

# TEST DATA OF UMCS60F-5-E

Regulated DC Power Supply  
July 18, 2024

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Design Manager

Prepared by : Kyosuke Kurata  
Design Engineer

**COSEL CO.,LTD.**

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Model		UMCS60F-5-E																																																				
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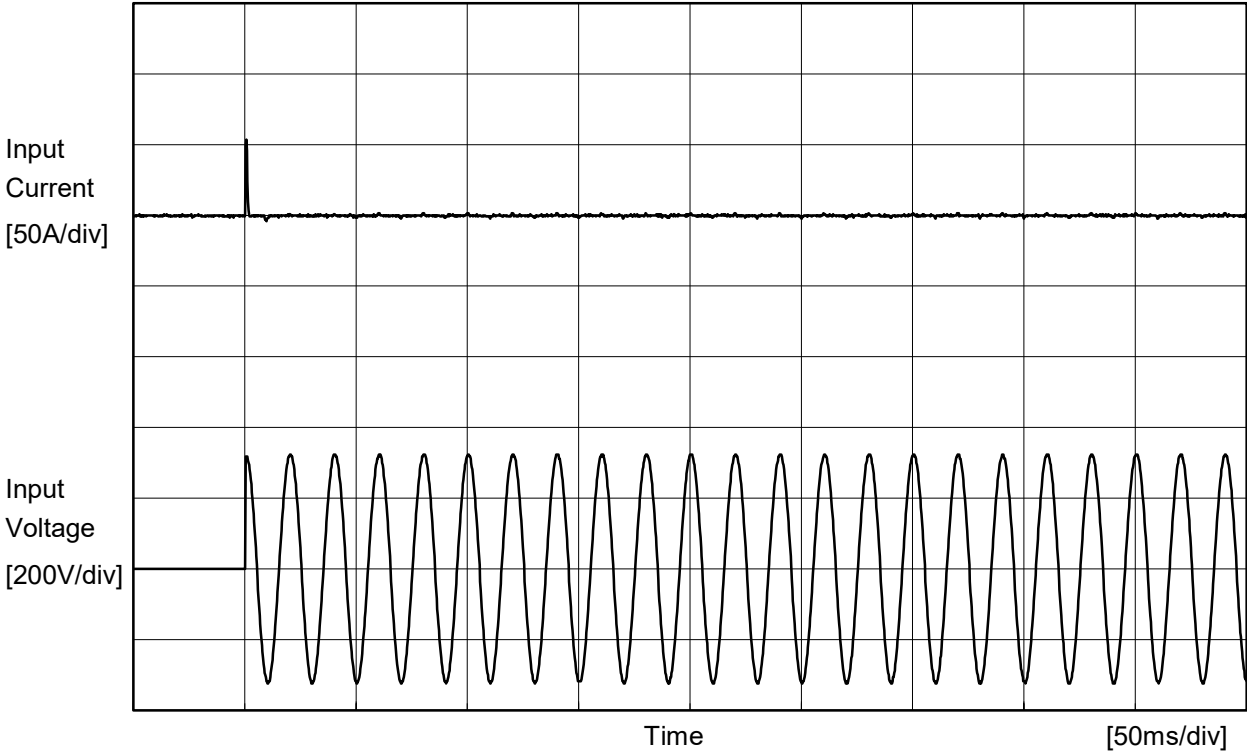
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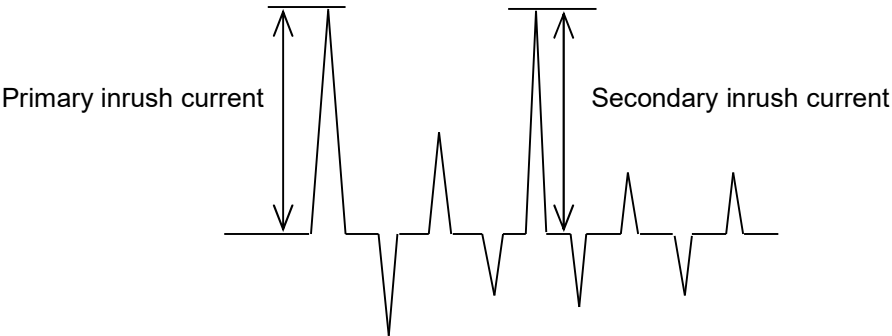


Model		UMCS60F-5-E	
Item		Inrush Current	Temperature 25°C Testing Circuitry Figure A
Object		+5V6A	



Input Voltage            230 V  
Frequency                50 Hz  
Load                        100 %

Primary inrush current    53.7 A  
Secondary inrush current  2.3 A



LOREL		Temperature 25°C Testing Circuitry Figure C
Model	UMCS60F-5-E	
Item	Leakage Current	
Object	+5V6A	

## 1.Results

[μA]

Standards	Testing Circuitry	Measuring Method	Input Volt.			Note
			115 [V]	230 [V]	264 [V]	
IEC60601-1	Figure C-1	Both phases	1.9	4.0	3.9	Operation
		One of phases	3.0	6.2	7.2	Stand by
IEC62368-1	Figure C-2	Both phases	1.0	3.6	4.3	Operation
		One of phases	2.6	5.9	6.8	Stand by
	Figure C-3	Both phases	1.0	3.6	4.3	Operation
		One of phases	2.6	5.9	6.8	Stand by

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

## 2.Condition

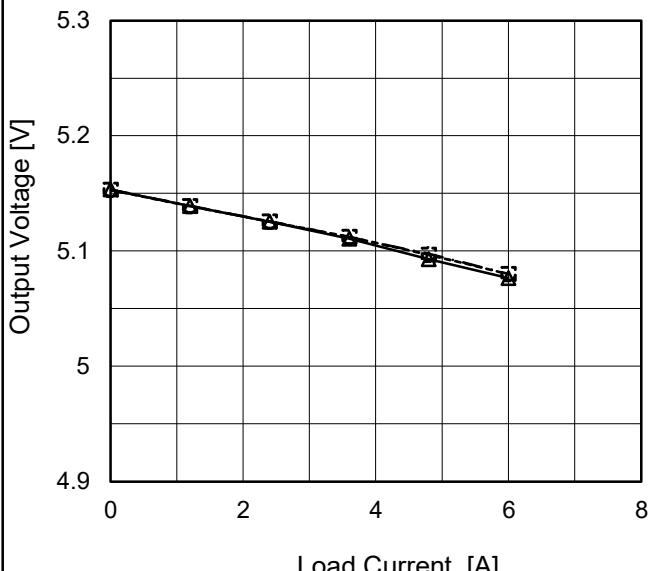
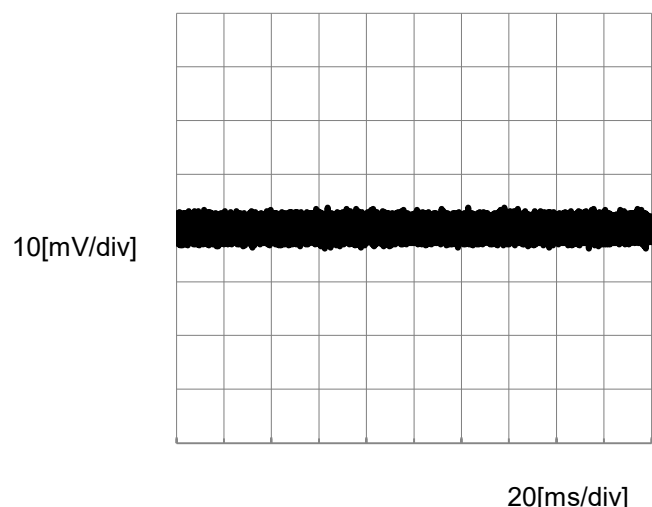
Leakage current value is concluded after measuring both phases of AC input and by choosing the larger one.



Model	UMCS60F-5-E																																		
Item	Line Regulation	Temperature	25°C																																
Object	+5V6A	Testing Circuitry	Figure A																																
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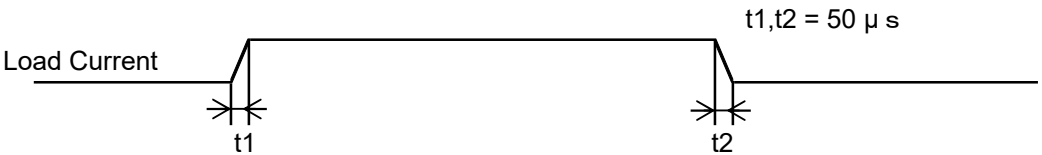
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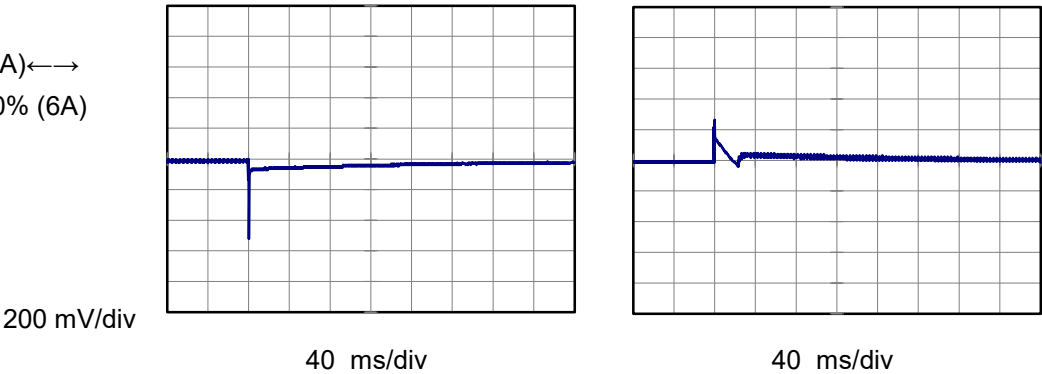


Model		UMCS60F-5-E	Temperature 25°C Testing Circuitry Figure A
Item		Dynamic Load Response	
Object		+5V6A	

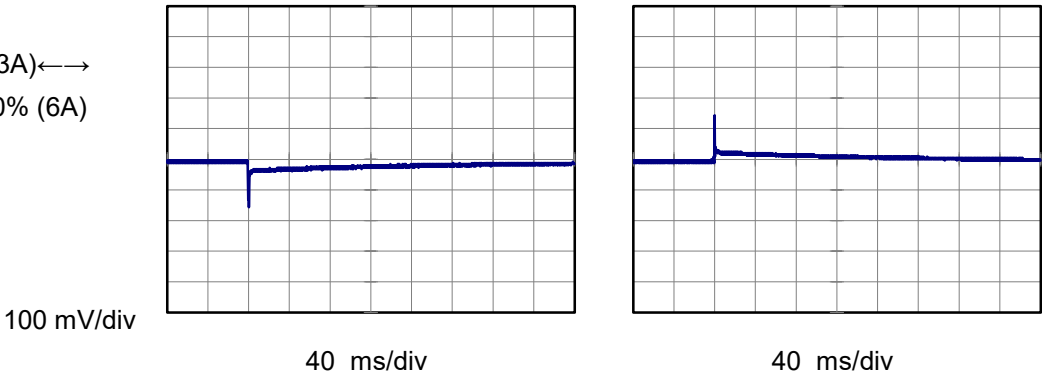
Input Volt. 230 V  
Cycle 1000 ms



Min.Load (0A) ←→  
Load 100% (6A)



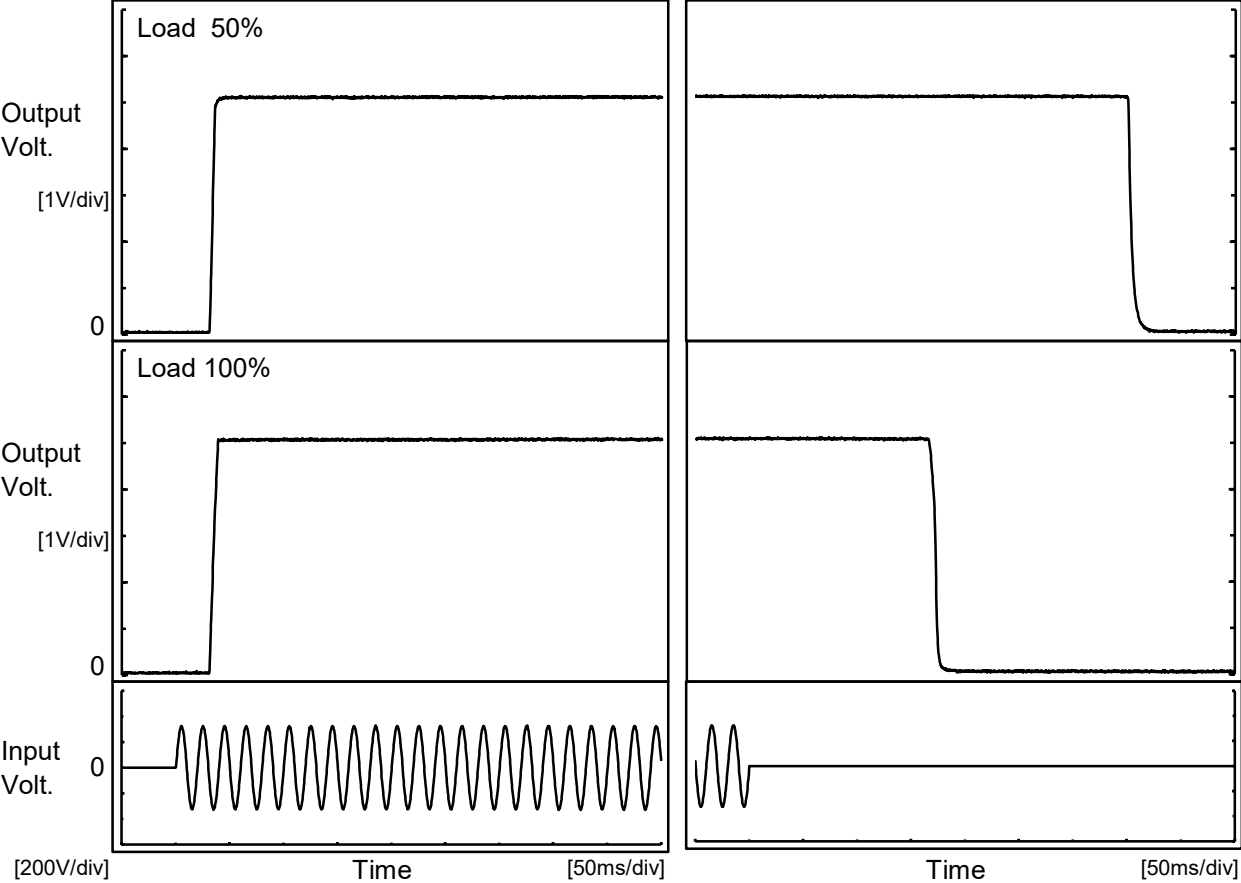
Load 50% (3A) ←→  
Load 100% (6A)





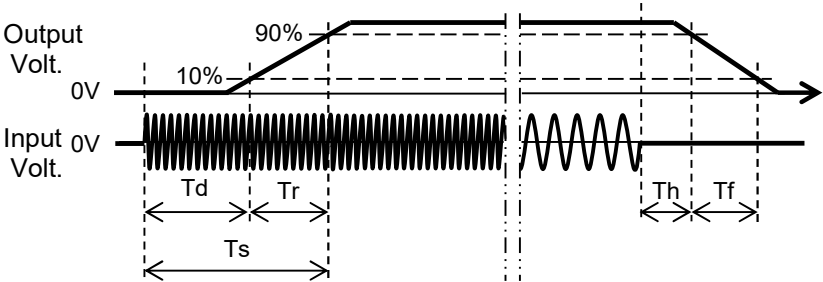
Model		UMCS60F-5-E	Temperature 25°C Testing Circuitry Figure A
Item		Rise and Fall Time	
Object		+5V6A	

1.Graph

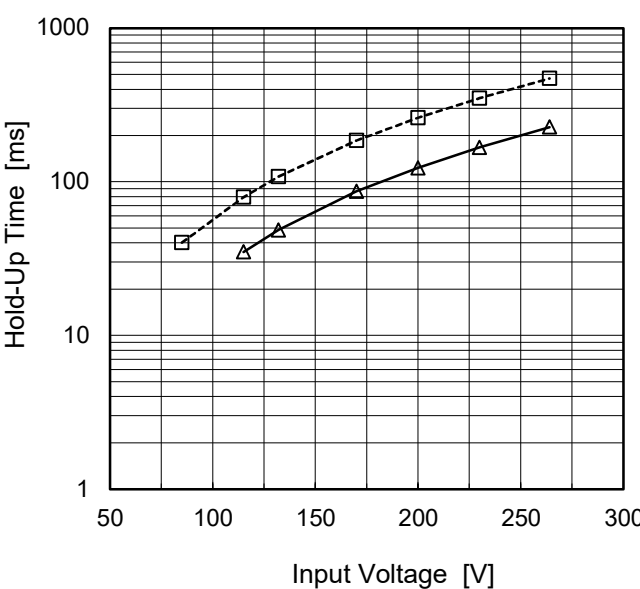


2.Values

		[ms]				
Load	Time	Td	Tr	Ts	Th	Tf
50 %		32.3	4.3	36.6	351.3	7.5
100 %		32.3	6.3	38.6	168.8	6.3





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Model	UMCS60F-5-E																																																						
Item	Instantaneous Interruption Compensation	Temperature	25°C																																																				
Object	+5V6A	Testing Circuitry	Figure A																																																				
1.Graph		2.Values																																																					
<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>Instantaneous Compensation Time [ms]</div><div><div>10000</div><div>1000</div><div>100</div><div>10</div><div>1</div></div><div><div>0</div><div>2</div><div>4</div><div>6</div><div>8</div></div><div>Load Current [A]</div></div>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Time [ms]</th></tr><tr><th>Input Volt. 115[V]</th><th>Input Volt. 230[V]</th><th>Input Volt. 264[V]</th></tr><tr><td>0.0</td><td>-</td><td>-</td><td>-</td></tr><tr><td>1.2</td><td>216</td><td>907</td><td>1210</td></tr><tr><td>2.4</td><td>105</td><td>453</td><td>605</td></tr><tr><td>3.6</td><td>68</td><td>301</td><td>403</td></tr><tr><td>4.8</td><td>48</td><td>221</td><td>298</td></tr><tr><td>6.0</td><td>36</td><td>171</td><td>230</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>			Load Current [A]	Time [ms]			Input Volt. 115[V]	Input Volt. 230[V]	Input Volt. 264[V]	0.0	-	-	-	1.2	216	907	1210	2.4	105	453	605	3.6	68	301	403	4.8	48	221	298	6.0	36	171	230	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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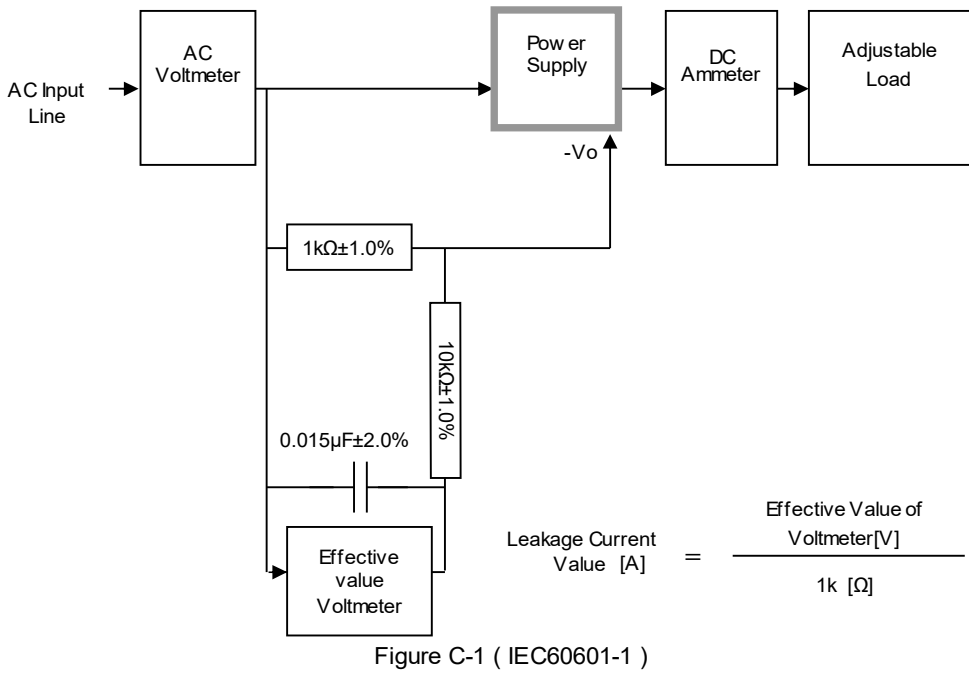
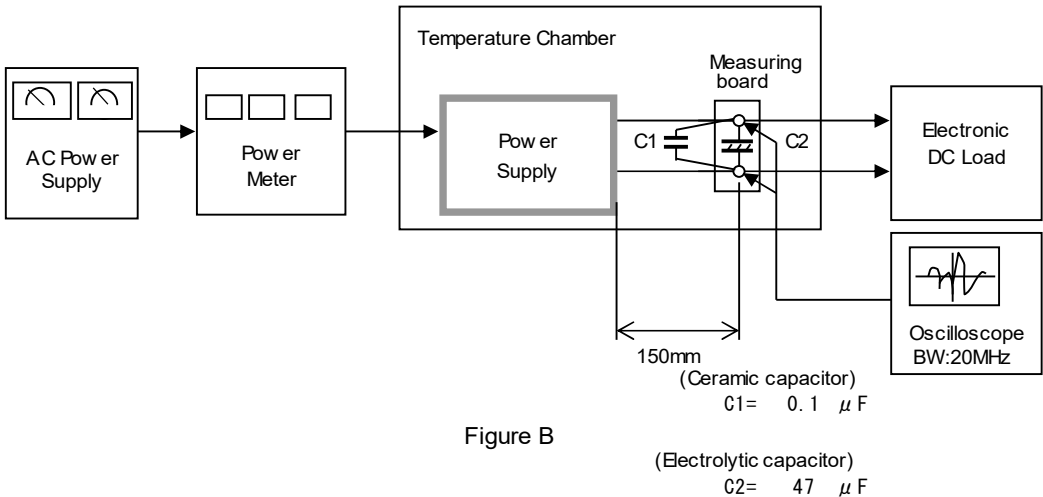
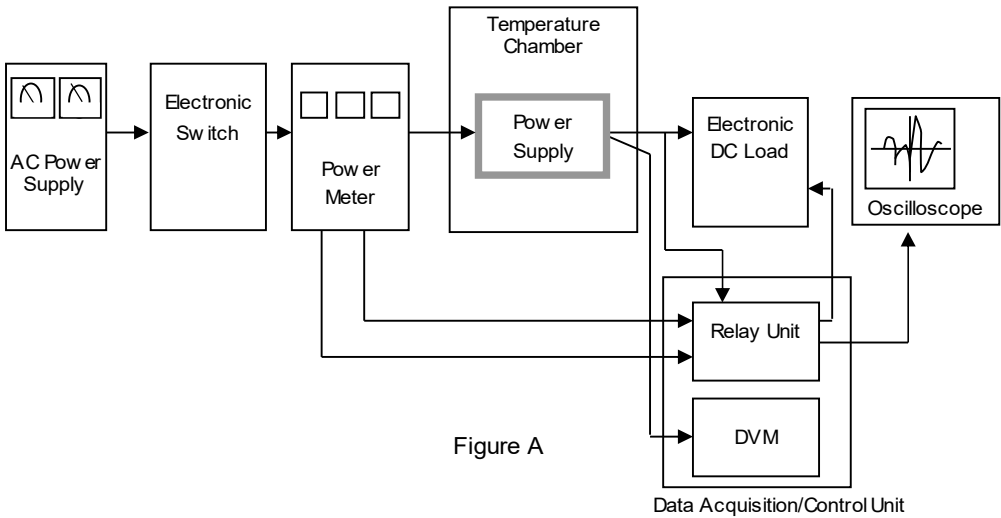
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		Testing Circuitry    Figure A	
Model	UMCS60F-5-E		
Item	Ambient Temperature Drift		
Object	+5V6A		
1.Values <span style="float:right">Load 100%</span>			
Ambient Temperature[°C]	Output Voltage [V]		
	Input Volt. 115V	Input Volt. 230V	Input Volt. 264V
-20	5.072	5.077	5.077
25	5.076	5.080	5.080
30	5.077	5.080	5.080
Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry    Figure A	
Object	+5V6A		
1.Values			
Ambient Temperature[°C]	Input Voltage [V]		
	Load 50%	Load 100%	
-20	29	48	
25	29	46	
30	28	47	
Item	Overvoltage Protection	Testing Circuitry    Figure A	
Object	+5V6A		
1.Values <span style="float:right">Load 0%</span>			
Ambient Temperature[°C]	Operating Point [V]		
	Input Volt. 115V	Input Volt. 264V	
-20	6.55	6.27	
25	6.55	6.27	
30	6.55	6.27	

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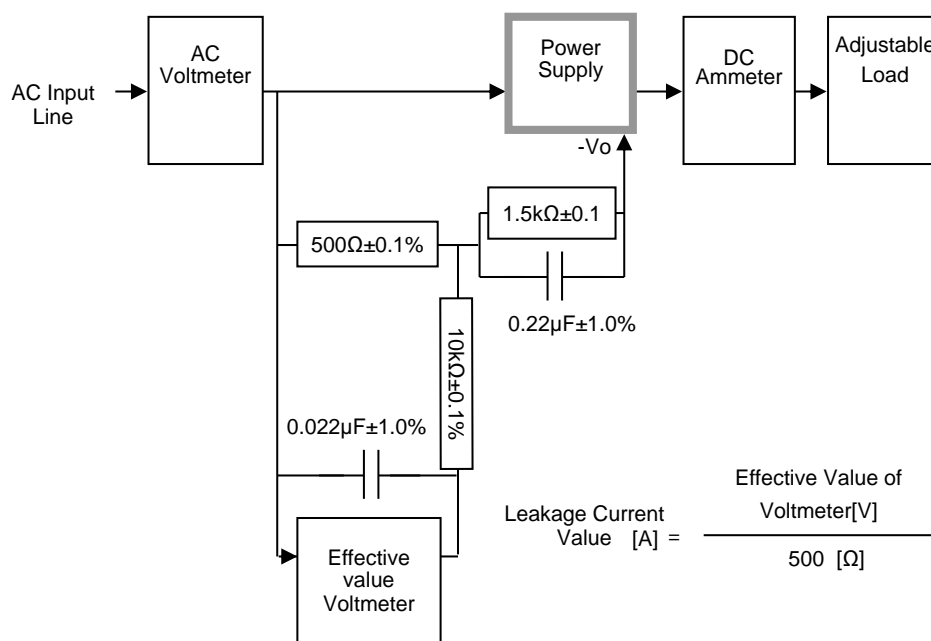


Figure C-2 ( IEC62368-1 refer to IEC60990 Fig.4 )

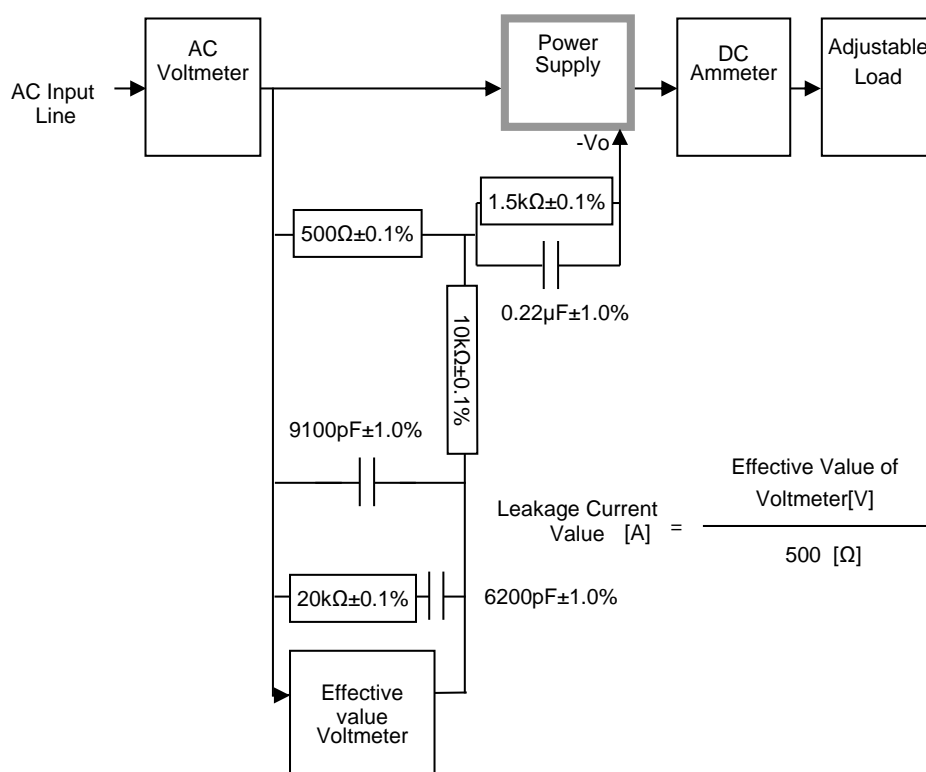


Figure C-3 ( IEC62368-1 refer to IEC60990 Fig.5 )