

TEST DATA OF PDA15F-12

Regulated DC Power Supply
November 22, 2023

Approved by : Tetsukazu Okamoto
Design Manager

Prepared by : Takaaki Sekiguchi
Design Engineer

COSEL CO.,LTD.

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(Final Page 15)

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Model		PDA15F-12		Temperature 25°C																																																				
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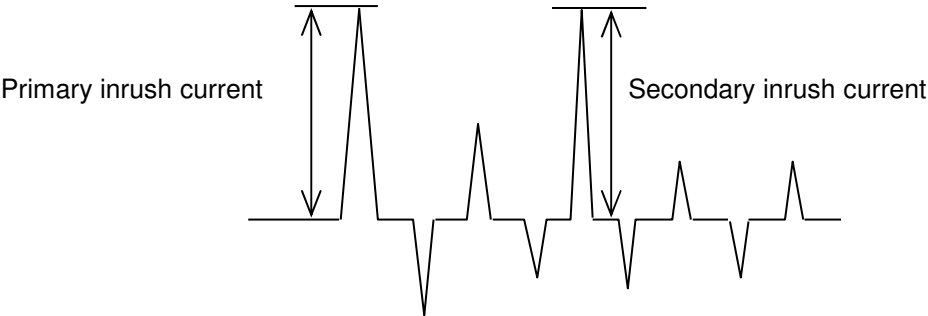
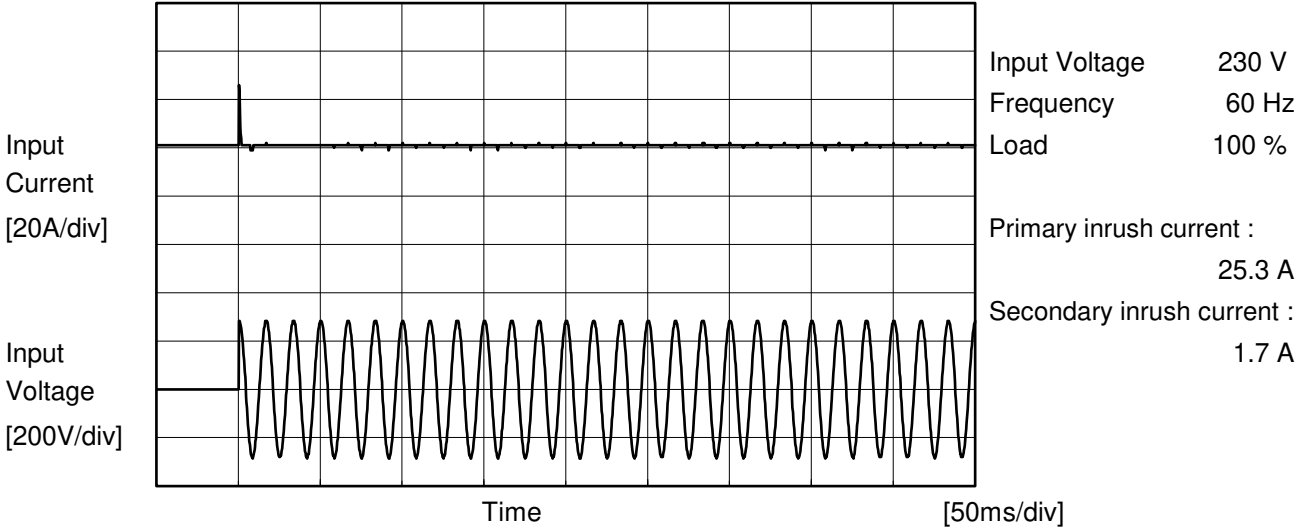
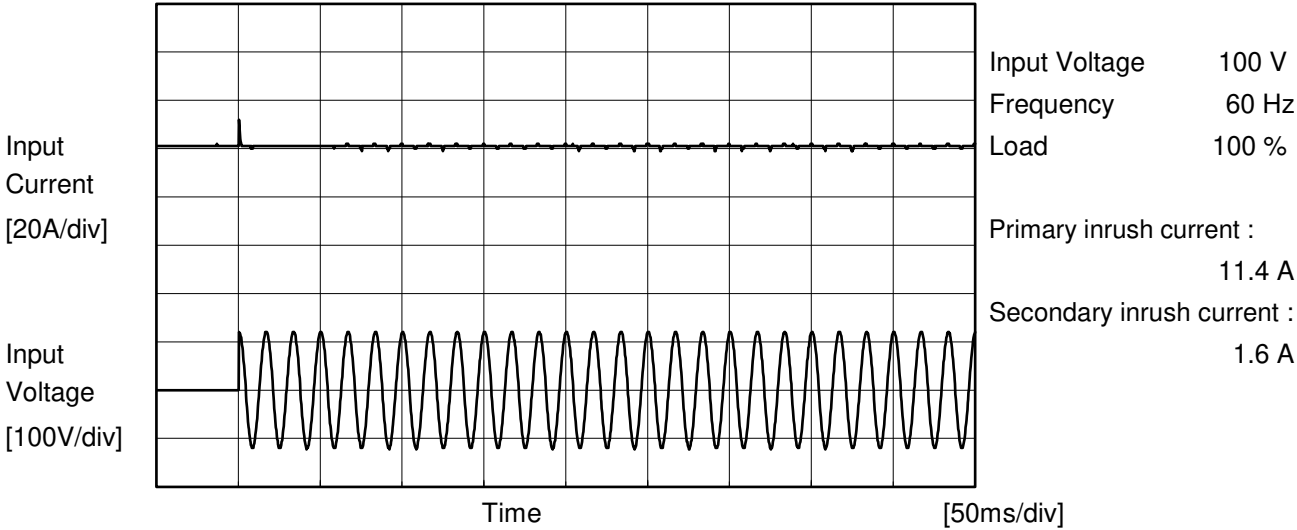
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Model		PDA15F-12	Temperature 25°C Testing Circuitry Figure A
Item		Inrush Current	
Object		_____	





Model		PDA15F-12	Temperature 25°C Testing Circuitry Figure C
Item		Leakage Current	
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	0.06	0.14	0.15	Operation
		One of phases	0.08	0.21	0.22	Stand by
IEC62368-1	Figure C-2	Both phases	0.06	0.14	0.15	Operation
		One of phases	0.08	0.21	0.22	Stand by
	Figure C-3	Both phases	0.06	0.14	0.15	Operation
		One of phases	0.08	0.21	0.22	Stand by

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

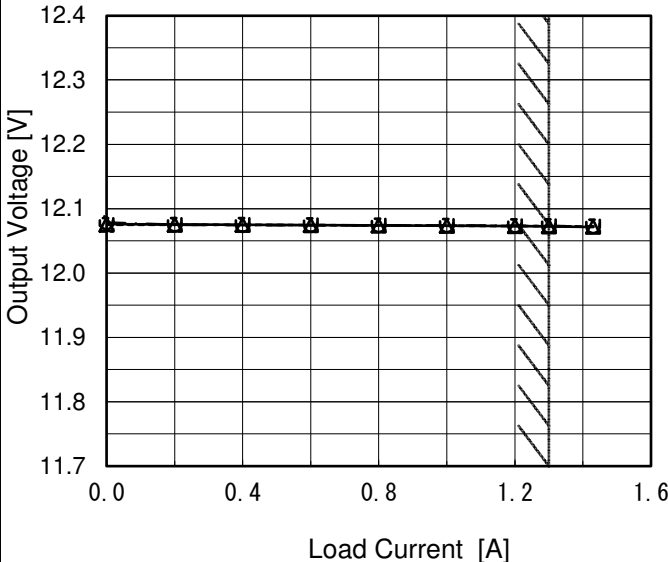
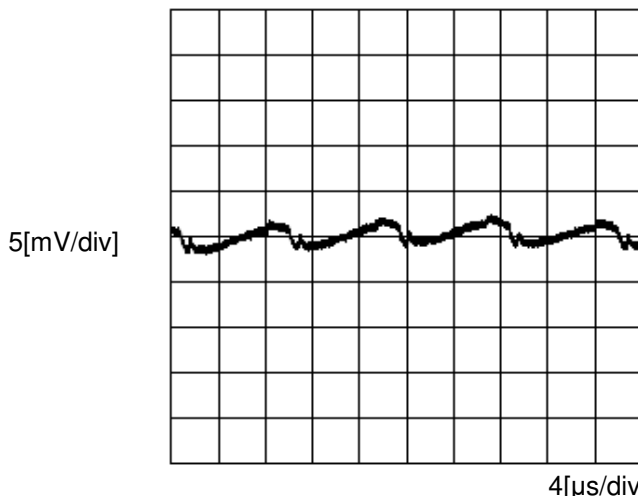
2.Condition

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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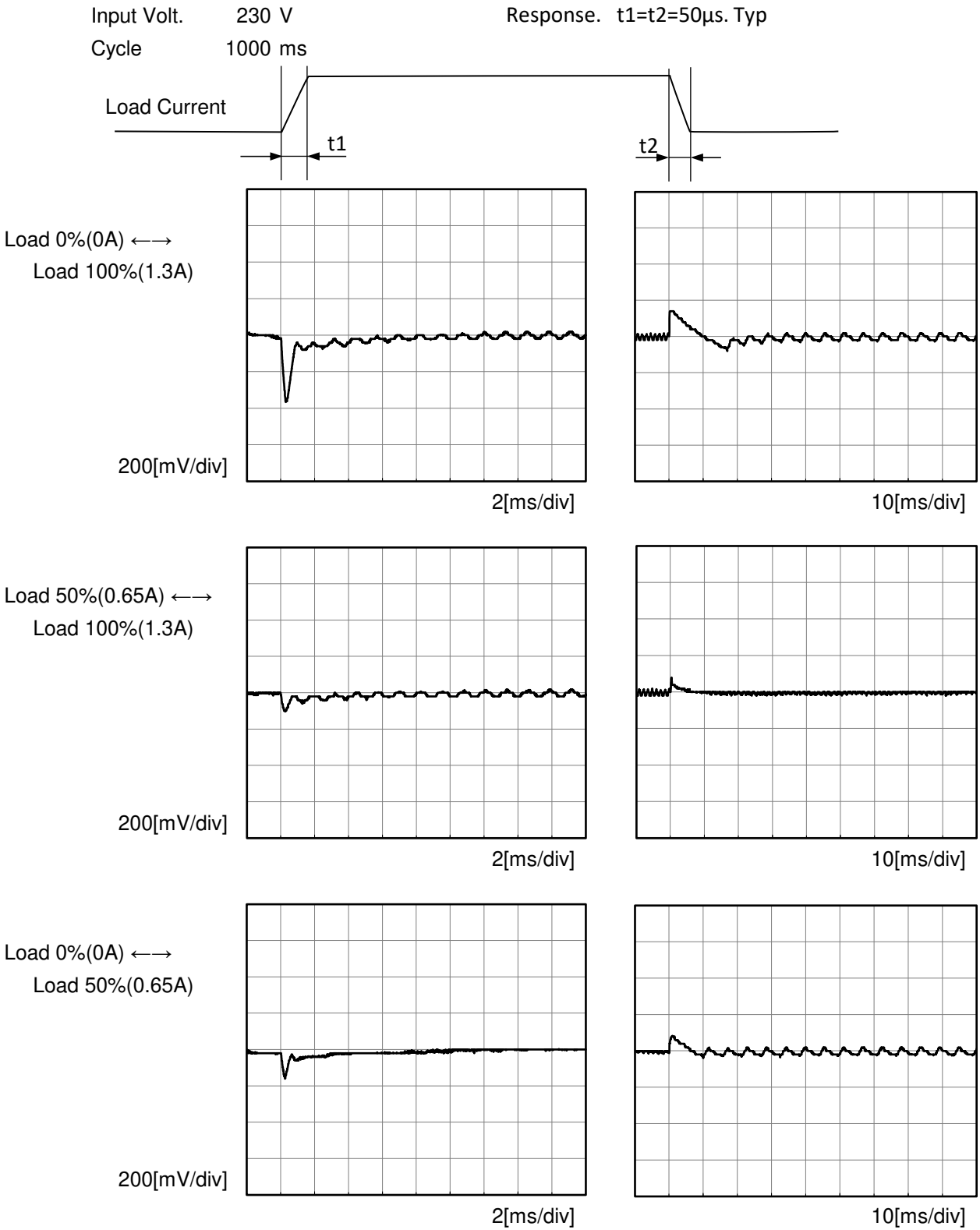
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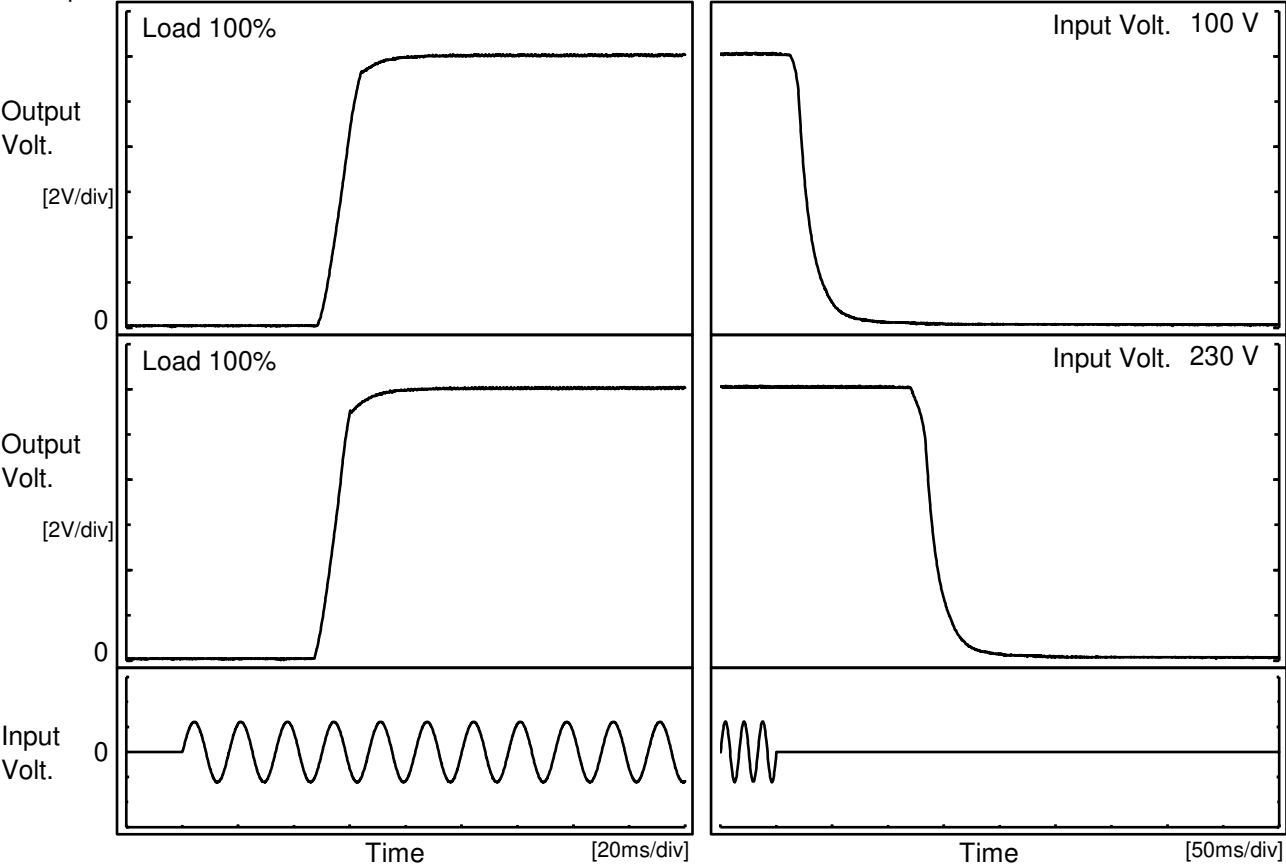
Model	PDA15F-12		
Item	Dynamic Load Response	Temperature	25°C
Object	+12V1.3A	Testing Circuitry	Figure A





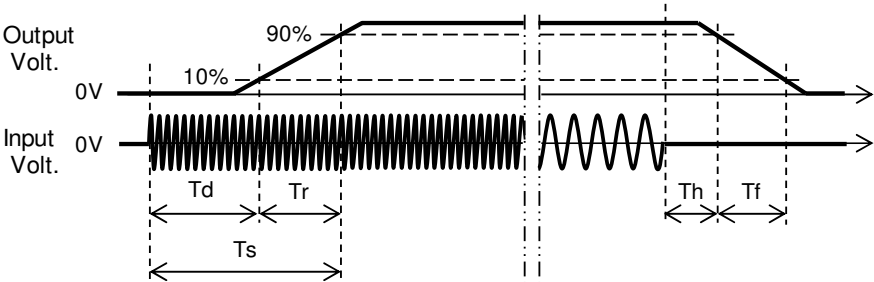
Model		PDA15F-12	Temperature 25°C Testing Circuitry Figure A
Item		Rise and Fall Time	
Object		+12V1.3A	

1.Graph



2.Values

		[ms]				
Input Volt.	Time	Td	Tr	Ts	Th	Tf
100 V		51.1	12.1	63.2	22.0	29.0
230 V		49.5	10.4	59.9	167.0	32.3



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Model	PDA15F-12		
Item	Hold-Up Time	Temperature	25°C
		Testing Circuitry	Figure A
Object	+12V1.3A		
1.Graph		2.Values	
<div><div><div>Hold-Up Time [ms]</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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><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><div></div><div></div><div></div><div></div><d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COSEL

Model		PDA15F-12		Temperature 25°C																																																				
Item		Instantaneous Interruption Compensation		Testing Circuitry Figure A																																																				
Object		+12V1.3A																																																						
1.Graph				2.Values																																																				
<div><div><div>—△—</div><div>Input Volt.</div><div>100V</div></div><div><div>- - □ - -</div><div>Input Volt.</div><div>200V</div></div><div><div>- · ○ - ·</div><div>Input Volt.</div><div>230V</div></div></div> <p>Instantaneous Compensation Time [ms]</p> <p>Load Current [A]</p> <p>Note: Slanted line shows the range of the rated load current.</p>				<table><tr><th rowspan="2">Load Current [A]</th><th colspan="3">Time [ms]</th></tr><tr><th>Input Volt. 100[V]</th><th>Input Volt. 200[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>0.00</td><td>-</td><td>-</td><td>-</td></tr><tr><td>0.20</td><td>188</td><td>804</td><td>1084</td></tr><tr><td>0.40</td><td>95</td><td>427</td><td>564</td></tr><tr><td>0.60</td><td>63</td><td>287</td><td>387</td></tr><tr><td>0.80</td><td>46</td><td>215</td><td>289</td></tr><tr><td>1.00</td><td>35</td><td>168</td><td>228</td></tr><tr><td>1.20</td><td>26</td><td>132</td><td>185</td></tr><tr><td>1.30</td><td>22</td><td>119</td><td>167</td></tr><tr><td>1.43</td><td>17</td><td>100</td><td>145</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. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]	0.00	-	-	-	0.20	188	804	1084	0.40	95	427	564	0.60	63	287	387	0.80	46	215	289	1.00	35	168	228	1.20	26	132	185	1.30	22	119	167	1.43	17	100	145	--	-	-	-	--	-	-	-
Load Current [A]	Time [ms]																																																							
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]																																																					
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COSEL

Model	PDA15F-12																																											
Item	Overcurrent Protection	Temperature	25°C																																									
Object	+12V1.3A	Testing Circuitry	Figure A																																									
1.Graph		2.Values																																										
<div><div><div></div>Input Volt. 100V</div><div><div></div>Input Volt. 230V</div></div> <p>Note: Slanted line shows the range of the rated load current.</p> <p>Overcurrent protection is Hiccup mode.</p>		<table><tr><th rowspan="2">Output Voltage [V]</th><th colspan="2">Load Current [A]</th></tr><tr><th>Input Volt. 100[V]</th><th>Input Volt. 230[V]</th></tr><tr><td>12.0</td><td>1.71</td><td>1.85</td></tr><tr><td>11.4</td><td>-</td><td>-</td></tr><tr><td>10.8</td><td>-</td><td>-</td></tr><tr><td>9.6</td><td>-</td><td>-</td></tr><tr><td>8.4</td><td>-</td><td>-</td></tr><tr><td>7.2</td><td>-</td><td>-</td></tr><tr><td>6.0</td><td>-</td><td>-</td></tr><tr><td>4.8</td><td>-</td><td>-</td></tr><tr><td>3.6</td><td>-</td><td>-</td></tr><tr><td>2.4</td><td>-</td><td>-</td></tr><tr><td>1.2</td><td>-</td><td>-</td></tr><tr><td>0.0</td><td>-</td><td>-</td></tr></table>		Output Voltage [V]	Load Current [A]		Input Volt. 100[V]	Input Volt. 230[V]	12.0	1.71	1.85	11.4	-	-	10.8	-	-	9.6	-	-	8.4	-	-	7.2	-	-	6.0	-	-	4.8	-	-	3.6	-	-	2.4	-	-	1.2	-	-	0.0	-	-
Output Voltage [V]	Load Current [A]																																											
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3.6	-	-																																										
2.4	-	-																																										
1.2	-	-																																										
0.0	-	-																																										

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COSEL

		Testing Circuitry Figure A
Model	PDA15F-12	
Item	Ambient Temperature Drift	
Object	+12V1.3A	
1.Values Load 100%		
Ambient Temperature [°C]		Output Voltage [V]
		Input Volt. 100V Input Volt. 200V Input Volt. 230V
-10	12.021	12.022 12.022
25	12.072	12.073 12.073
55	12.090	12.091 12.091
Item Minimum Input Voltage for Regulated Output Voltage		Testing Circuitry Figure A
Object	+12V1.3A	
1.Values		
Ambient Temperature [°C]		Input Voltage [V]
		Load 50% Load 100%
-10	33	66
25	32	64
55	32	62
Item Overvoltage Protection		Testing Circuitry Figure A
Object	+12V1.3A	
1.Values Load 0%		
Ambient Temperature [°C]		Operating Point [V]
		Input Volt. 100V Input Volt. 230V
-20	15.83	15.83
25	16.34	16.34
55	16.63	16.63

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BC-11954

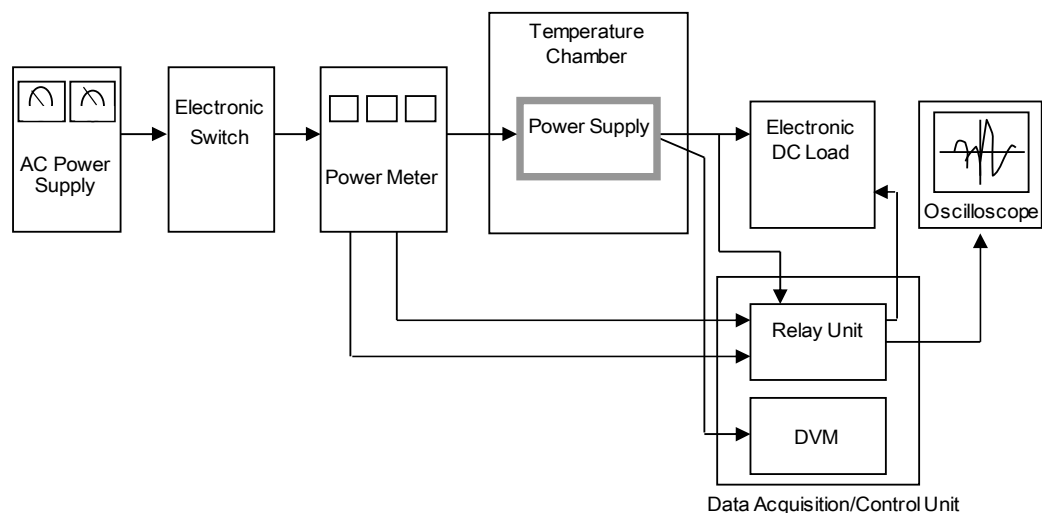


Figure A

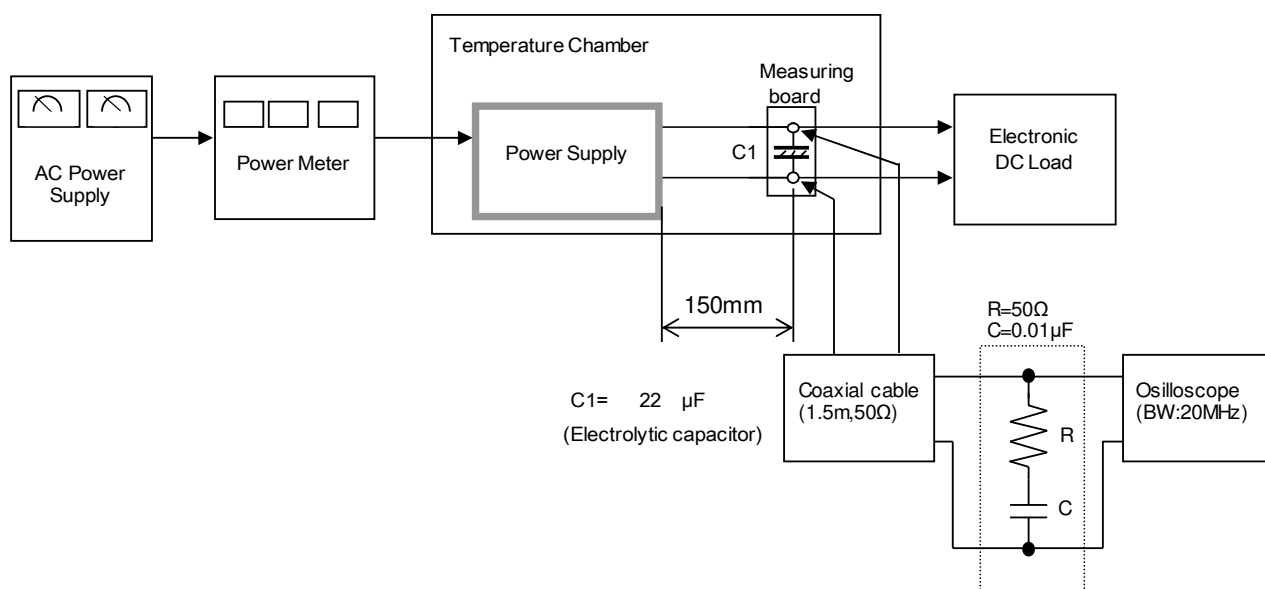


Figure B

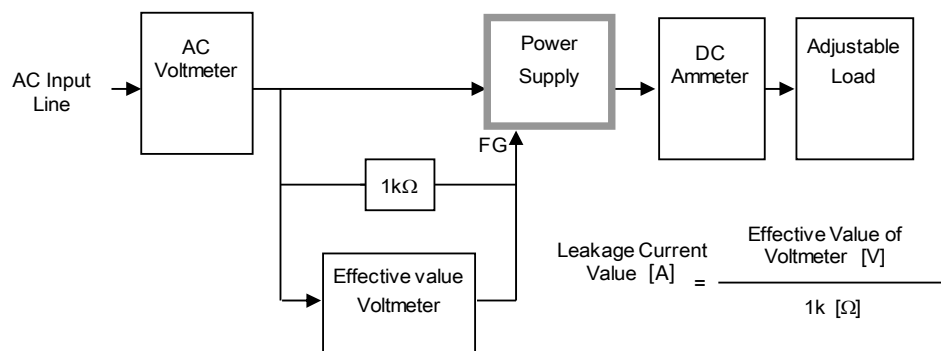


Figure C-1 (DEN-AN)

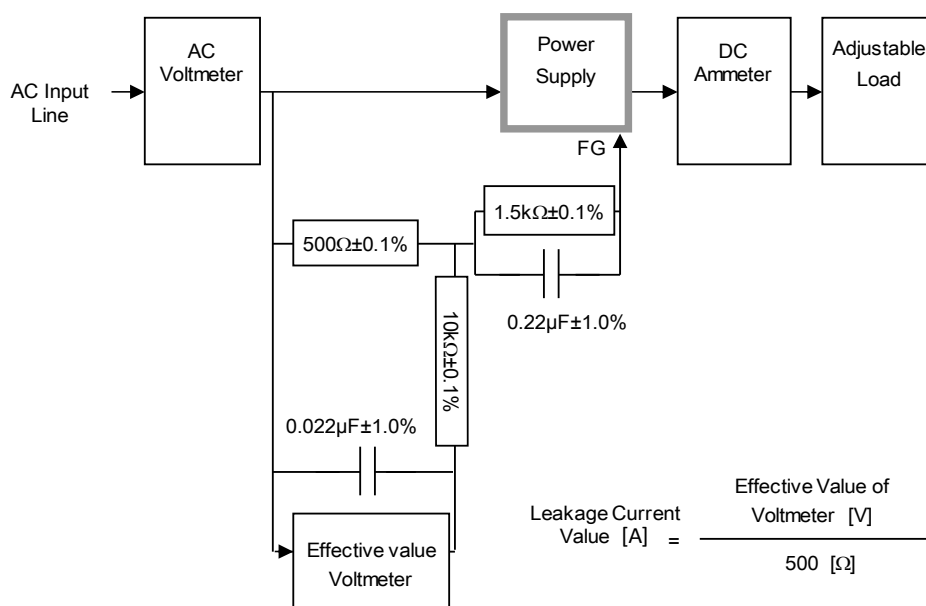


Figure C-2 (IEC62368-1 refer to IEC60990 Fig.4)

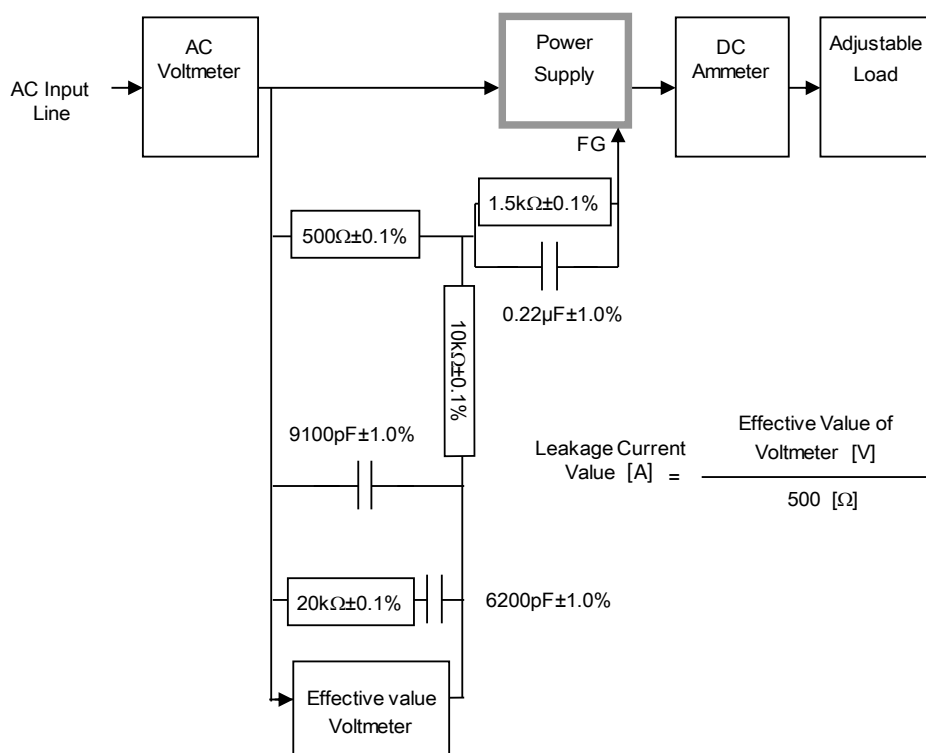


Figure C-3 (IEC62368-1 refer to IEC60990 Fig.5)