

# TEST DATA OF PDA100F-5

Regulated DC Power Supply  
December 12, 2024

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Design Manager

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**COSEL CO.,LTD.**



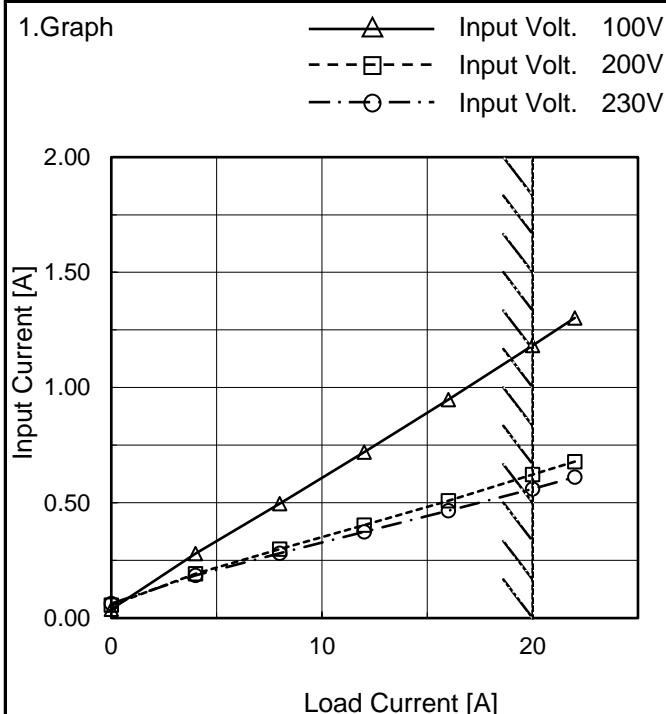
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Model	PDA100F-5
Item	Input Current (by Load Current)
Object	_____



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

Temperature 25°C  
Testing Circuitry Figure A

## 2. Values

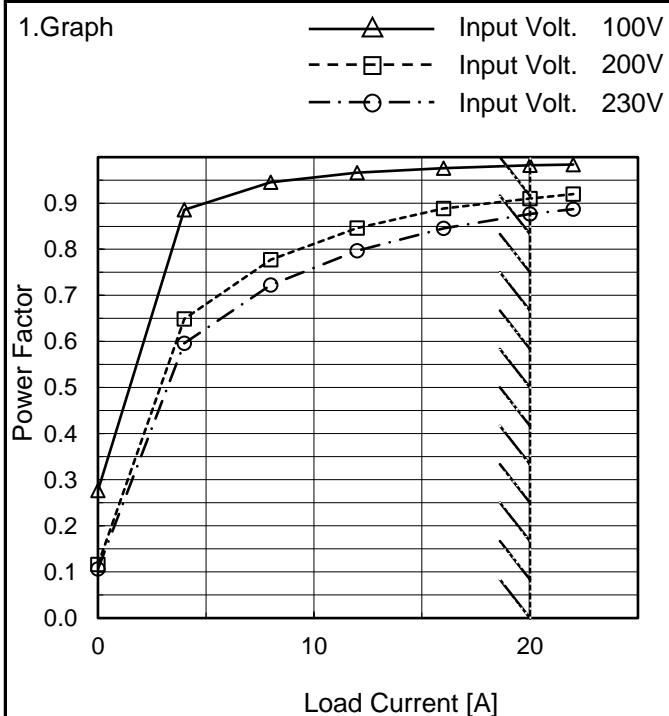
Load Current [A]	Input Current [A]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0.00	0.038	0.056	0.063
4.00	0.279	0.192	0.186
8.00	0.497	0.299	0.282
12.00	0.720	0.403	0.374
16.00	0.948	0.510	0.466
20.00	1.183	0.623	0.561
22.00	1.302	0.679	0.611
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--	-	-	-
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Model	PDA100F-5	Temperature Testing Circuitry 25°C Figure A																																														
Item	Efficiency (by Load Current)																																															
Object	_____																																															
1.Graph		2.Values																																														
<p>—△— Input Volt. 100V        - - -□--- Input Volt. 200V        - ·○--- Input Volt. 230V</p> <table border="1"> <thead> <tr> <th>Load Current [A]</th> <th>Input Volt. 100[V]</th> <th>Input Volt. 200[V]</th> <th>Input Volt. 230[V]</th> </tr> </thead> <tbody> <tr><td>0.00</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>4.00</td><td>82.6</td><td>81.9</td><td>80.3</td></tr> <tr><td>8.00</td><td>86.5</td><td>87.5</td><td>87.0</td></tr> <tr><td>12.00</td><td>87.5</td><td>89.2</td><td>89.0</td></tr> <tr><td>16.00</td><td>87.7</td><td>89.7</td><td>89.7</td></tr> <tr><td>20.00</td><td>87.4</td><td>89.4</td><td>89.6</td></tr> <tr><td>22.00</td><td>87.1</td><td>89.3</td><td>89.4</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> <tr><td>--</td><td>-</td><td>-</td><td>-</td></tr> </tbody> </table>	Load Current [A]	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]	0.00	-	-	-	4.00	82.6	81.9	80.3	8.00	86.5	87.5	87.0	12.00	87.5	89.2	89.0	16.00	87.7	89.7	89.7	20.00	87.4	89.4	89.6	22.00	87.1	89.3	89.4	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
Load Current [A]	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]																																													
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<p>Note: Slanted line shows the range of the rated load current.</p>																																																

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Model	PDA100F-5
Item	Power Factor (by Load Current)
Object	_____



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

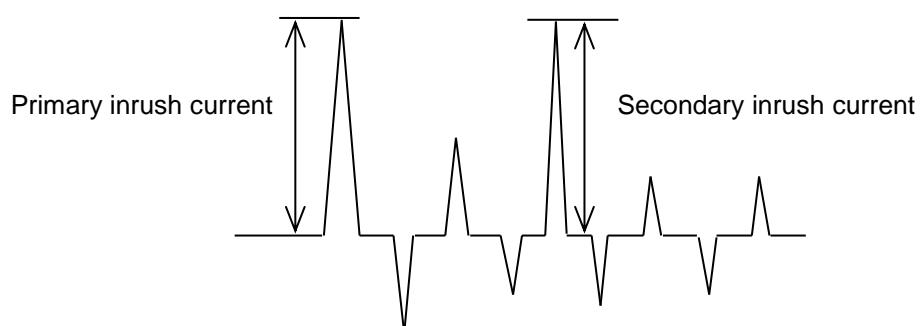
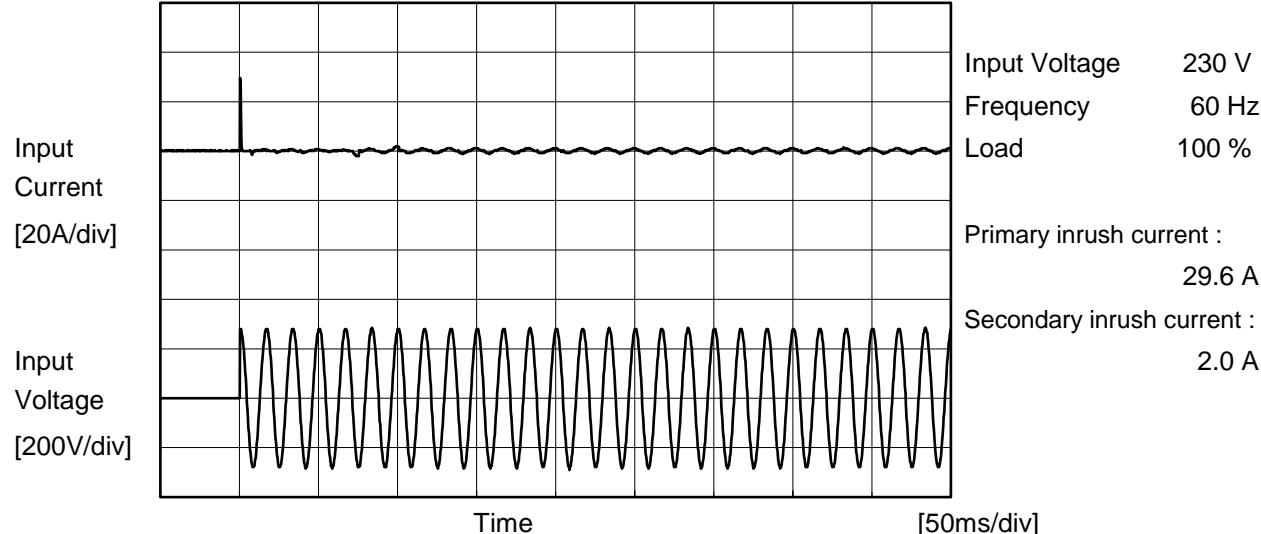
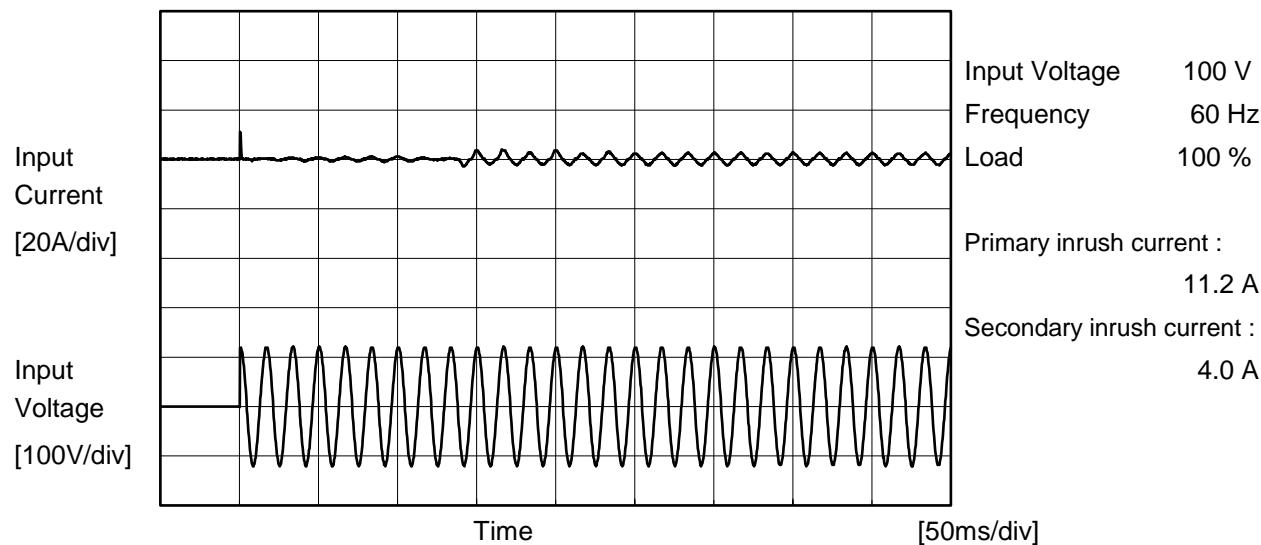
Temperature 25°C  
Testing Circuitry Figure A

## 2. Values

Load Current [A]	Power Factor		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0.00	0.277	0.116	0.106
4.00	0.885	0.649	0.596
8.00	0.945	0.778	0.722
12.00	0.966	0.846	0.797
16.00	0.976	0.888	0.845
20.00	0.982	0.910	0.877
22.00	0.984	0.920	0.887
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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Model	PDA100F-5
Item	Inrush Current
Object	_____

Temperature 25°C  
Testing Circuitry Figure A



Model	PDA100F-5	Temperature Testing Circuitry Object	25°C Figure C
Item	Leakage Current		
Object	_____		

### 1. Results

Standards	Testing Circuitry	Measuring Method	Input Volt.			Note
			100 [V]	230 [V]	240 [V]	
DEN-AN	Figure C-1	Both phases	0.14	0.37	0.38	Operation
		One of phases	0.28	0.70	0.73	Stand by
IEC62368-1	Figure C-2	Both phases	0.14	0.36	0.37	Operation
		One of phases	0.27	0.69	0.72	Stand by
	Figure C-3	Both phases	0.14	0.35	0.37	Operation
		One of phases	0.27	0.67	0.71	Stand by

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

### 2. Condition

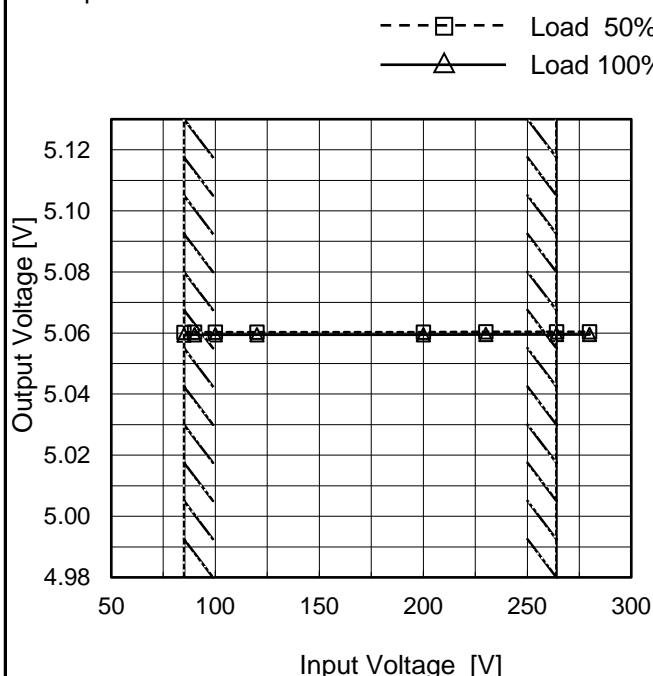
Leakage current value is concluded after measuring both phases of AC input and by choosing the larger one.

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Model	PDA100F-5
Item	Line Regulation
Object	+5V20A

 Temperature 25°C  
 Testing Circuitry Figure A

## 1.Graph

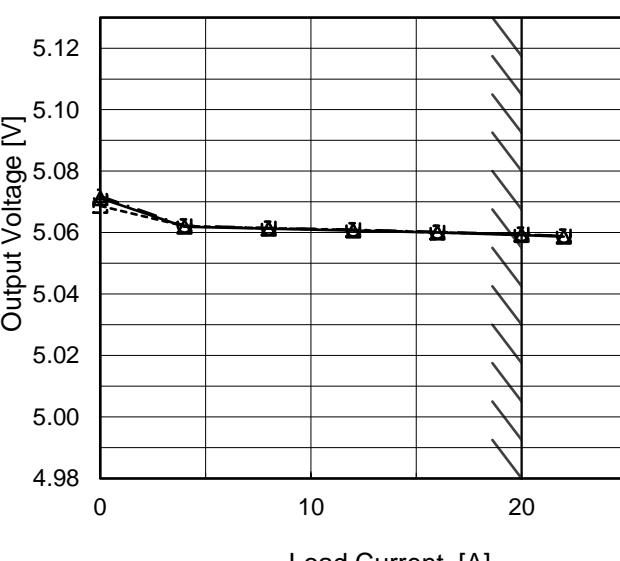
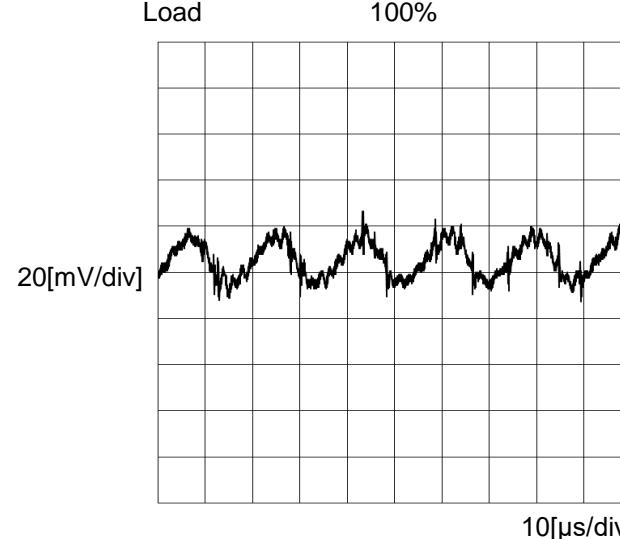


Note: Slanted line shows the range of the rated input voltage.

## 2.Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
85	5.060	5.059
90	5.060	5.059
100	5.060	5.059
120	5.060	5.059
200	5.060	5.059
230	5.060	5.060
264	5.060	5.060
280	5.060	5.060
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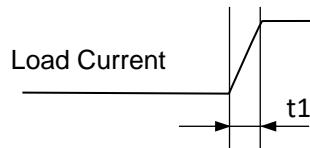
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Item	Ripple-Noise	Temperature Testing Circuitry 25°C Figure B																																																			
Object	+5V20A																																																				
1.Graph	<p>Input Voltage 230V        Load 100%</p>  <p>20[mV/div]</p> <p>10[μs/div]</p>																																																				

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Model	PDA100F-5	Temperature Testing Circuitry Figure A	25°C
Item	Dynamic Load Response		
Object	+5V20A		

Input Volt. 230 V

Cycle 1000 ms

Response.  $t_1=t_2=50\mu s$ . Typ

Load 0%(0A)  $\longleftrightarrow$   
Load 100%(20A)

200[mV/div]

4[ms/div]

10[ms/div]

Load 50%(10A)  $\longleftrightarrow$   
Load 100%(20A)

200[mV/div]

4[ms/div]

10[ms/div]

Load 0%(0A)  $\longleftrightarrow$   
Load 50%(10A)

200[mV/div]

4[ms/div]

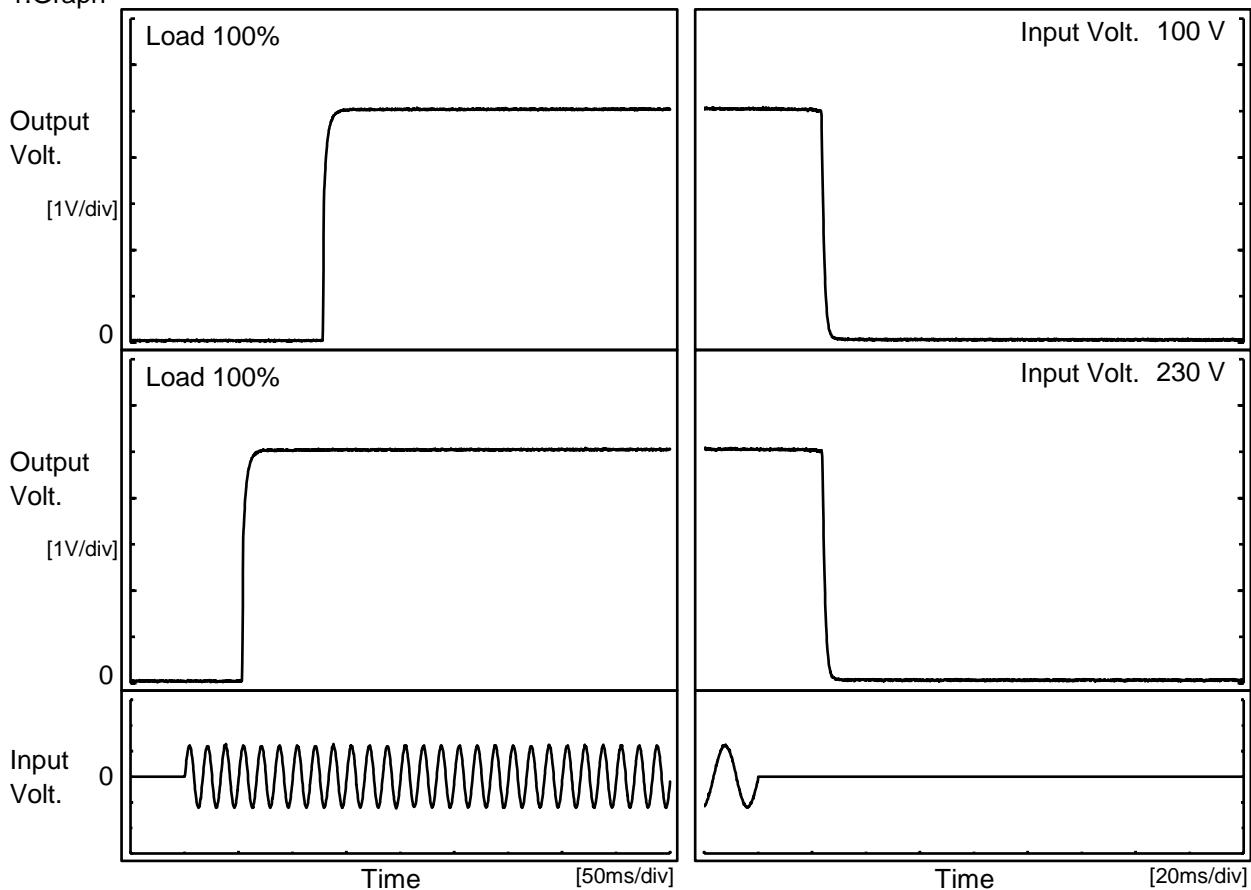
10[ms/div]

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Model	PDA100F-5
Item	Rise and Fall Time
Object	+5V20A

Temperature 25°C  
Testing Circuitry Figure A

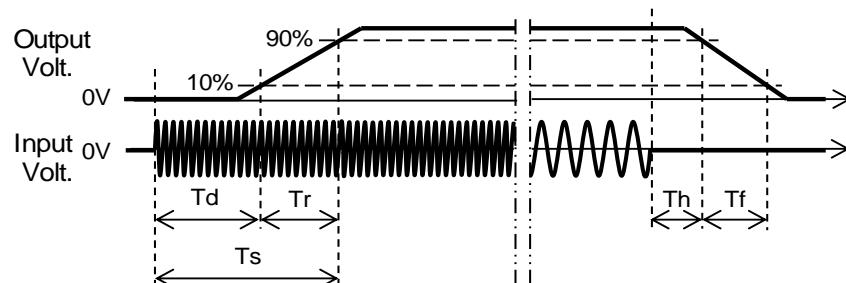
## 1. Graph



## 2. Values

[ms]

Input Volt.	Time	Td	Tr	Ts	Th	Tf
100 V		128.5	5.3	133.8	23.6	2.0
230 V		53.8	5.3	59.1	23.9	2.0

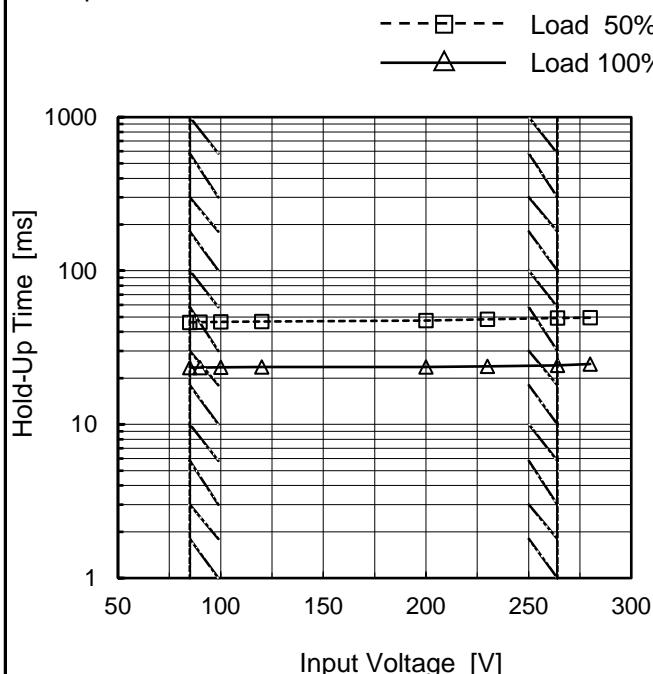


**COSEL**

Model	PDA100F-5
Item	Hold-Up Time
Object	+5V20A

Temperature 25°C  
Testing Circuitry Figure A

## 1.Graph



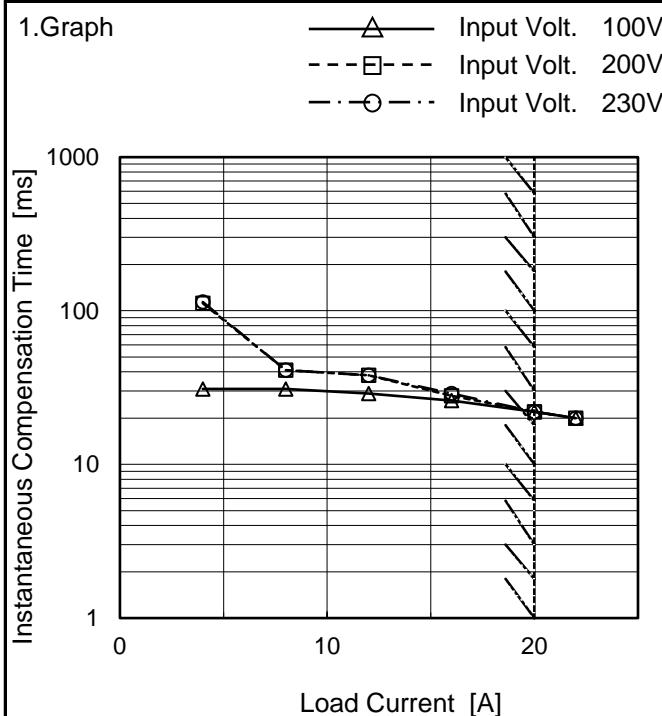
## 2.Values

Input Voltage [V]	Hold-Up Time [ms]	
	Load 50%	Load 100%
85	46	23
90	46	23
100	47	24
120	47	24
200	48	24
230	48	24
264	49	24
280	50	25
--	-	-

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.

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Model	PDA100F-5
Item	Instantaneous Interruption Compensation
Object	+5V20A



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

Temperature 25°C  
Testing Circuitry Figure A

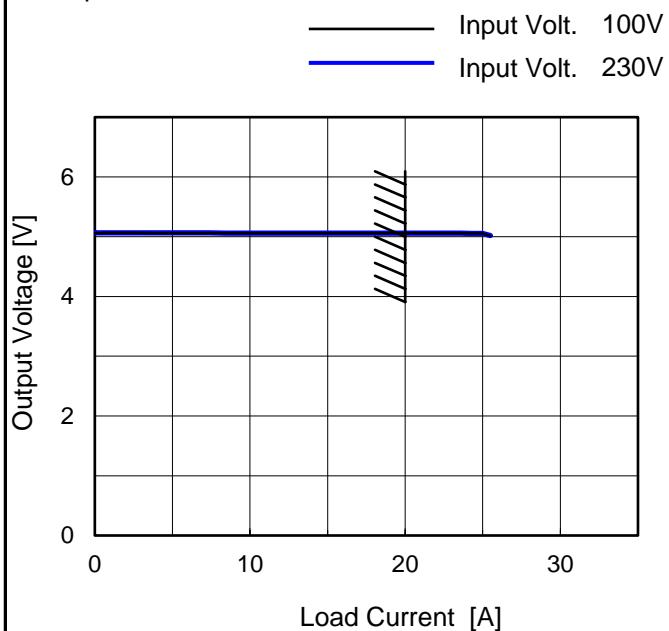
## 2.Values

Load Current [A]	Time [ms]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0.00	-	-	-
4.00	31	112	114
8.00	31	41	41
12.00	29	38	38
16.00	26	28	29
20.00	22	22	22
22.00	20	20	20
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

**COSEL**

Model	PDA100F-5
Item	Overcurrent Protection
Object	+5V20A

## 1.Graph



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

Temperature 25°C  
Testing Circuitry Figure A

## 2.Values

Output Voltage [V]	Load Current [A]	
	Input Volt. 100[V]	Input Volt. 230[V]
5.00	25.47	25.49
4.75	-	-
4.50	-	-
4.00	-	-
3.50	-	-
3.00	-	-
2.50	-	-
2.00	-	-
1.50	-	-
1.00	-	-
0.50	-	-
0.00	-	-



Model	PDA100F-5	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+5V20A	

## 1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 100V	Input Volt. 200V	Input Volt. 230V
-10	5.056	5.056	5.056
25	5.065	5.065	5.065
50	5.061	5.061	5.061

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+5V20A	

## 1.Values

Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 100%
-10	43	58
25	43	57
50	41	53

Item	Overvoltage Protection	Testing Circuitry Figure A
Object	+5V20A	

## 1.Values

Load 0%

Ambient Temperature[°C]	Operating Point [V]	
	Input Volt. 100V	Input Volt. 230V
-20	6.76	6.76
25	6.70	6.70
50	6.70	6.70

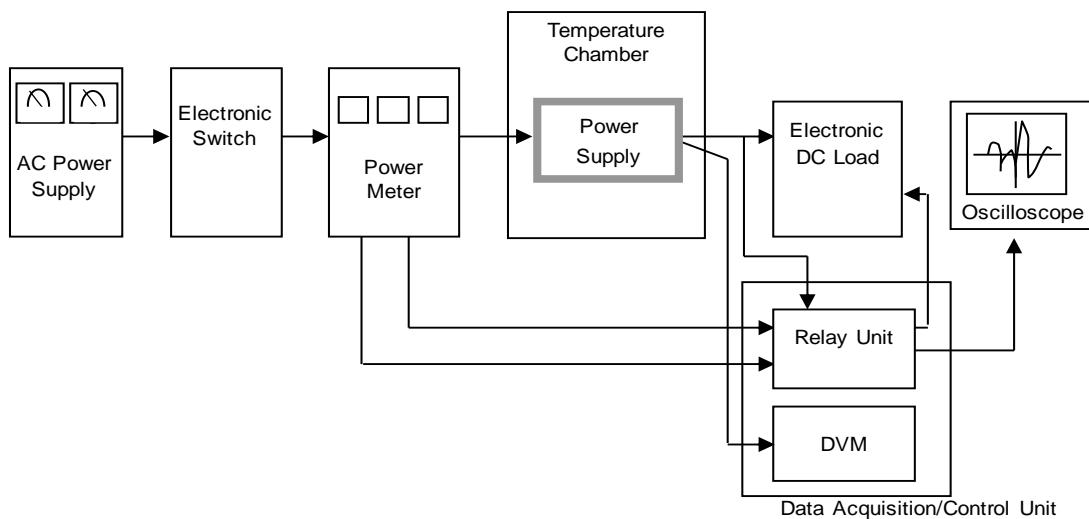
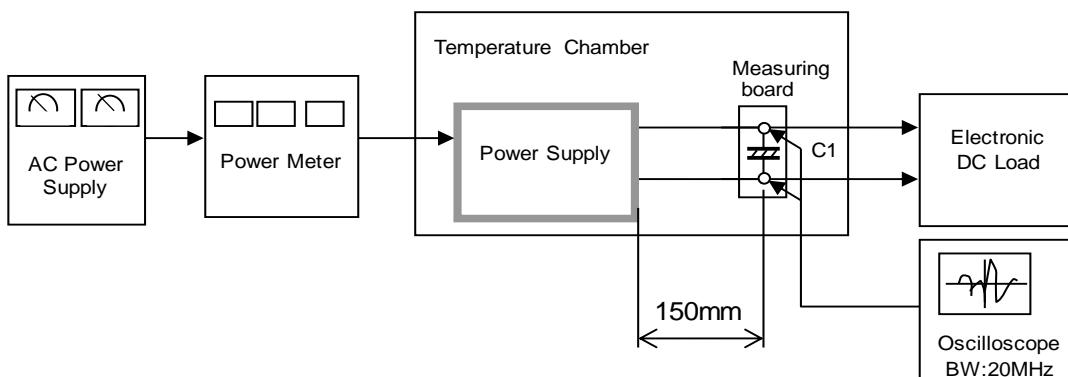


Figure A



$C1 = 22 \mu F$   
(Electrolytic capacitor)

Figure B

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