A		

Input Volt. 115 V
Cycle 1000 ms



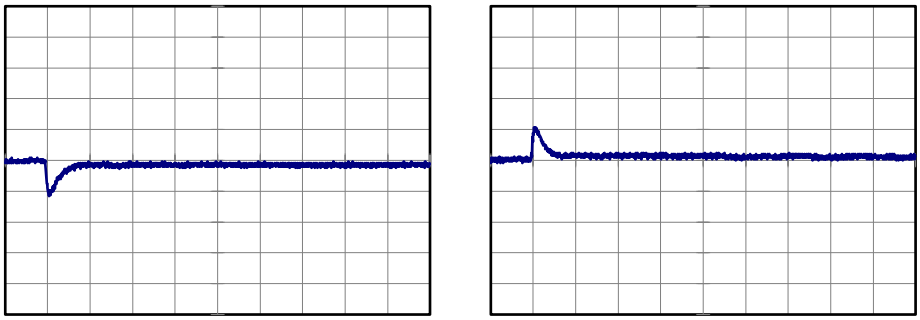
Min.Load (0A)←→
Load 100% (42A)



200 mV/div

10 ms/div 10 ms/div

Load 50% (21A)←→
Load 100% (42A)



100 mV/div

100 us/div 100 us/div

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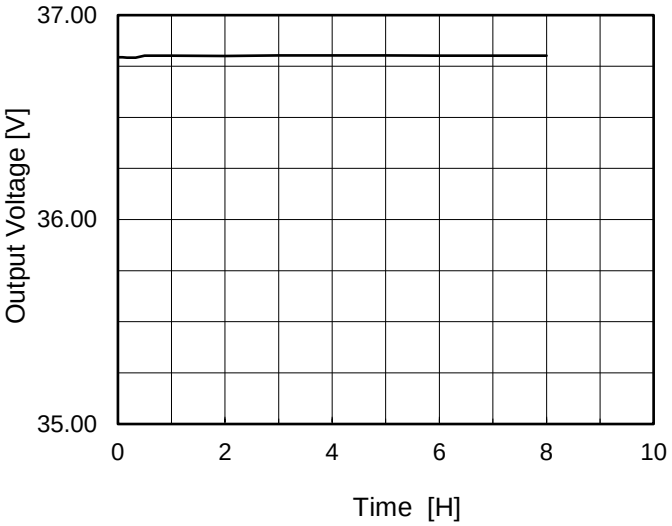
Model	PJMA1500F-36
Item	Time Lapse Drift
Object	+36V42A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 115V
Load 100%

2.Values

Time since start [H]	Output Voltage [V]
0.0	36.794
0.5	36.802
1.0	36.802
2.0	36.801
3.0	36.803
4.0	36.803
5.0	36.803
6.0	36.802
7.0	36.802
8.0	36.802

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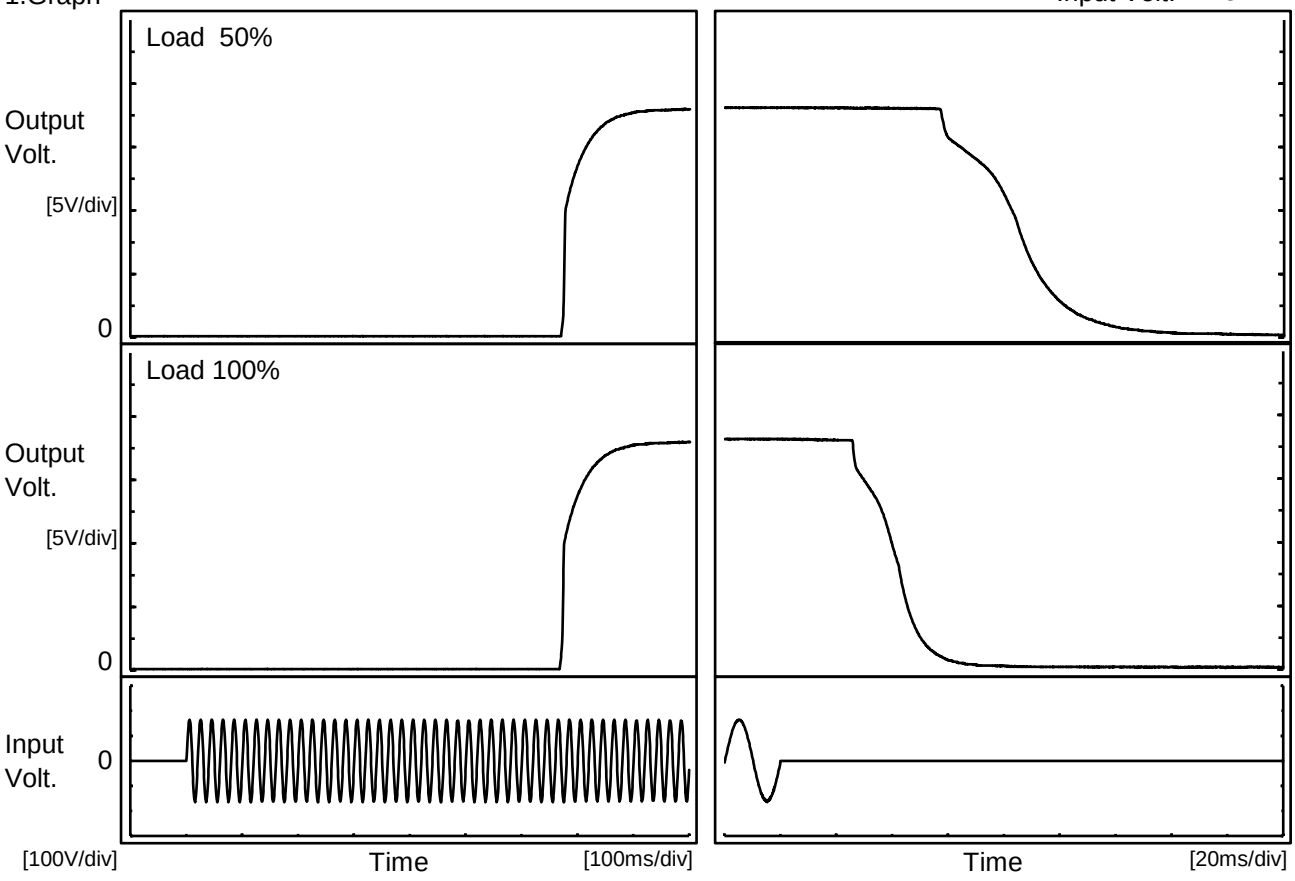
Model	PJMA1500F-36	
Item	Rise and Fall Time	Temperature 25°C Testing Circuitry Figure A
Object	+36V42A	

1.Graph

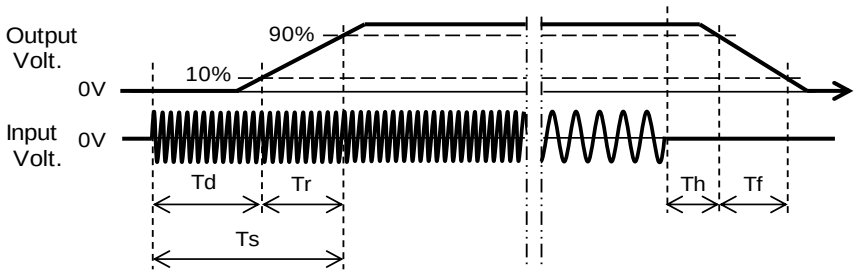
Input Volt. 115 V



2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	674.0	61.0	735.0	58.8	47.2
100 %	671.5	61.5	733.0	26.6	25.7

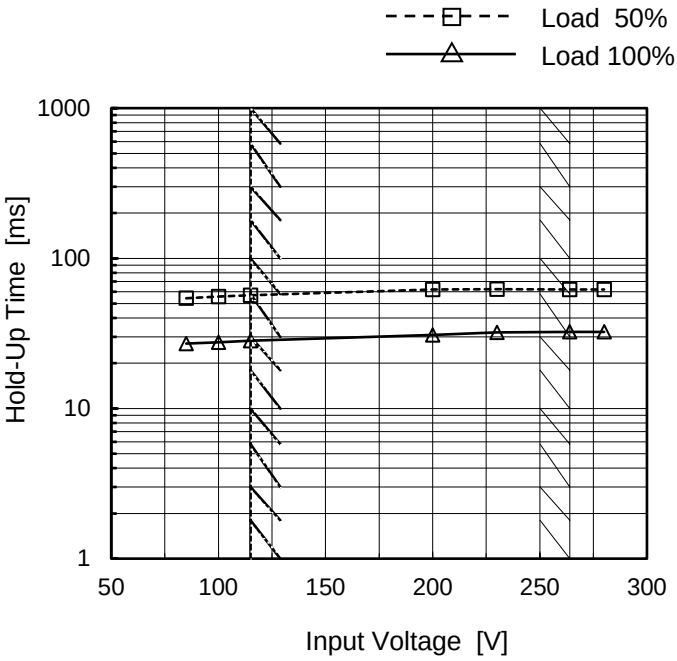


COSEL

Model	PJMA1500F-36
Item	Hold-Up Time
Object	+36V42A

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	54	27 ※1
100	56	28 ※2
115	57	28
200	62	31
230	62	32
264	62	32
280	62	32
--	-	-
--	-	-

※1 : Load 80%
※2 : Load 90%

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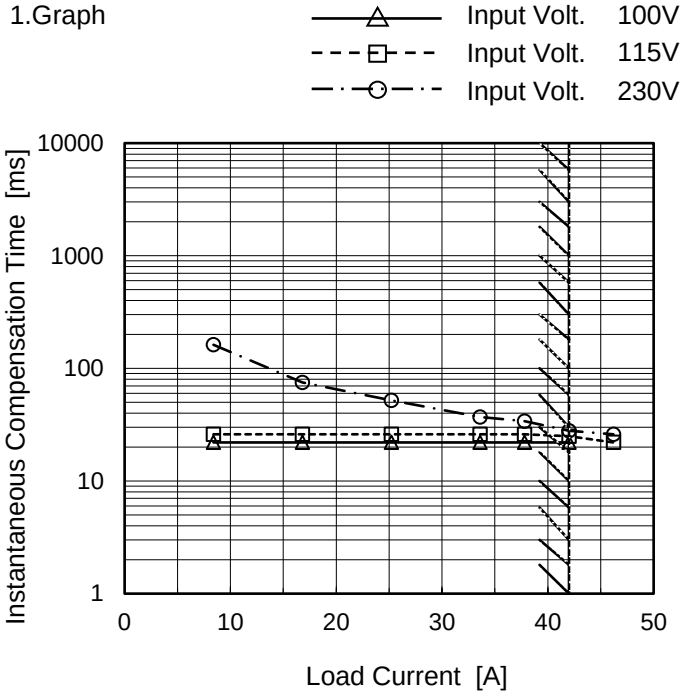
Model	PJMA1500F-36
Item	Instantaneous Interruption Compensation
Object	+36V42A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

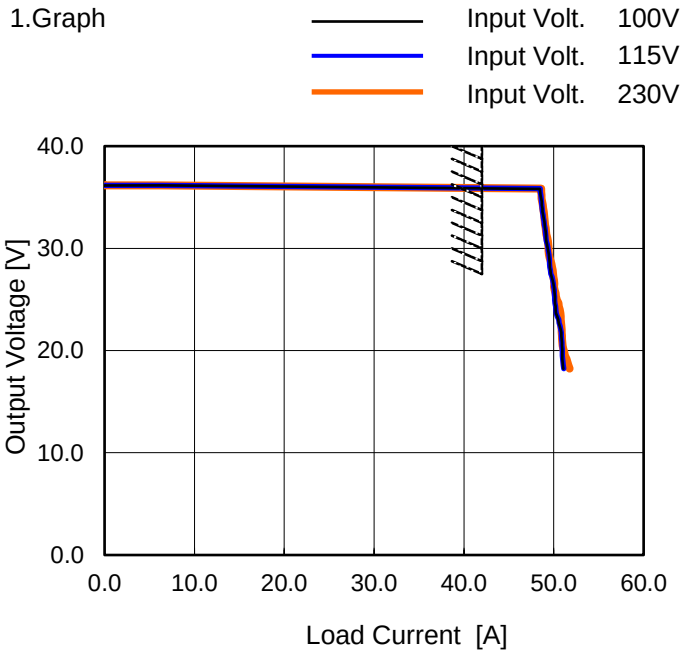
Load Current [A]	Time [ms]		
	Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]
0.0	-	-	-
8.4	22	26	162
16.8	22	26	75
25.2	22	26	52
33.6	22	26	37
37.8	22	26	34
42.0	22	25	28
46.2	-	22	26
--	-	-	-
--	-	-	-
--	-	-	-

COSEL

Model	PJMA1500F-36
Item	Overcurrent Protection
Object	+36V42A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

Intermittent operation occurs when the output voltage is from 18V to 0V.

2.Values

Output Voltage [V]	Load Current [A] Input Volt. 100[V]	Input Volt. 115[V]	Input Volt. 230[V]
36.0	48.46	48.49	48.59
34.2	48.68	48.66	48.78
32.4	48.96	48.92	49.00
28.8	49.50	49.49	49.63
25.2	50.12	50.08	50.22
21.6	50.83	50.84	50.88
18.0	51.07	51.11	51.76
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

Model	PJMA1500F-36	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+36V42A	

1.Values

Load 100%

Ambient Temperature[℃]	Output Voltage [V]		
	Input Volt. 100V	Input Volt. 115V	Input Volt. 230V
-20	35.852	35.853	35.855
25	36.095	36.097	36.098
50	36.151	36.152	36.150

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+36V42A	

1.Values

Ambient Temperature[℃]	Input Voltage [V]	
	Load 50%	Load 100%
-20	68	68
25	69	70
50	67	68

Item	Overvoltage Protection	Testing Circuitry Figure A
Object	+36V42A	

1.Values

Load 0%

Ambient Temperature[℃]	Operating Point [V]	
	Input Volt. 100V	Input Volt. 230V
-20	46.34	46.40
25	48.09	48.09
50	49.14	49.14

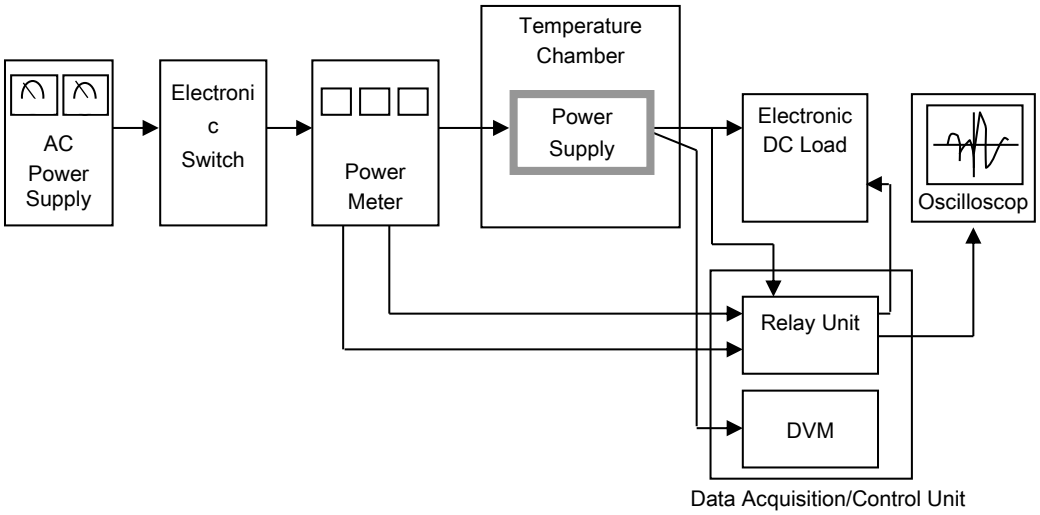
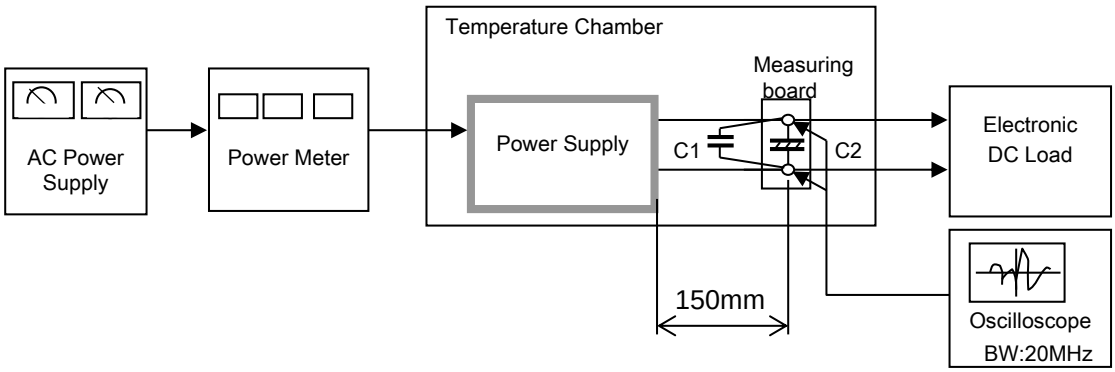


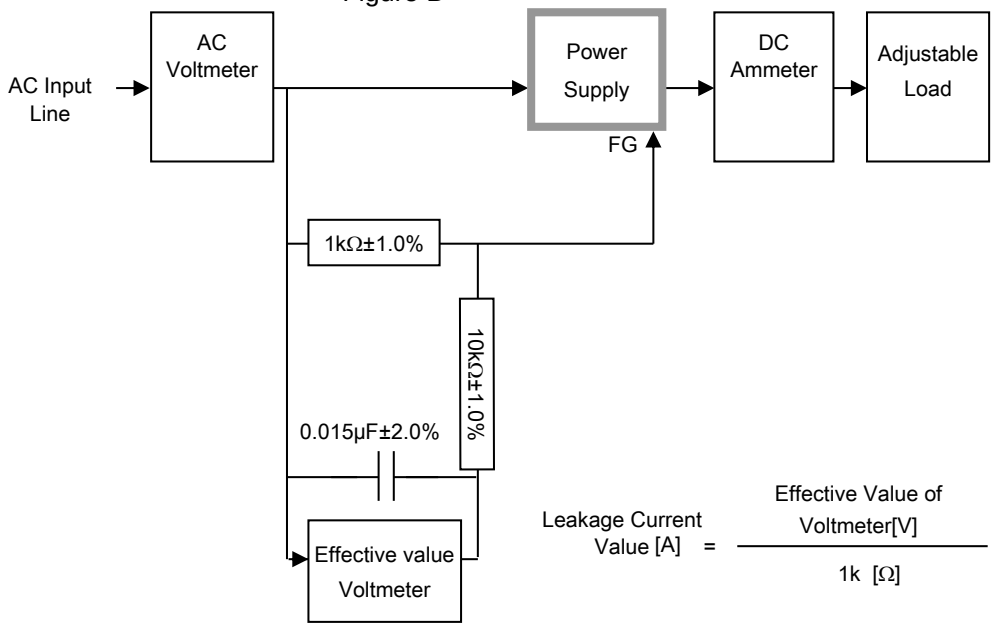
Figure A



C1= 0.1 μF
(Ceramic capacitor)

C2= 22 μF
(Electrolytic capacitor)

Figure B



$$\text{Leakage Current Value [A]} = \frac{\text{Effective Value of Voltmeter[V]}}{1\text{k }[\Omega]}$$

Figure C (IEC60601-1)