



# TEST DATA OF UMHA120F-15-Y

Regulated DC Power Supply  
December 22, 2025

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Design Manager

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Design Engineer

**COSEL CO.,LTD.**

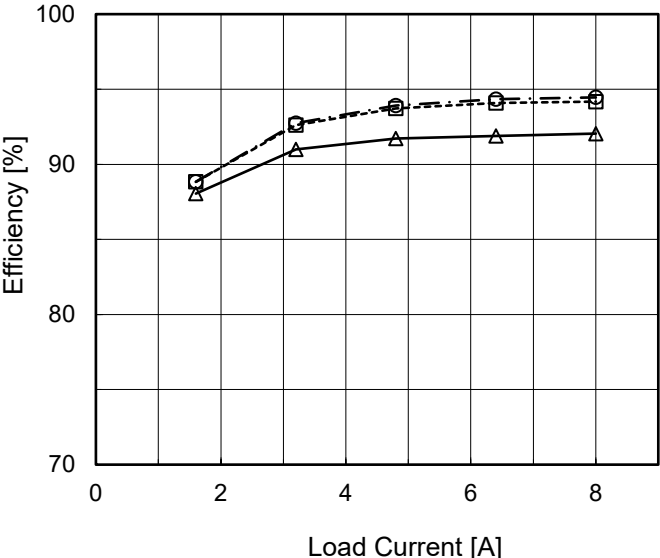
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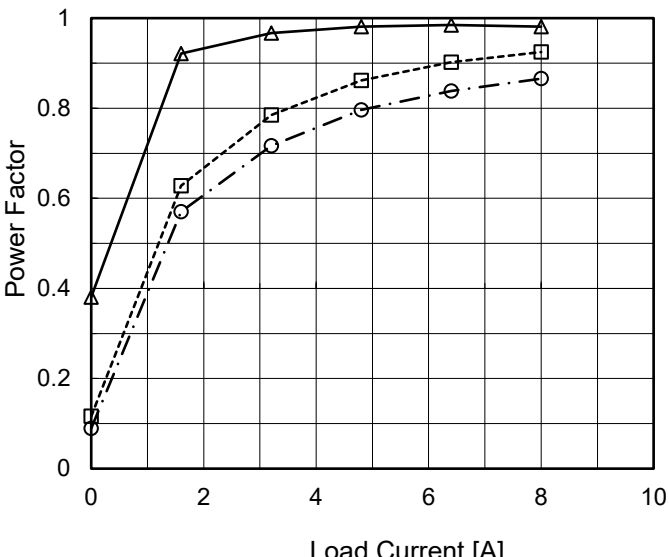
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Model		UMHA120F-15-Y		Temperature 25°C																																																				
Item		Efficiency (by Load Current)		Testing Circuitry Figure A																																																				
Object																																																								
1.Graph		<div><div><div>—△—</div><div>Input Volt.</div><div>115V</div></div><div><div>---□---</div><div>Input Volt.</div><div>230V</div></div><div><div>---○---</div><div>Input Volt.</div><div>264V</div></div></div>  <p>Efficiency [%]</p> <p>Load Current [A]</p>		2.Values																																																				
		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Efficiency [%]</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>1.6</td><td>88.0</td><td>88.8</td><td>88.8</td></tr><tr><td>3.2</td><td>91.0</td><td>92.6</td><td>92.7</td></tr><tr><td>4.8</td><td>91.7</td><td>93.7</td><td>93.9</td></tr><tr><td>6.4</td><td>91.9</td><td>94.1</td><td>94.3</td></tr><tr><td>8.0</td><td>92.0</td><td>94.2</td><td>94.5</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]	Efficiency [%]			Input Volt. 115[V]	Input Volt. 230[V]	Input Volt. 264[V]	0.0	-	-	-	1.6	88.0	88.8	88.8	3.2	91.0	92.6	92.7	4.8	91.7	93.7	93.9	6.4	91.9	94.1	94.3	8.0	92.0	94.2	94.5	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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Model		UMHA120F-15-Y		Temperature 25°C																																																				
Item		Power Factor (by Load Current)		Testing Circuitry Figure A																																																				
Object		_____																																																						
1.Graph		<div><div>—△—</div>Input Volt. 115V</div> <div><div>- - □ - -</div>Input Volt. 230V</div> <div><div>- · ○ - ·</div>Input Volt. 264V</div> 		2.Values																																																				
		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Power Factor</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>0.381</td><td>0.116</td><td>0.089</td></tr><tr><td>1.6</td><td>0.922</td><td>0.628</td><td>0.570</td></tr><tr><td>3.2</td><td>0.967</td><td>0.785</td><td>0.717</td></tr><tr><td>4.8</td><td>0.981</td><td>0.861</td><td>0.796</td></tr><tr><td>6.4</td><td>0.985</td><td>0.902</td><td>0.838</td></tr><tr><td>8.0</td><td>0.981</td><td>0.925</td><td>0.866</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]	Power Factor			Input Volt. 115[V]	Input Volt. 230[V]	Input Volt. 264[V]	0.0	0.381	0.116	0.089	1.6	0.922	0.628	0.570	3.2	0.967	0.785	0.717	4.8	0.981	0.861	0.796	6.4	0.985	0.902	0.838	8.0	0.981	0.925	0.866	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
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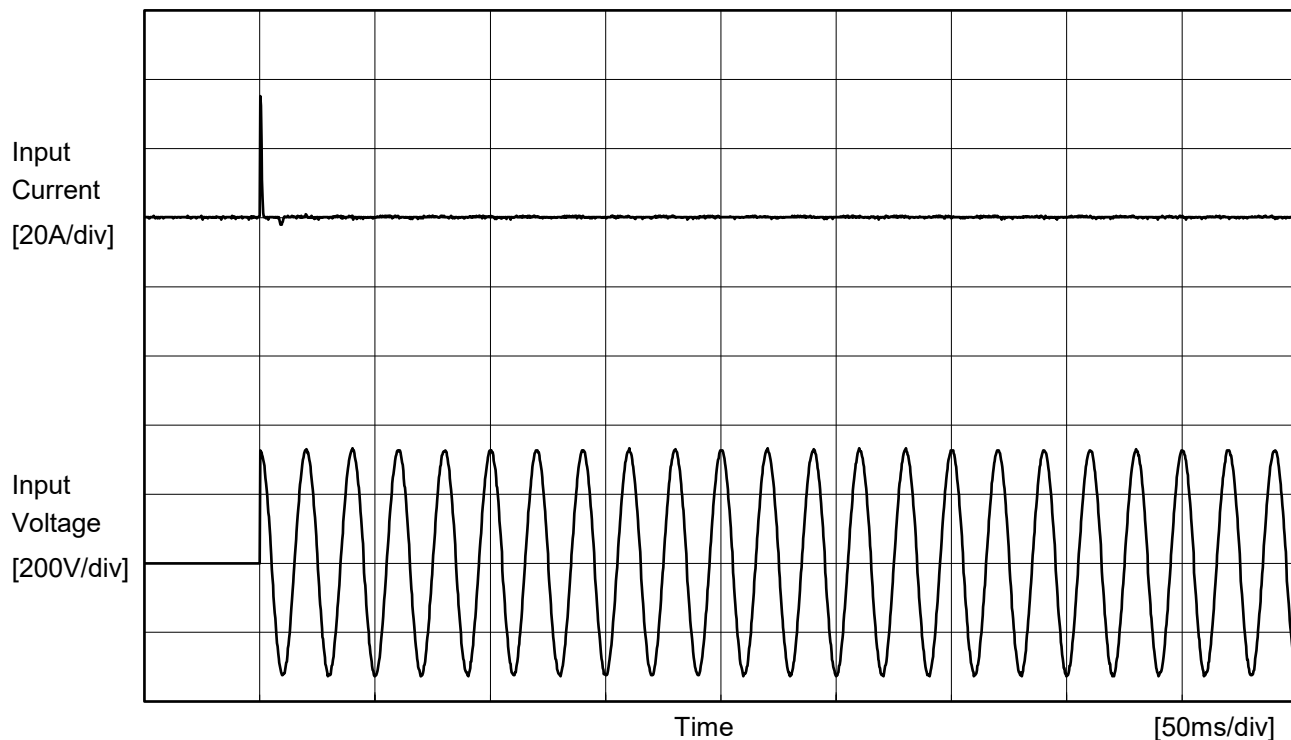
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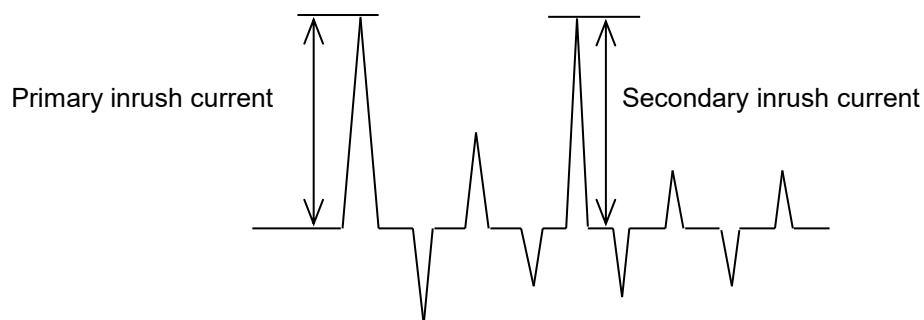


Model		UMHA120F-15-Y	
Item		Inrush Current	Temperature 25°C Testing Circuitry Figure A
Object			



Input Voltage 230 V  
 Frequency 50 Hz  
 Load 100 %

Primary inrush current 35.2 A  
 Secondary inrush current 0.6 A





COSEL		Temperature 25°C Testing Circuitry Figure C
Model	UMHA120F-15-Y	
Item	Leakage Current	
Object	_____	

## 1.Results

[uA]

Standards	Testing Circuitry	Measuring Method	Input Volt.			Note
			115 [V]	230 [V]	264 [V]	
IEC60601-1	Figure C-1	Both phases	8.37	19.40	21.34	Operation
		One of phases	15.56	34.10	39.80	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		UMHA120F-15-Y																																	
Item		Line Regulation																																	
Object		+15V8A																																	
1.Graph		2.Values																																	
<div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div></div><div></div></div><div><div></div><div></div></div></div><div>Load 50%</div><div>Load 100%</div></div> <table><thead><tr><th rowspan="2">Input Voltage [V]</th><th colspan="2">Output Voltage [V]</th></tr><tr><th>Load 50%</th><th>Load 100%</th></tr></thead><tbody><tr><td>85</td><td>15.143</td><td>-</td></tr><tr><td>100</td><td>15.143</td><td>-</td></tr><tr><td>115</td><td>15.143</td><td>15.136</td></tr><tr><td>132</td><td>15.143</td><td>15.134</td></tr><tr><td>170</td><td>15.143</td><td>15.136</td></tr><tr><td>200</td><td>15.143</td><td>15.135</td></tr><tr><td>230</td><td>15.143</td><td>15.136</td></tr><tr><td>264</td><td>15.143</td><td>15.135</td></tr><tr><td>--</td><td>-</td><td>-</td></tr></tbody></table>		Input Voltage [V]	Output Voltage [V]		Load 50%	Load 100%	85	15.143	-	100	15.143	-	115	15.143	15.136	132	15.143	15.134	170	15.143	15.136	200	15.143	15.135	230	15.143	15.136	264	15.143	15.135	--	-	-		
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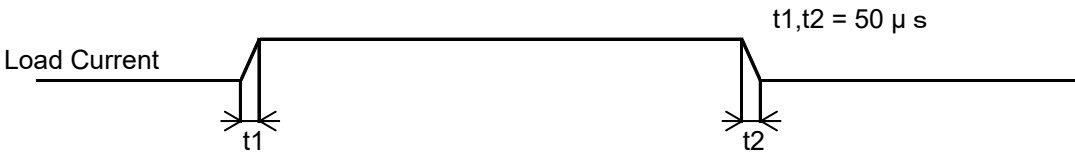
**COSEL**

Model	UMHA120F-15-Y																																																									
Item	Load Regulation	Temperature	25°C																																																							
Object	+15V8A	Testing Circuitry	Figure A																																																							
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<div><div><div>—△—</div><div>Input Volt.</div><div>115V</div></div><div><div>---□---</div><div>Input Volt.</div><div>230V</div></div><div><div>---○---</div><div>Input Volt.</div><div>264V</div></div></div> <p>Output Voltage [V]</p> <p>Load Current [A]</p>		<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Output Voltage [V]</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>15.154</td><td>15.154</td><td>15.154</td></tr><tr><td>1.6</td><td>15.150</td><td>15.150</td><td>15.150</td></tr><tr><td>3.2</td><td>15.146</td><td>15.146</td><td>15.146</td></tr><tr><td>4.8</td><td>15.142</td><td>15.143</td><td>15.143</td></tr><tr><td>6.4</td><td>15.138</td><td>15.139</td><td>15.139</td></tr><tr><td>8.0</td><td>15.134</td><td>15.135</td><td>15.136</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>		Load Current [A]	Output Voltage [V]			Input Volt. 115[V]	Input Volt. 230[V]	Input Volt. 264[V]	0.0	15.154	15.154	15.154	1.6	15.150	15.150	15.150	3.2	15.146	15.146	15.146	4.8	15.142	15.143	15.143	6.4	15.138	15.139	15.139	8.0	15.134	15.135	15.136	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Load Current [A]	Output Voltage [V]																																																									
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Item	Ripple-Noise	Temperature	25°C																																																							
Object	+15V8A	Testing Circuitry	Figure B																																																							
1.Graph																																																										
<div><div>Input Voltage</div><div>230V</div></div> <div><div>Load</div><div>100%</div></div> <p>20[mV/div]</p> <p>20[ms/div]</p>																																																										



Model	UMHA120F-15-Y		
Item	Dynamic Load Response	Temperature	25°C
Object	+15V8A	Testing Circuitry	Figure A

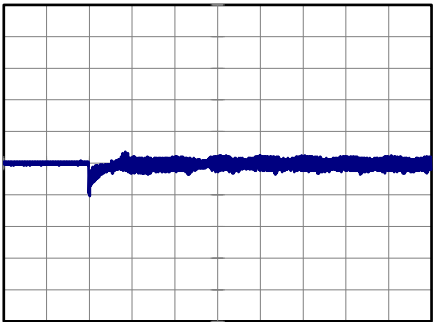
Input Volt. 230 V  
Cycle 1000 ms



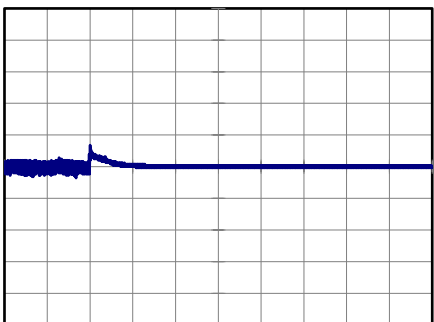
Min.Load (0A) ←→  
Load 100% (8A)

200 mV/div

10 ms/div



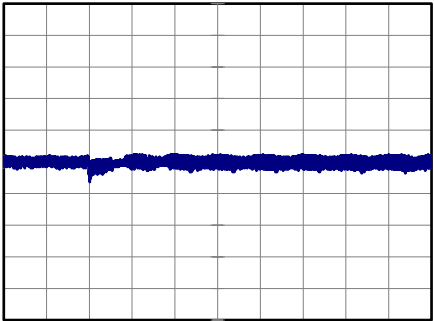
10 ms/div



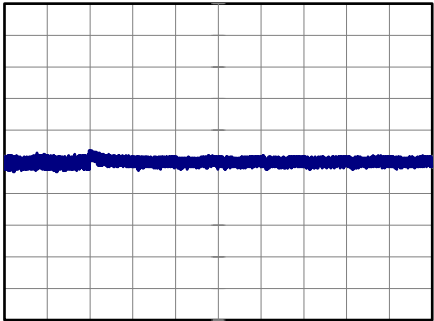
Load 50% (4A) ←→  
Load 100% (8A)

200 mV/div

10 ms/div



10 ms/div

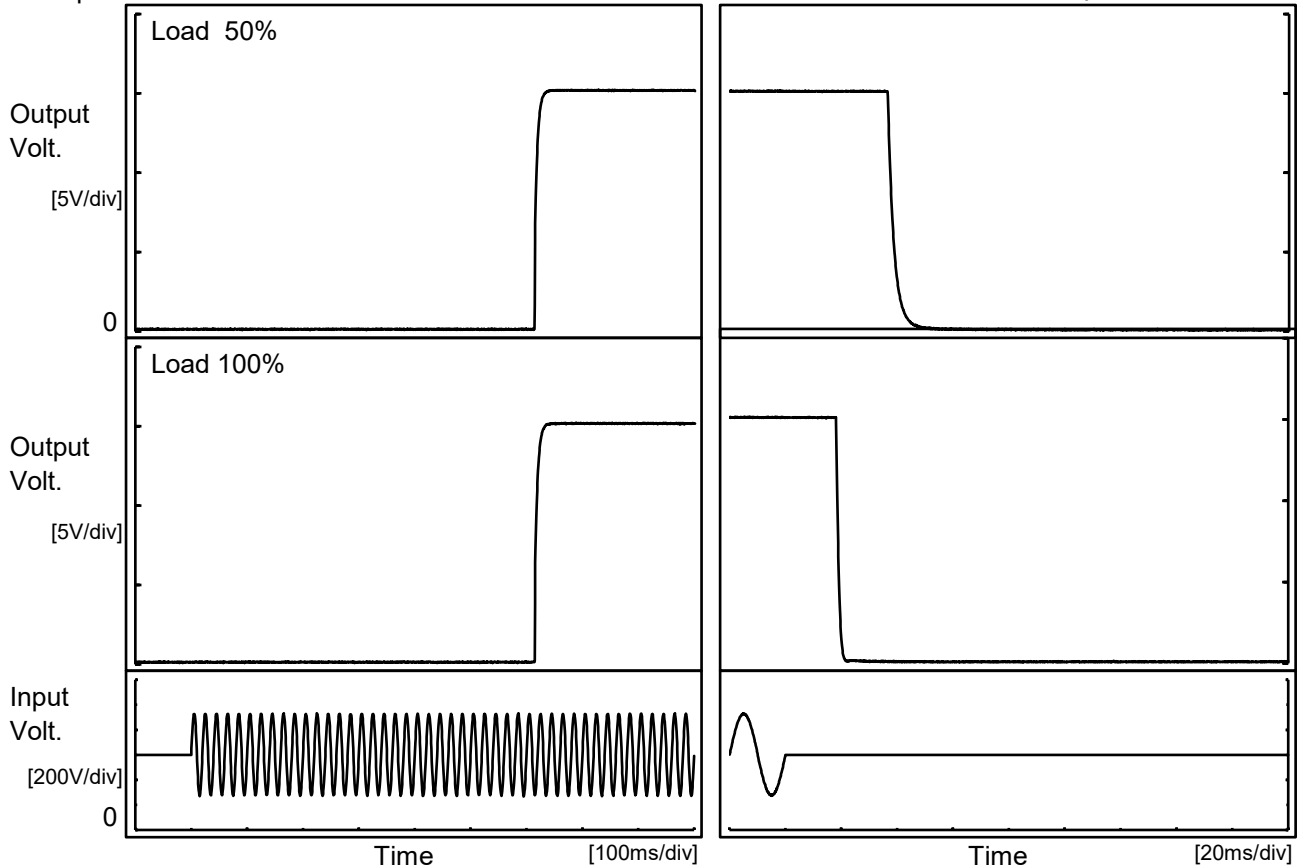


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Model	UMHA120F-15-Y	Temperature	25°C
Item	Rise and Fall Time	Testing Circuitry	Figure A
Object	+15V8A		

## 1.Graph

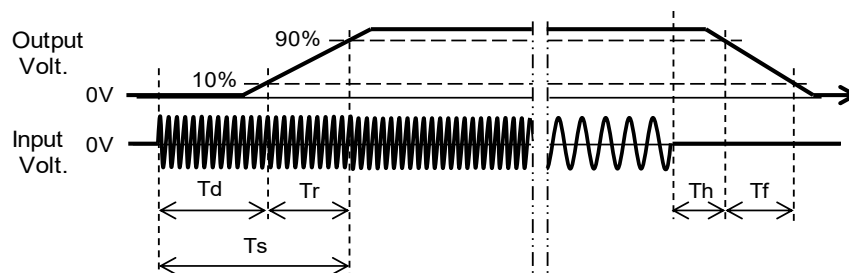
Input Volt. 230 V



## 2.Values

[ms]

Load \ Time	Td	Tr	Ts	Th	Tf
50 %	613.5	9.0	622.5	36.8	4.8
100 %	614.0	8.5	622.5	18.3	1.7



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Model		UMHA120F-15-Y	
Item		Hold-Up Time	
Object		+15V8A	
1.Graph		2.Values	

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		Testing Circuitry    Figure A	
Model	UMHA120F-15-Y		
Item	Ambient Temperature Drift		
Object	+15V8A		
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	15.105	15.106	15.108
25	15.136	15.137	15.138
45	15.144	15.143	15.146
Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry    Figure A	
Object	+15V8A		
1.Values			
Ambient Temperature[°C]	Input Voltage [V]		
	Load 50%	Load 100%	
-20	51	59	
25	50	60	
45	50	58	
Item	Overvoltage Protection	Testing Circuitry    Figure A	
Object	+15V8A		
1.Values <span style="float:right">Load 0%</span>			
Ambient Temperature[°C]	Operating Point [V]		
	Input Volt. 115V	Input Volt. 264V	
-20	18.66	18.59	
25	19.26	19.20	
45	19.47	19.47	

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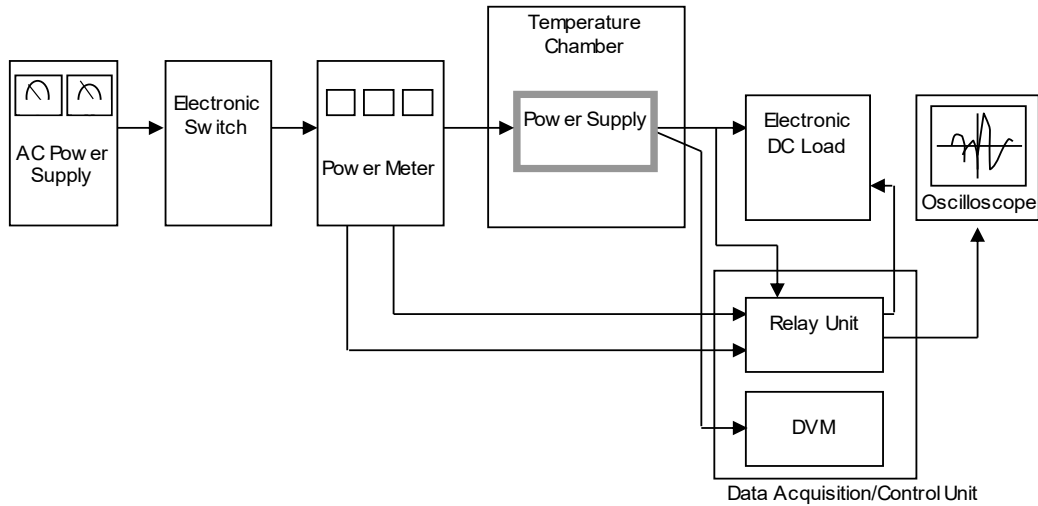


Figure A

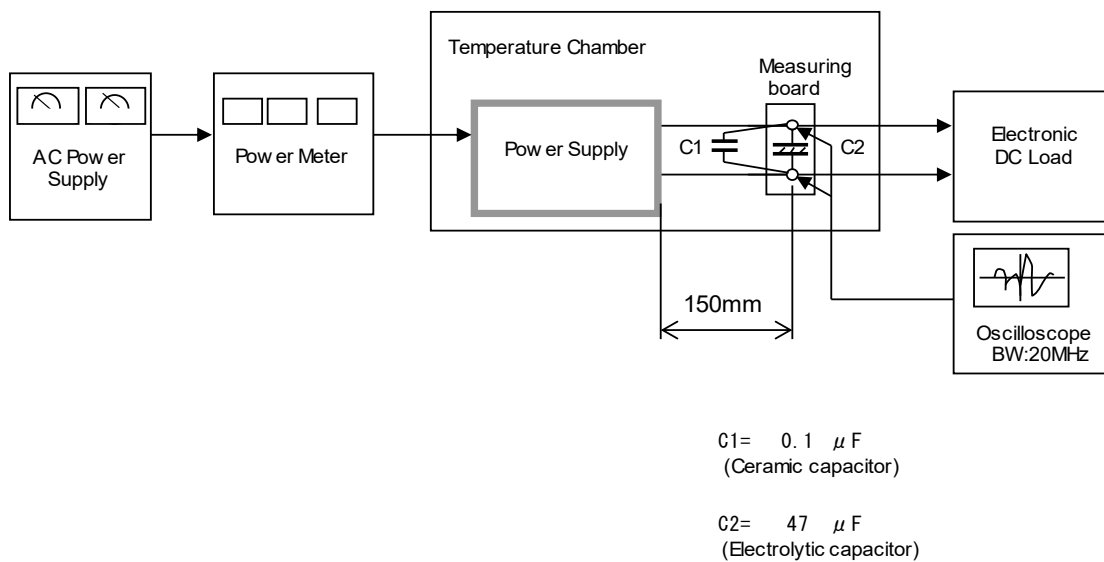


Figure B

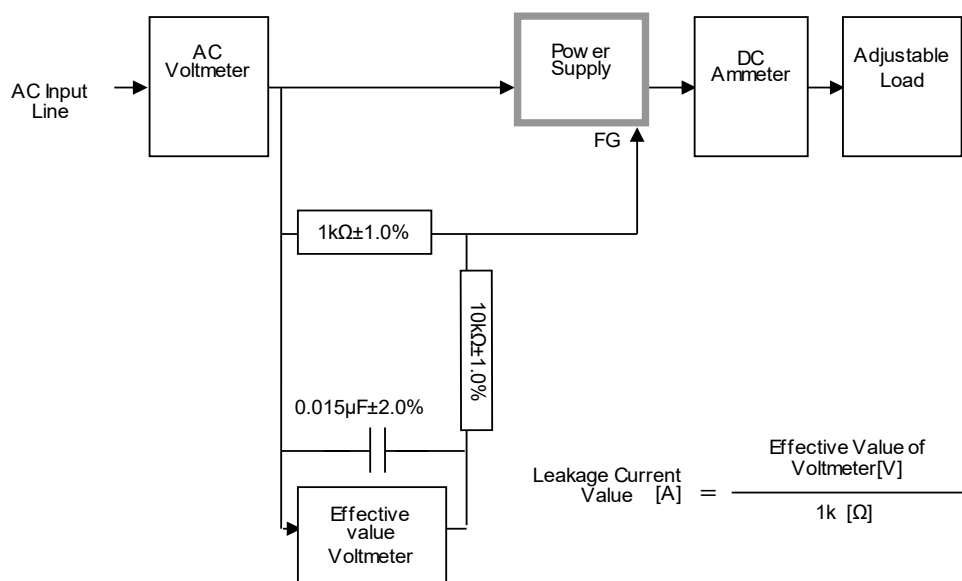


Figure C-1 (IEC60601-1)