

# TEST DATA OF UMA120F-5-Y

Regulated DC Power Supply  
June 23, 2025

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Design Manager

Prepared by : Ryoki Nakanishi  
Design Engineer

**COSEL CO.,LTD.**

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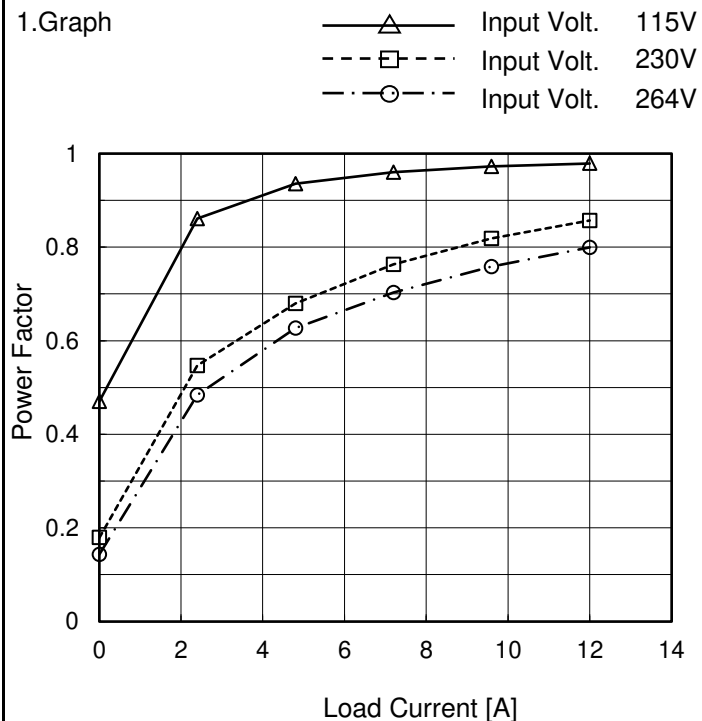
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Model	UMA120F-5-Y
Item	Power Factor (by Load Current)
Object	+5V12A

Temperature 25°C  
Testing Circuitry Figure A

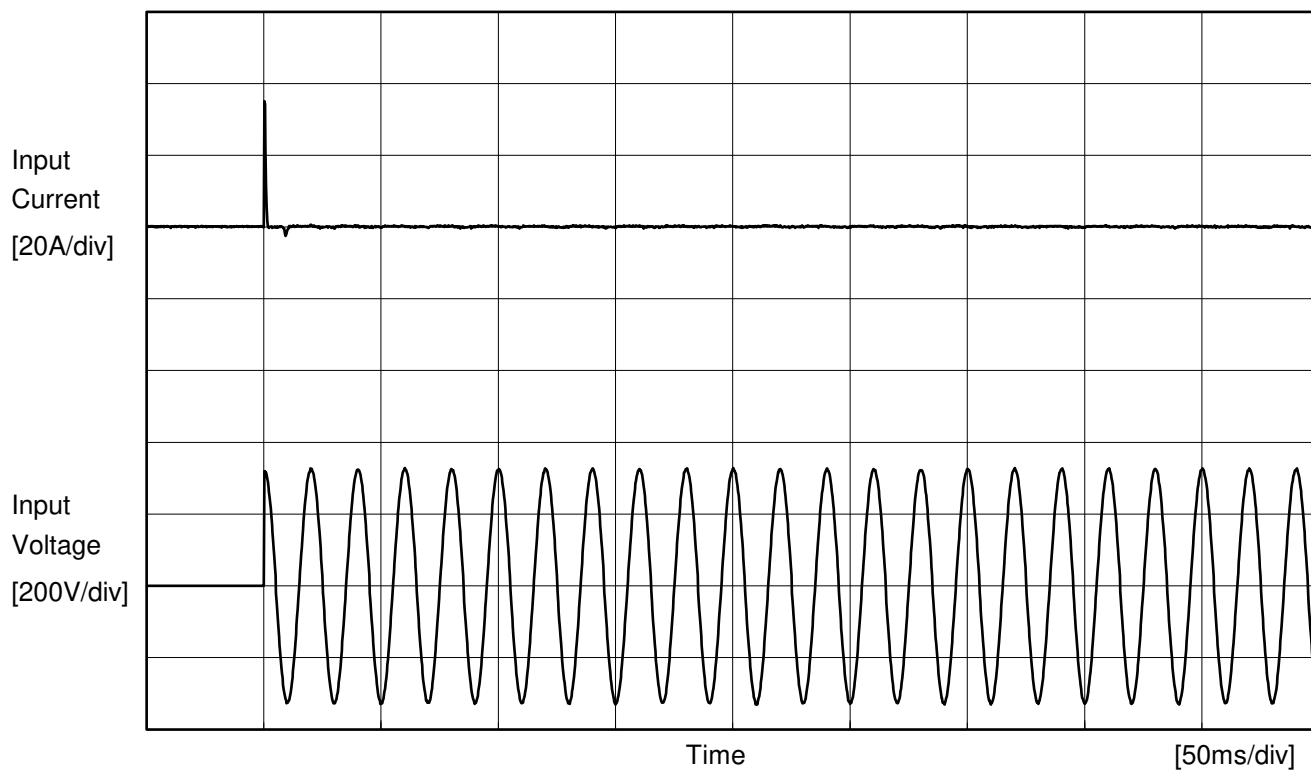
### 1. Graph



### 2. Values

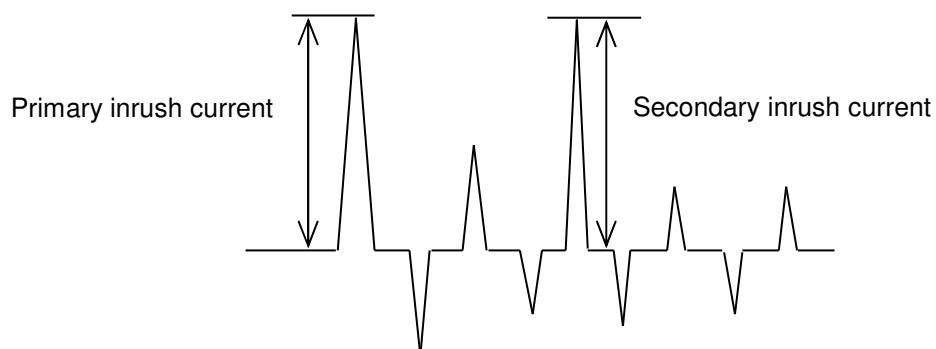
Load Current [A]	Power Factor		
	Input Volt. 115[V]	Input Volt. 230[V]	Input Volt. 264[V]
0.0	0.470	0.179	0.143
2.4	0.861	0.547	0.484
4.8	0.936	0.680	0.627
7.2	0.961	0.763	0.703
9.6	0.972	0.819	0.758
12.0	0.979	0.857	0.800
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

Model	UMA120F-5-Y	Temperature 25°C Testing Circuitry Figure A
Item	Inrush Current	
Object	+5V12A	



Input Voltage 230 V  
Frequency 50 Hz  
Load 100 %

Primary inrush current 35.1 A  
Secondary inrush current 0.7 A



Model	UMA120F-5-Y	Temperature 25°C Testing Circuitry Figure C
Item	Leakage Current	
Object	+5V12A	

### 1.Results

[mA]

Standards	Testing Circuitry	Measuring Method	Input Volt.			Note
			115 [V]	230 [V]	264 [V]	
IEC60601-1	Figure C-1	Both phases	0.05	0.10	0.12	Operation
		One of phases	0.09	0.20	0.23	Stand by
IEC62368-1	Figure C-2	Both phases	0.05	0.10	0.12	Operation
		One of phases	0.09	0.20	0.23	Stand by
	Figure C-3	Both phases	0.05	0.10	0.12	Operation
		One of phases	0.09	0.20	0.23	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.

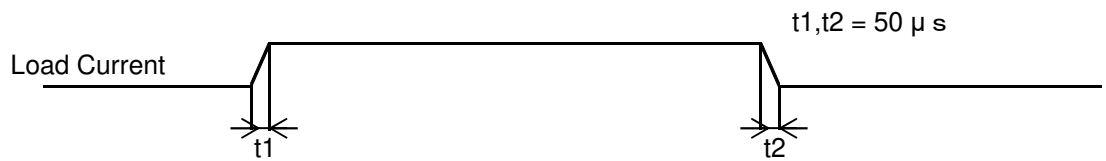
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Item	Line Regulation	Temperature	25°C																														
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		BC-12166																																																				

Model	UMA120F-5-Y	Temperature 25°C Testing Circuitry Figure A
Item	Dynamic Load Response	
Object	+5V12A	

Input Volt. 230 V  
Cycle 1000 ms



Min.Load (0A) ←→  
Load 100% (12A)

100 mV/div

10 ms/div

10 ms/div

Load 50% (6A) ←→  
Load 100% (12A)

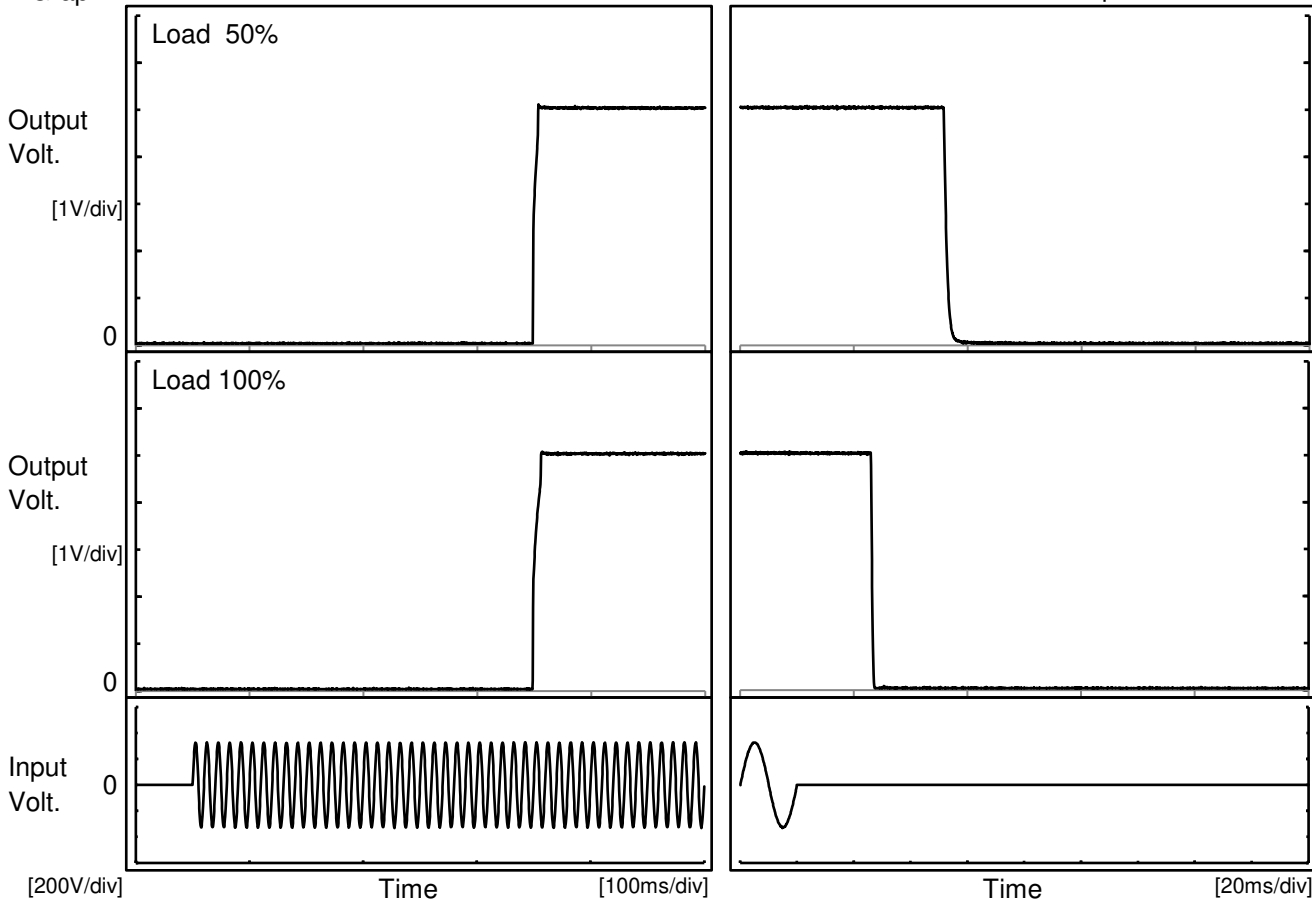
100 mV/div

10 ms/div

10 ms/div

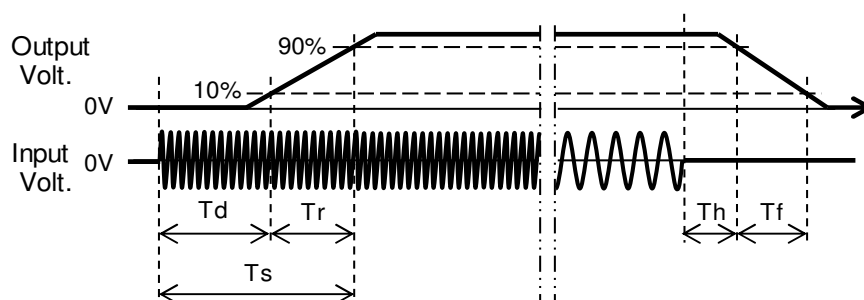
Model	UMA120F-5-Y	Temperature 25°C Testing Circuitry Figure A
Item	Rise and Fall Time	
Object	+5V12A	

## 1.Graph



## 2.Values

						[ms]
Load \ Time	Td	Tr	Ts	Th		
50 %	598.0	9.0	607.0	51.7		2.1
100 %	598.0	13.5	611.5	26.1		0.8



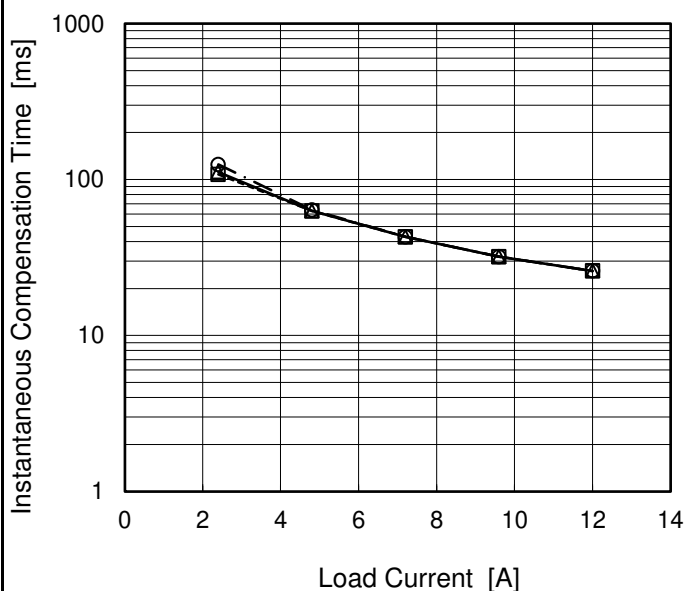


Model	UMA120F-5-Y
Item	Instantaneous Interruption Compensation
Object	+5V12A

Temperature 25°C  
Testing Circuitry Figure A

## 1. Graph

—△— Input Volt. 115V  
---□--- Input Volt. 230V  
-·-○-·- Input Volt. 264V



## 2. Values

Load Current [A]	Time [ms]		
	Input Volt. 115[V]	Input Volt. 230[V]	Input Volt. 264[V]
0.0	-	-	-
2.4	112	108	125
4.8	63	63	64
7.2	43	43	43
9.6	32	32	32
12.0	26	26	26
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<div><div><div></div><div>Input Volt. 115V</div></div><div><div></div><div>Input Volt. 230V</div></div><div><div></div><div>Input Volt. 264V</div></div></div> <div><div>Output Voltage [V]</div><div><div>Load Current [A]</div></div><div>Note: Slanted line shows the range of the rated load current.</div><div>Overcurrent protection is Hiccup mode.</div></div>		<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="3">Load Current [A]</th></tr><tr><th>Input Volt. 115[V]</th><th>Input Volt. 230[V]</th><th>Input Volt. 264[V]</th></tr><tr><td>5</td><td>15.73</td><td>15.84</td><td>15.80</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><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><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><tr><td>--</td><td>-</td><td>-</td><td>-</td></tr></table>		Output Voltage [V]	Load Current [A]			Input Volt. 115[V]	Input Volt. 230[V]	Input Volt. 264[V]	5	15.73	15.84	15.80	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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COSEL		Testing Circuitry Figure A
Model	UMA120F-5-Y	
Item	Ambient Temperature Drift	
Object	+5V12A	

## 1.Values

Load 100%

Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 115V	Input Volt. 230V	Input Volt. 264V
-20	5.016	5.017	5.017
25	5.036	5.036	5.037
35	5.039	5.039	5.039

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+5V12A	

## 1.Values

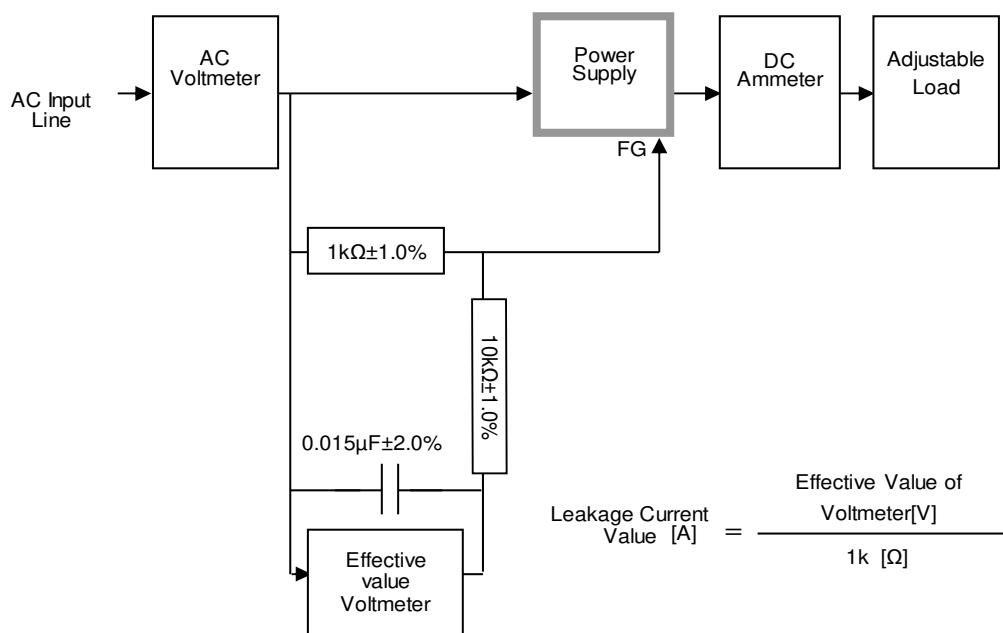
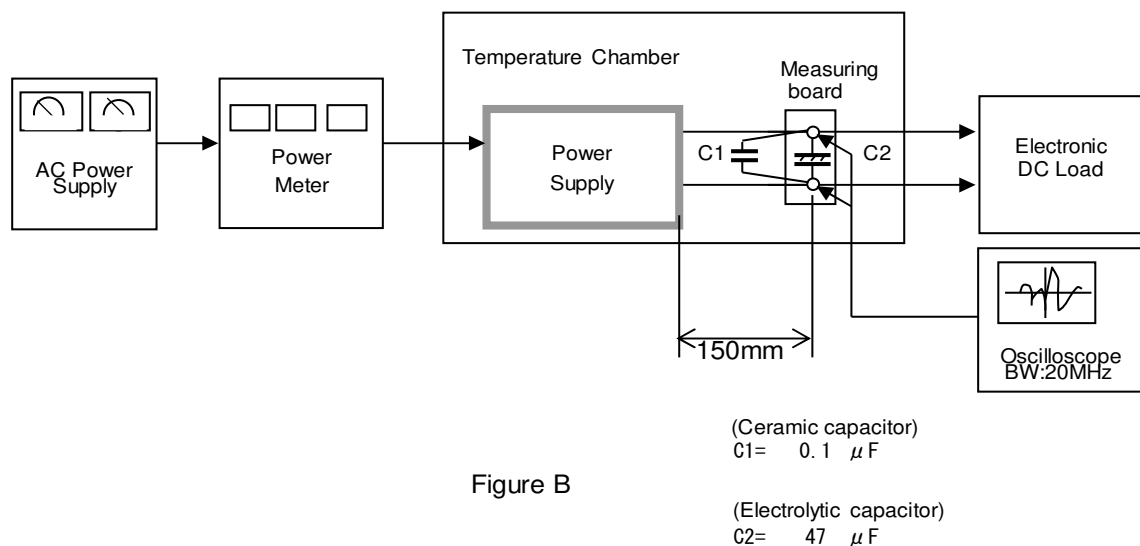
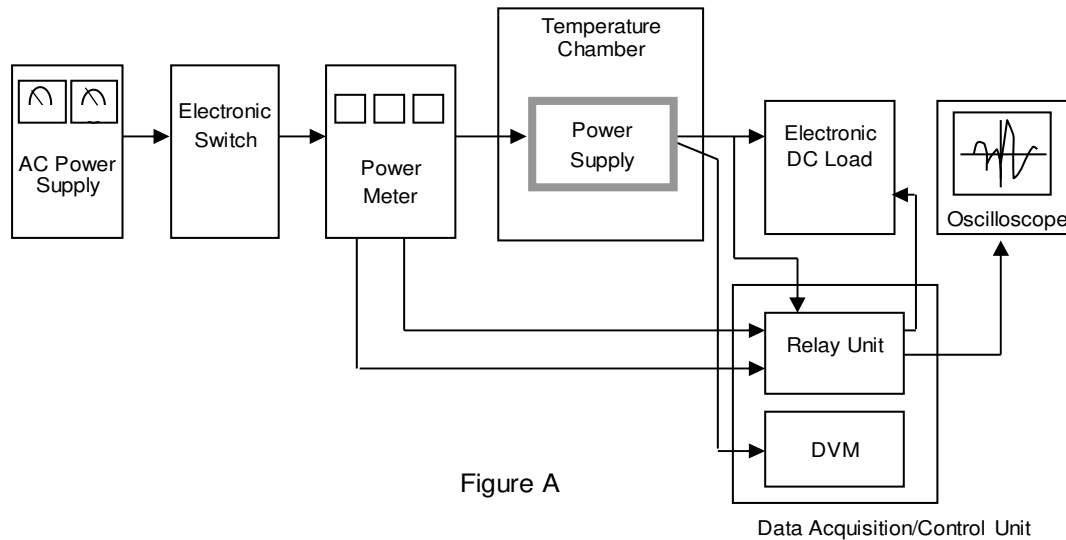
Ambient Temperature[°C]	Input Voltage [V]	
	Load 50%	Load 100%
-20	51	51
25	50	50
35	50	50

Item	Overvoltage Protection	Testing Circuitry Figure A
Object	+5V12A	

## 1.Values

Load 0%

Ambient Temperature[°C]	Operating Point [V]	
	Input Volt. 115V	Input Volt. 264V
-20	6.42	6.48
25	6.42	6.42
35	6.42	6.42





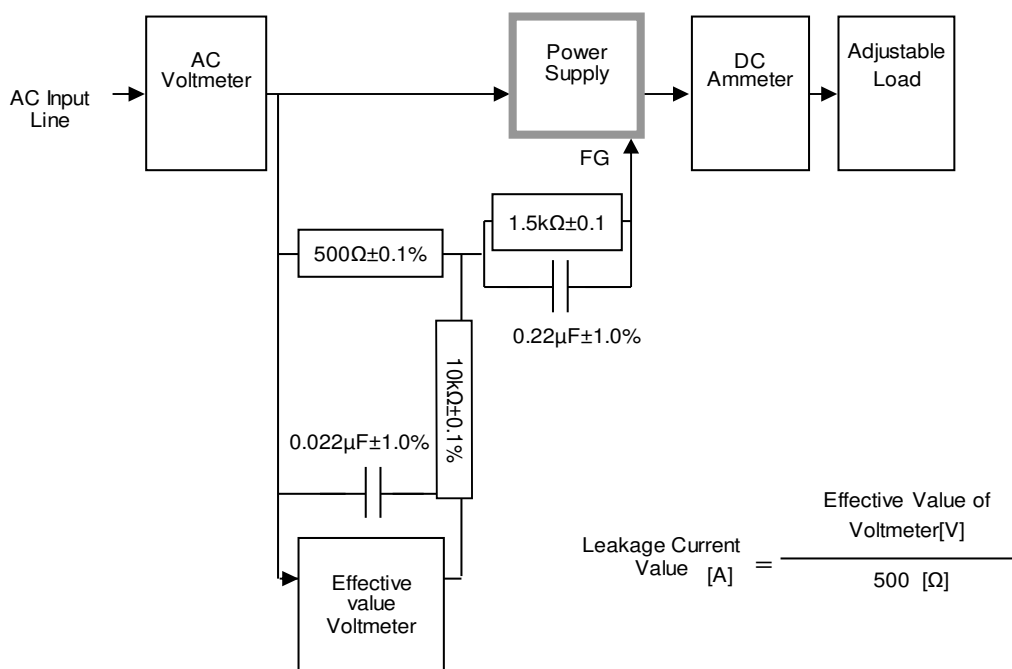


Figure C-2 ( IEC62368-1 refer to IEC60990 Fig.4 )

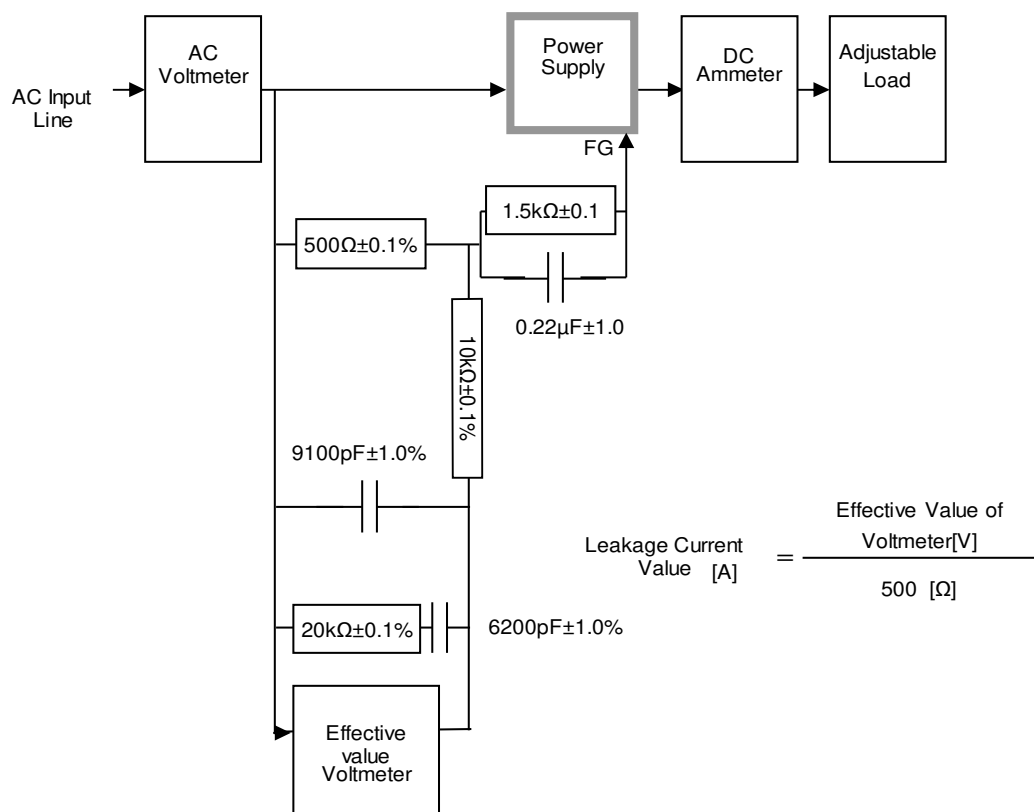


Figure C-3 ( IEC62368-1 refer to IEC60990 Fig.5 )