For Reference

TEST DATA OF PDA300F-48

Regulated DC Power Supply
May 30, 2025

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COSEL CO.,LTD.

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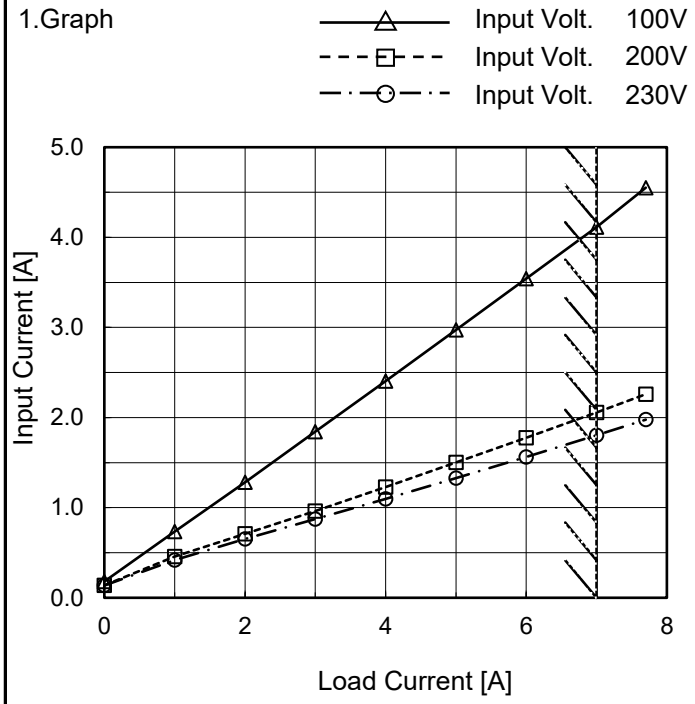
Model	PDA300F-48
Item	Input Current (by Load Current)
Object	――――――

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]
0.0	0.181	0.138	0.136
1.0	0.736	0.457	0.417
2.0	1.284	0.711	0.652
3.0	1.844	0.964	0.874
4.0	2.406	1.230	1.097
5.0	2.972	1.501	1.328
6.0	3.543	1.776	1.562
7.0	4.114	2.058	1.804
7.7	4.551	2.259	1.977
--	-	-	-
--	-	-	-

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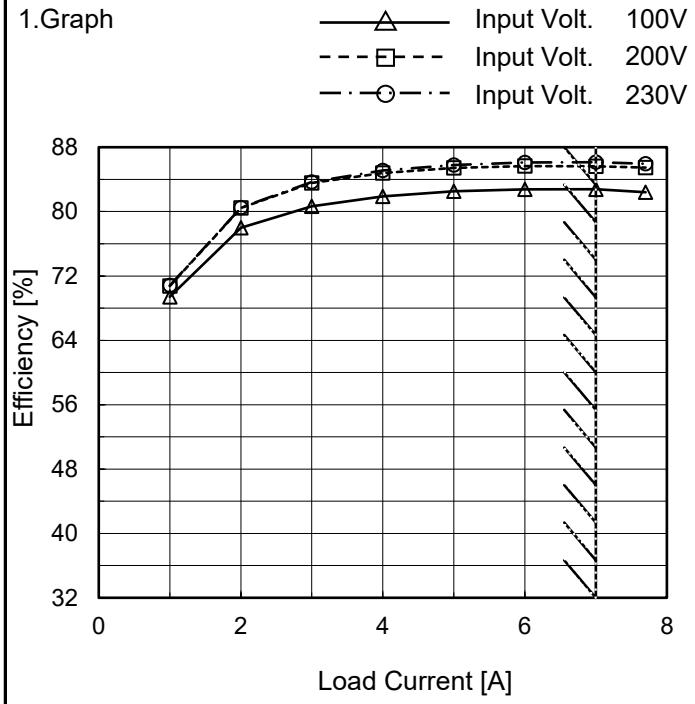
Model	PDA300F-48
Item	Efficiency (by Load Current)
Object	————————

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]
0.0	-	-	-
1.0	69.4	70.7	70.8
2.0	78.0	80.4	80.5
3.0	80.7	83.6	83.7
4.0	81.9	84.8	85.1
5.0	82.5	85.4	85.8
6.0	82.8	85.7	86.1
7.0	82.8	85.6	86.1
7.7	82.4	85.5	86.0
--	-	-	-
--	-	-	-

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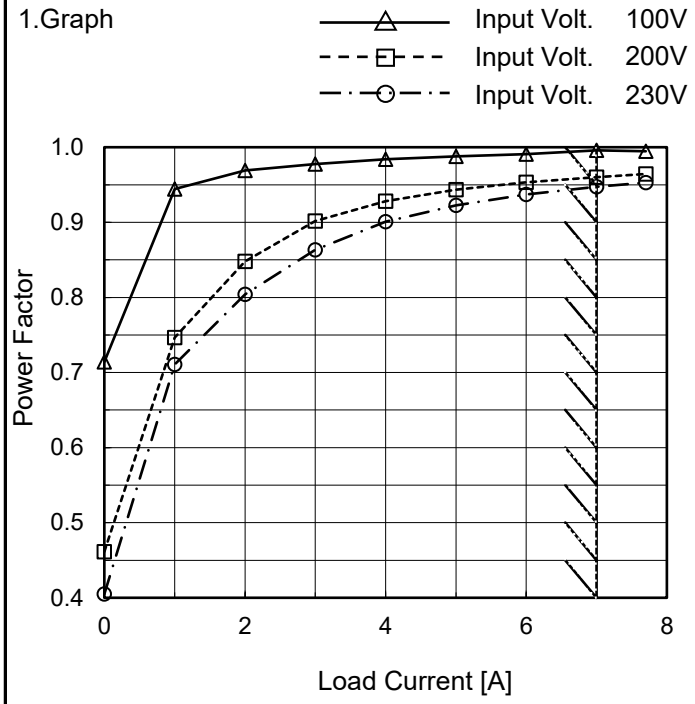
COSEL

Model	PDA300F-48
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. 200[V]	Input Volt. 230[V]
0.0	0.714	0.461	0.405
1.0	0.944	0.747	0.711
2.0	0.969	0.848	0.804
3.0	0.977	0.902	0.864
4.0	0.984	0.928	0.901
5.0	0.988	0.943	0.923
6.0	0.991	0.953	0.937
7.0	0.996	0.960	0.947
7.7	0.995	0.964	0.953
--	-	-	-
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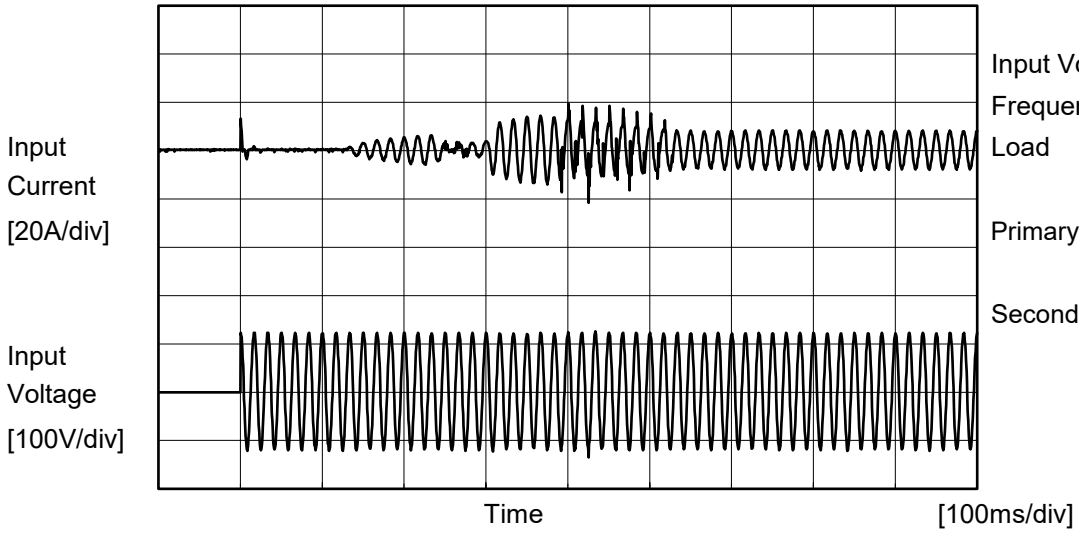
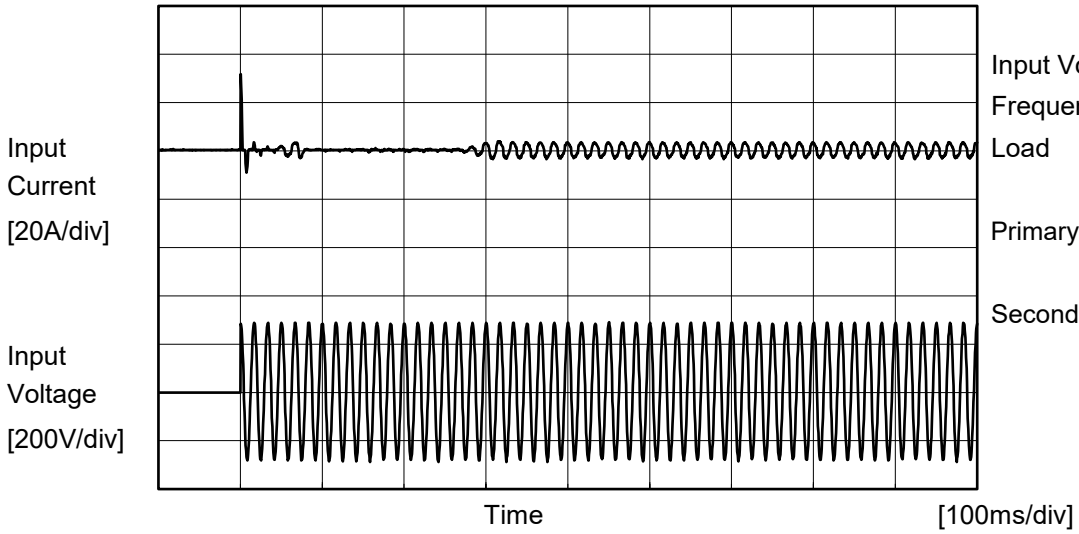
Model	PDA300F-48	
Item	Inrush Current	Temperature 25°C Testing Circuitry Figure A
Object	————————	



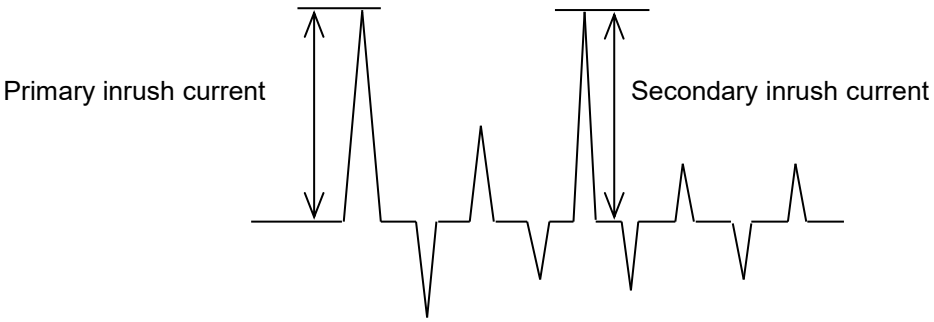
Input Voltage 100 V
Frequency 60 Hz
Load 100 %

Primary inrush current : 13.2 A
Secondary inrush current : 21.6 A



Input Voltage 230 V
Frequency 60 Hz
Load 100 %

Primary inrush current : 31.8 A
Secondary inrush current : 4.0 A



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Model	PDA300F-48	
Item	Leakage Current	Temperature 25°C Testing Circuitry Figure C
Object	――――――――――――	

1.Results

[mA]

Standards	Testing Circuitry	Measuring Method	Input Volt.			Note
			100 [V]	230 [V]	240 [V]	
DEN-AN	Figure C-1	Both phases	0.19	0.38	0.37	Operation
		One of phases	0.29	0.68	0.71	Stand by
IEC62368-1	Figure C-2	Both phases	0.14	0.35	0.37	Operation
		One of phases	0.26	0.67	0.70	Stand by
	Figure C-3	Both phases	0.14	0.35	0.37	Operation
		One of phases	0.26	0.66	0.69	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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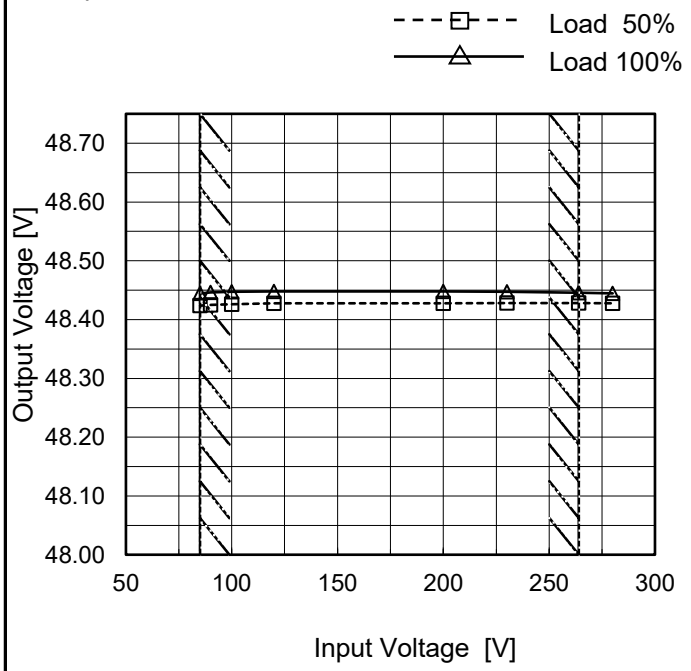
Model	PDA300F-48
Item	Line Regulation
Object	+48V7A

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	48.424	48.444
90	48.425	48.446
100	48.426	48.447
120	48.428	48.448
200	48.428	48.448
230	48.428	48.447
264	48.428	48.446
280	48.428	48.445
--	-	-

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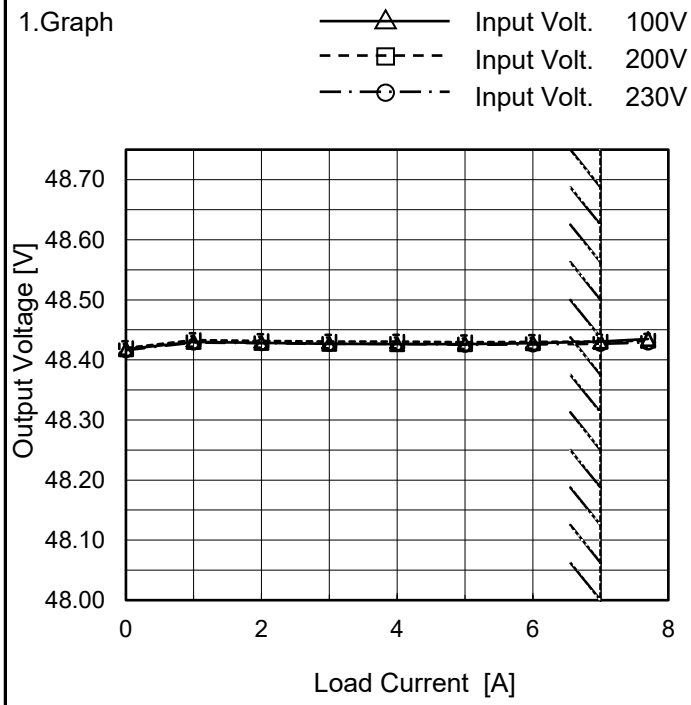
COSEL

Model	PDA300F-48
Item	Load Regulation
Object	+48V7A

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]
0.0	48.418	48.420	48.416
1.0	48.430	48.433	48.429
2.0	48.428	48.432	48.428
3.0	48.427	48.430	48.427
4.0	48.426	48.430	48.427
5.0	48.426	48.430	48.425
6.0	48.428	48.430	48.426
7.0	48.431	48.431	48.427
7.7	48.435	48.432	48.429
--	--	--	--
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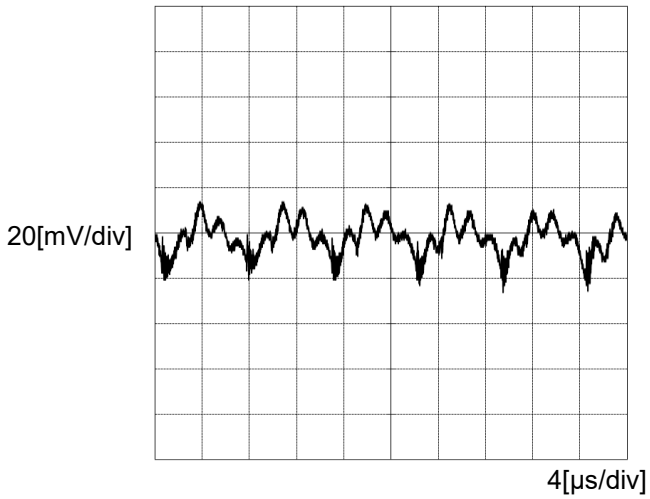
Item	Ripple-Noise
Object	+48V7A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 230V
Load 100%



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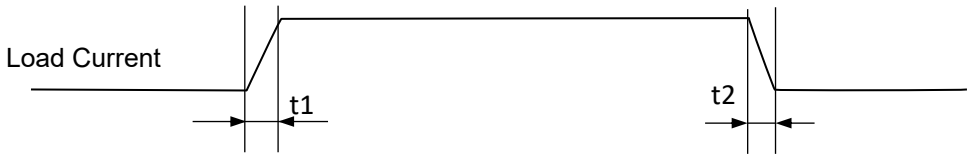
Model	PDA300F-48	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+48V7A	

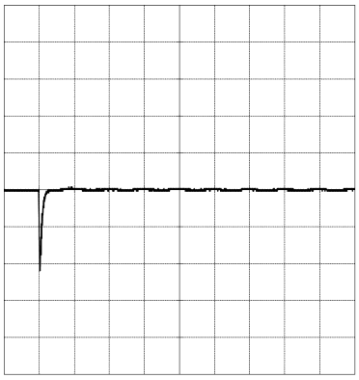
Input Volt. 230 V

Cycle 1000 ms

Response. t1=t2=50µs. Typ



Load 0%(0A) ←→
Load 100%(7A)

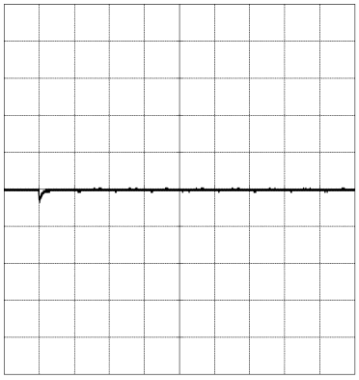


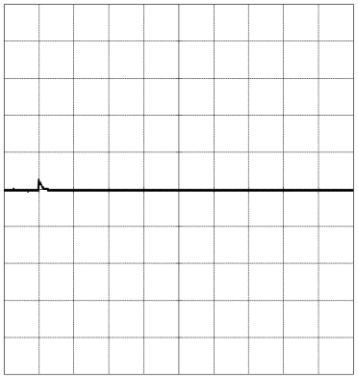
500[mV/div]

10[ms/div]

10[ms/div]

Load 50%(3.5A) ←→
Load 100%(7A)



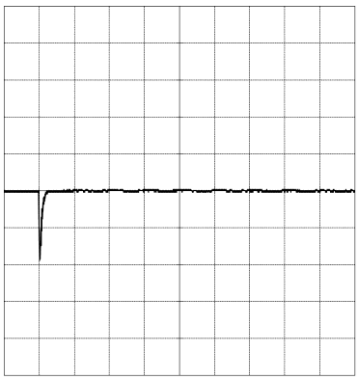


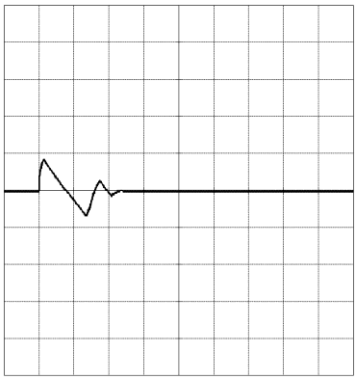
500[mV/div]

10[ms/div]

10[ms/div]

Load %(0A) ←→
Load 50%(3.5A)





500[mV/div]

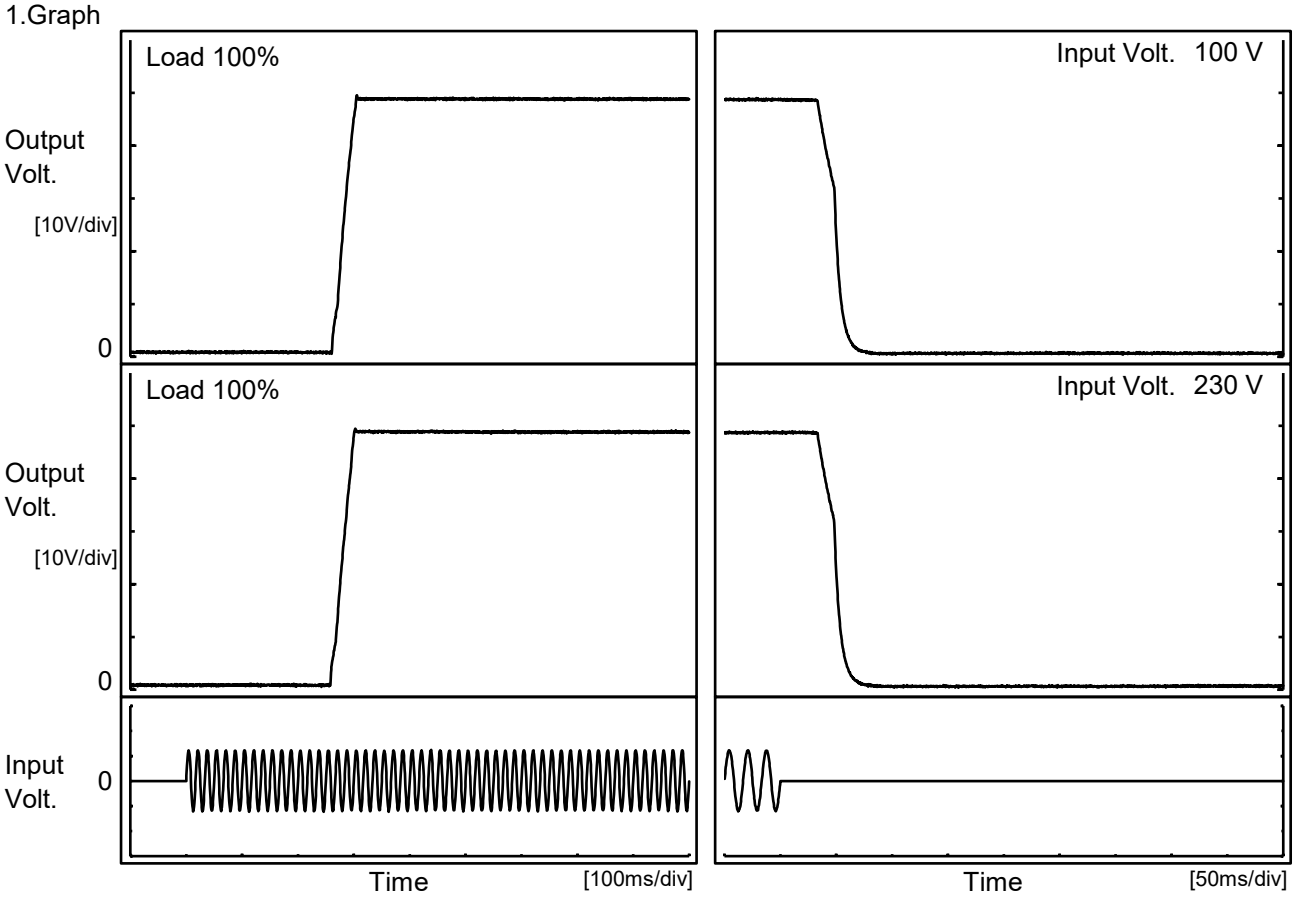
10[ms/div]

10[ms/div]

COSEL

Model	PDA300F-48	
Item	Rise and Fall Time	Temperature 25°C Testing Circuitry Figure A
Object	+48V7A	

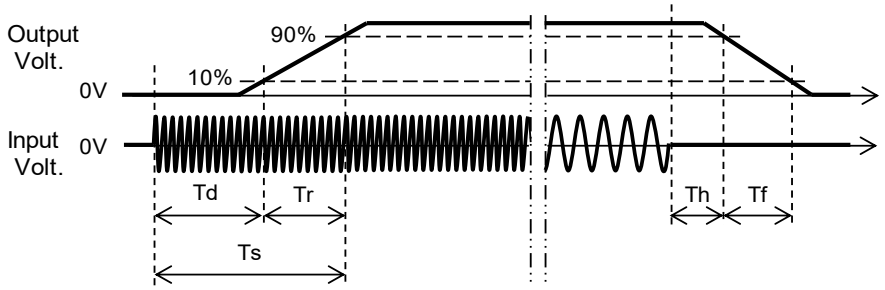
1.Graph



2.Values

[ms]

Input Volt. \ Time	Td	Tr	Ts	Th	Tf
100 V	264.0	34.5	298.5	37.0	21.5
230 V	261.5	35.0	296.5	37.0	21.5

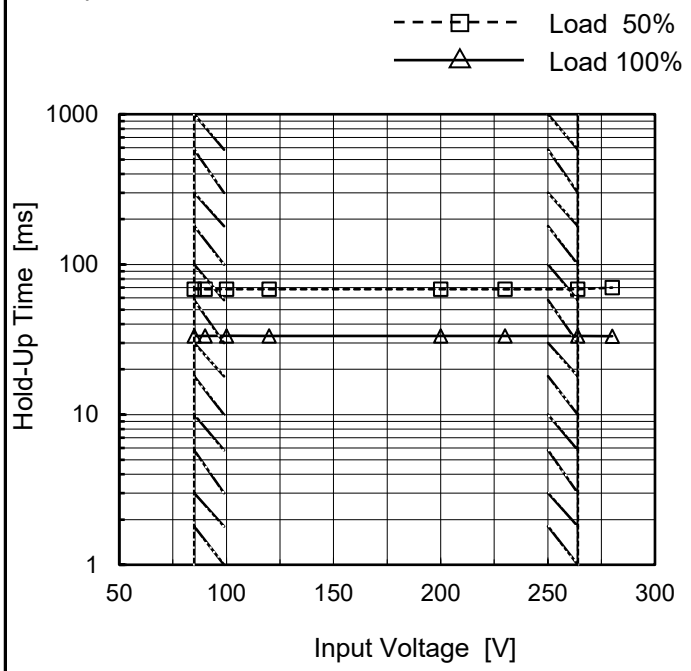


COSEL

Model	PDA300F-48
Item	Hold-Up Time
Object	+48V7A

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	69	33
90	69	33
100	69	33
120	69	33
200	68	33
230	68	33
264	68	33
280	70	33
--	-	-

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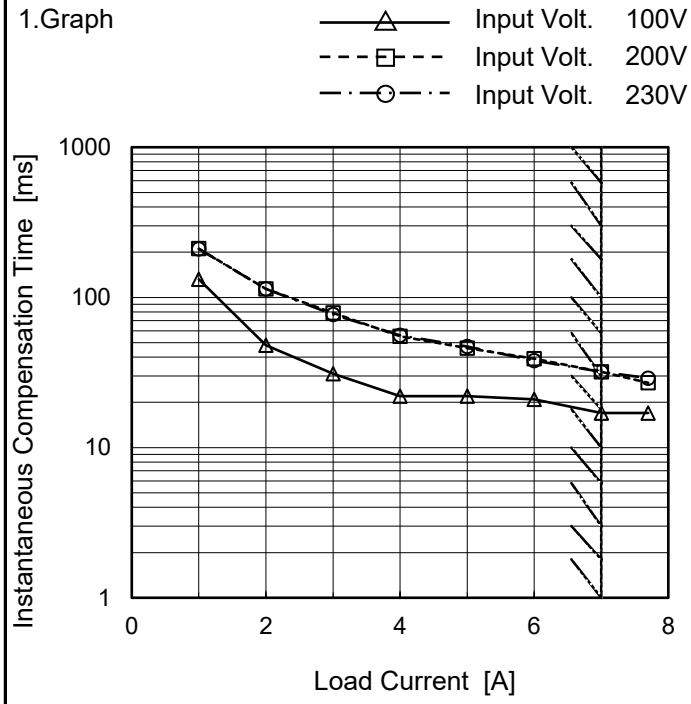
Model	PDA300F-48
Item	Instantaneous Interruption Compensation
Object	+48V7A

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]
0.0	-	-	-
1.0	132	211	210
2.0	48	114	114
3.0	31	79	77
4.0	22	55	56
5.0	22	46	47
6.0	21	39	38
7.0	17	32	32
7.7	17	27	29
--	-	-	-
--	-	-	-

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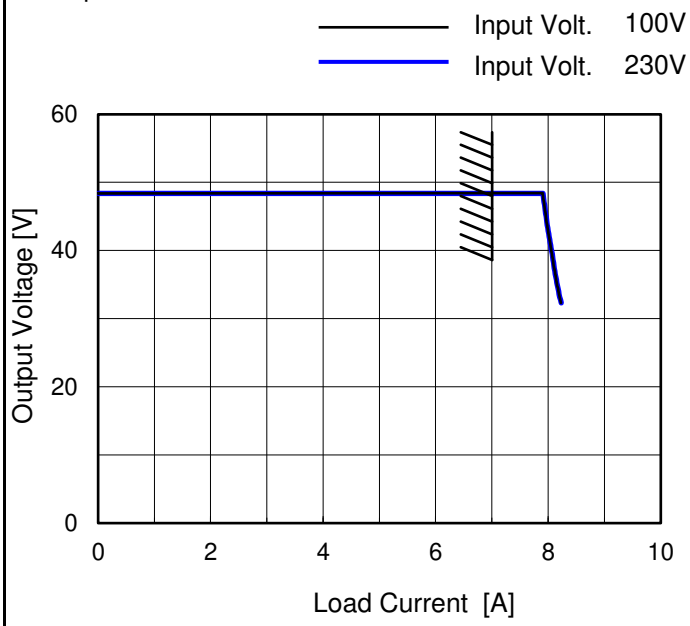
Model	PDA300F-48
Item	Overcurrent Protection
Object	+48V7A

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 28.8V to 0V.

2.Values

Output Voltage [V]	Load Current [A]	
	Input Volt. 100[V]	Input Volt. 230[V]
45.6	7.95	7.96
43.2	7.90	7.91
38.4	8.09	8.09
33.6	8.19	8.19
28.8	8.23	8.23
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	PDA300F-48
Item	Ambient Temperature Drift
Object	+48V7A

Testing Circuitry Figure A

1.Values

Load 100%

Ambient Temperature[℃]	Output Voltage [V]		
	Input Volt. 100V	Input Volt. 200V	Input Volt. 230V
-20	48.079	48.083	48.085
25	48.357	48.362	48.367
50	48.504	48.506	48.516

Item	Minimum Input Voltage for Regulated Output Voltage
Object	+48V7A

Testing Circuitry Figure A

1.Values

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

Item	Overvoltage Protection
Object	+48V7A

Testing Circuitry Figure A

1.Values

Load 0%

Ambient Temperature[℃]	Operating Point [V]	
	Input Volt. 100V	Input Volt. 230V
-20	71.51	71.51
25	71.51	71.51
50	71.51	71.51

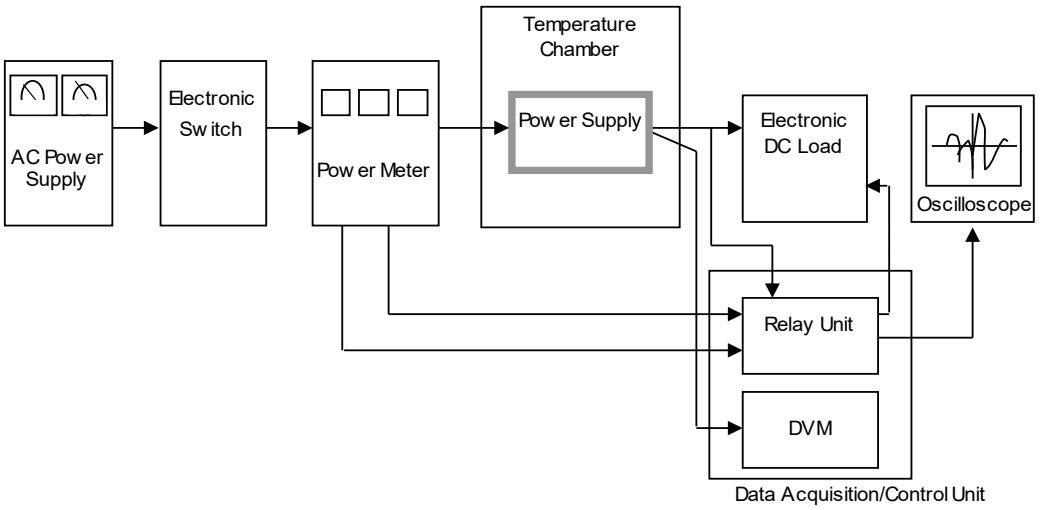
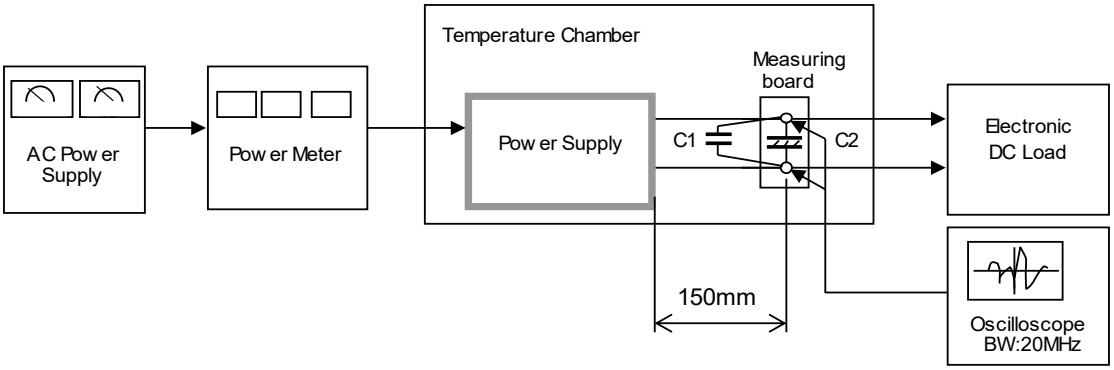


Figure A



C1= 0.1 μF
(Ceramic capacitor)

C2= 22 μF
(Electrolytic capacitor)

Figure B

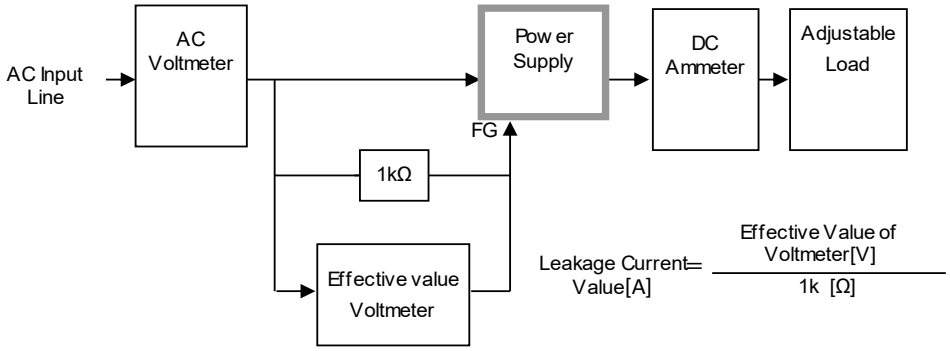


Figure C-1 (DEN-AN)

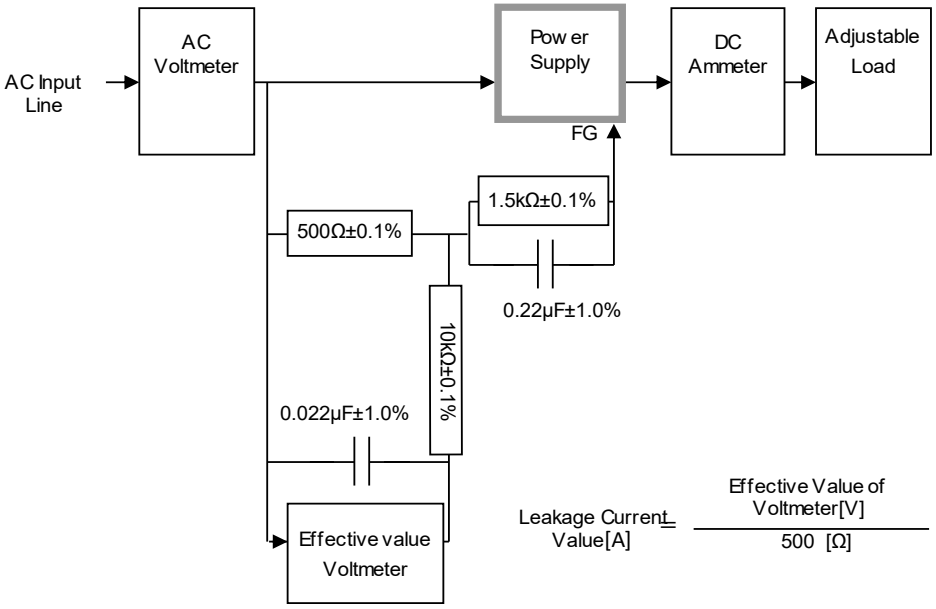


Figure C-2 (IEC62368-1 refer to IEC60990 Fig.4)

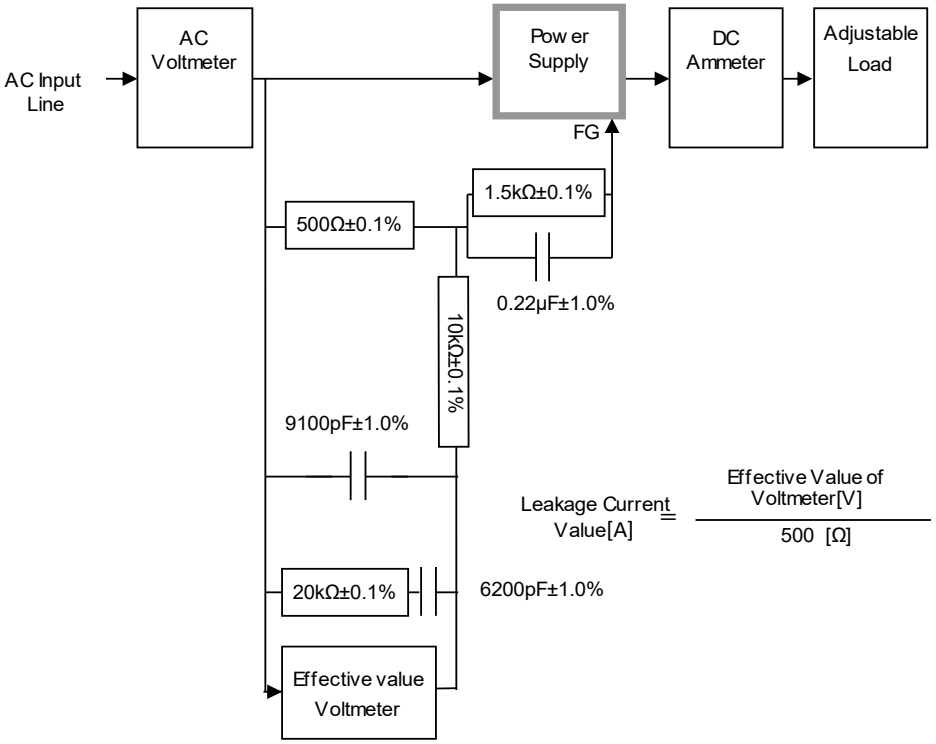


Figure C-3 (IEC62368-1 refer to IEC60990 Fig.5)