COSEL

参考資料

TEST DATA OF MODULE K

(ACE series)

Regulated DC power supply
Jun.14.2003

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COSEL CO.,LTD.

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CONTENTS

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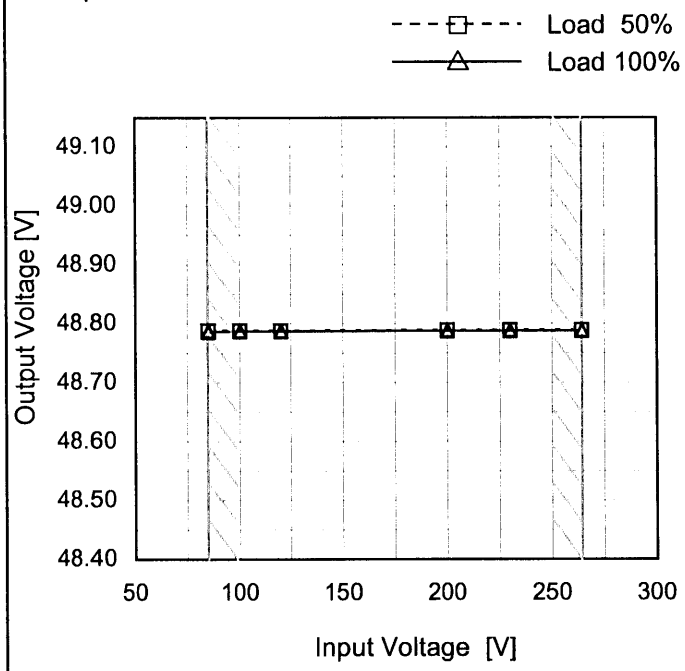
Model	MODULE K
Item	Line Regulation
Object	+48V3.2A

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	48.788	48.786
100	48.788	48.787
120	48.788	48.787
200	48.789	48.788
230	48.789	48.788
264	48.789	48.788
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--	-	-
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BC-0905

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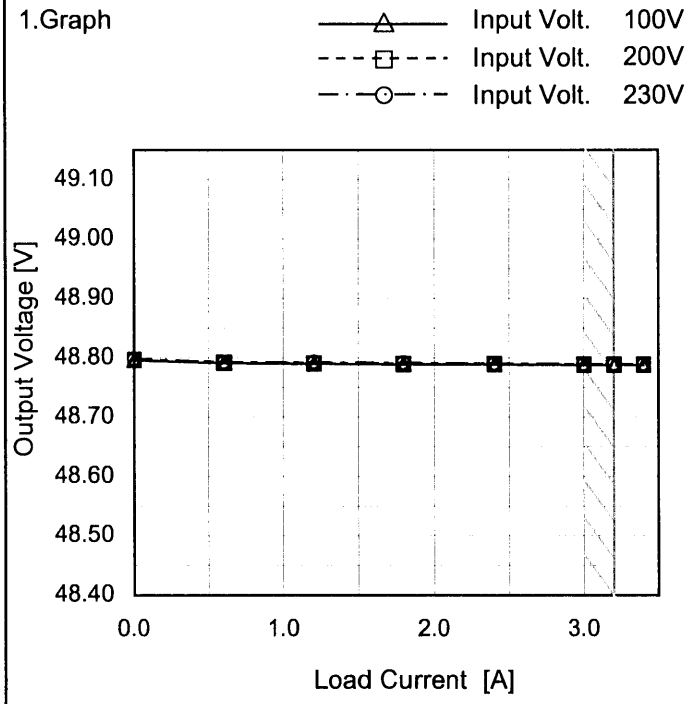
Model	MODULE K
Item	Load Regulation
Object	+48V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

Load Current [A]	Output Voltage [V]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0.0	48.796	48.797	48.797
0.6	48.791	48.792	48.792
1.2	48.790	48.791	48.792
1.8	48.789	48.790	48.791
2.4	48.789	48.790	48.790
3.0	48.788	48.789	48.789
3.2	48.788	48.789	48.789
3.4	48.788	48.789	48.789
--	-	-	-
--	-	-	-
--	-	-	-

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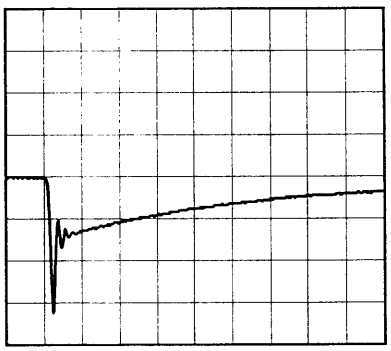
Model	MODULE K
Item	Dynamic Load Response
Object	+48V3.2A

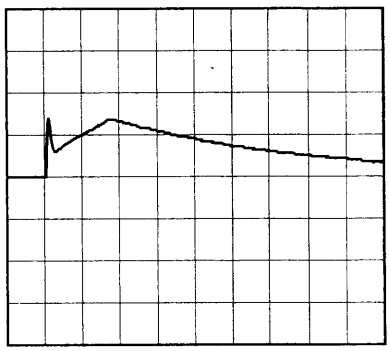
Temperature 25°C
Testing Circuitry Figure A

Input Volt. 100 V
Cycle 1000 mS

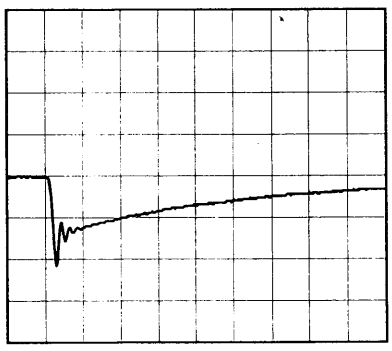
Load Current

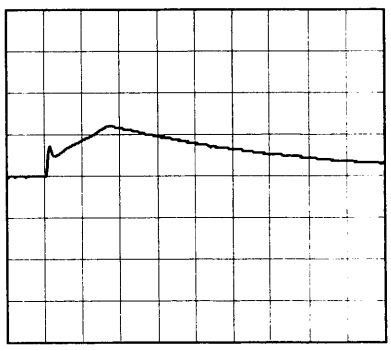
Min. Load (0A) ⟷
Load 100% (3.2A)





Min. Load (0A) ⟷
Load 50% (1.6A)





* The characteristic of AC200V is equal.

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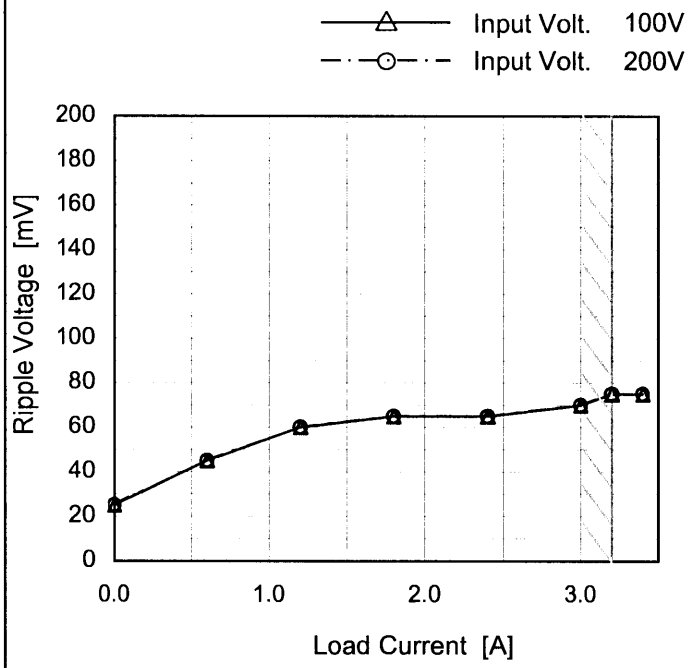
Model	MODULE K
Item	Ripple Voltage (by Load Current)
Object	+48V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Ripple Voltage is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 100 [V]	Input Volt. 200 [V]
0.0	25	25
0.6	45	45
1.2	60	60
1.8	65	65
2.4	65	65
3.0	70	70
3.2	75	75
3.4	75	75
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--	-	-
--	-	-

T1: Due to AC Input Line
T2: Due to Switching

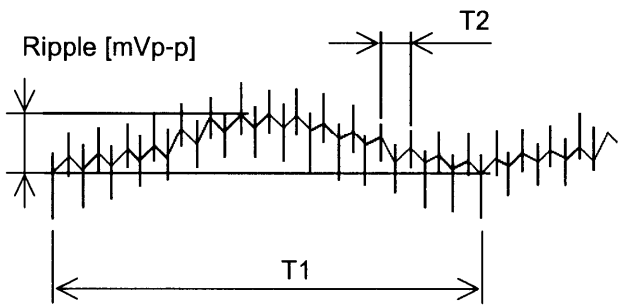

Fig. Complex Ripple Wave Form

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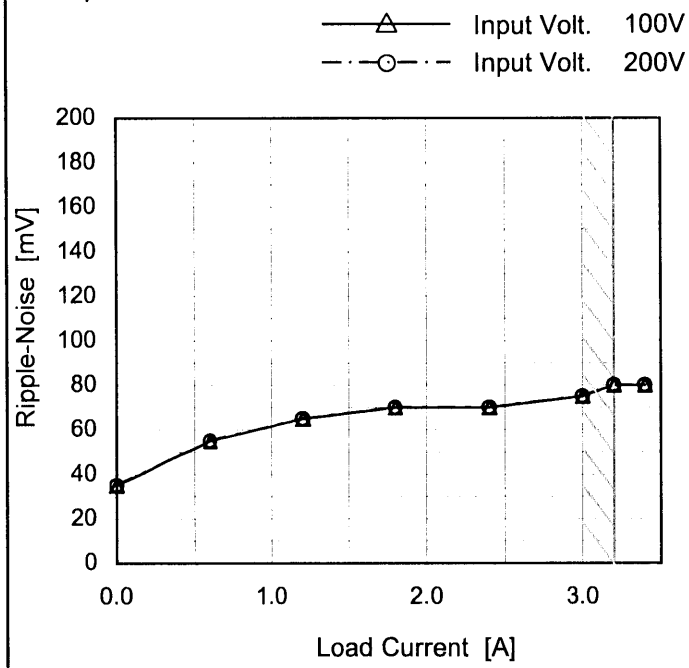
Model	MODULE K
Item	Ripple-Noise
Object	+48V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.
Ripple-Noise is shown as p-p in the figure below.
Note: Slanted line shows the range of the rated load current.

2.Values

Load Current [A]	Ripple-Noise [mV] Input Volt. 100 [V]	Ripple-Noise [mV] Input Volt. 200 [V]
0.0	35	35
0.6	55	55
1.2	65	65
1.8	70	70
2.4	70	70
3.0	75	75
3.2	80	80
3.4	80	80
--	-	-
--	-	-
--	-	-

T1: Due to AC Input Line
T2: Due to Switching

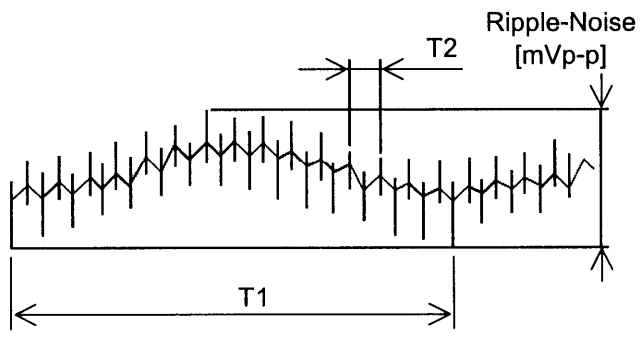


Fig. Complex Ripple Wave Form

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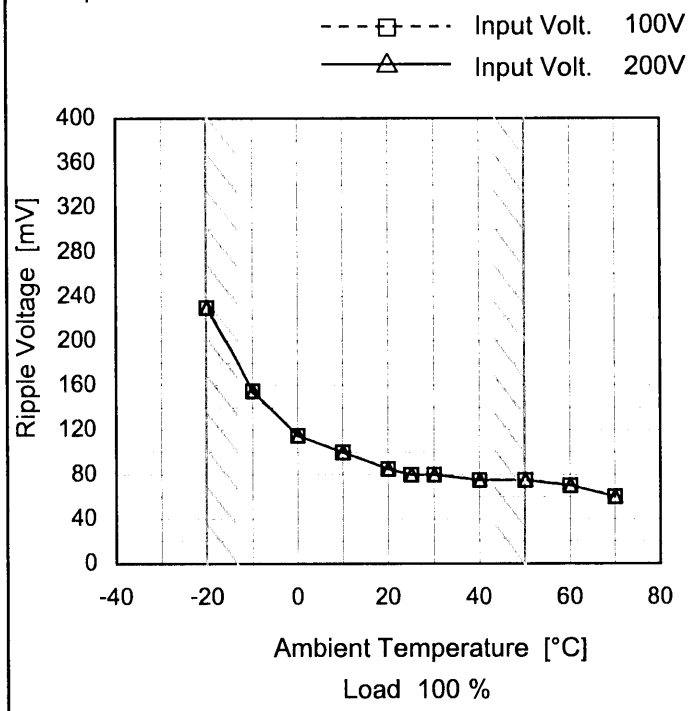
Model	MODULE K
Item	Ripple Voltage (by Ambient Temp.)
Object	+48V3.2A

Testing Circuitry Figure A

1.Graph



Measured by 20 MHz Oscilloscope.

Note: Slanted line shows the range of the rated ambient temperature.

2.Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Input Volt. 100 [V]	Input Volt. 200 [V]
-20	230	230
-10	155	155
0	115	115
10	100	100
20	85	85
25	80	80
30	80	80
40	75	75
50	75	75
60	70	70
70	60	60

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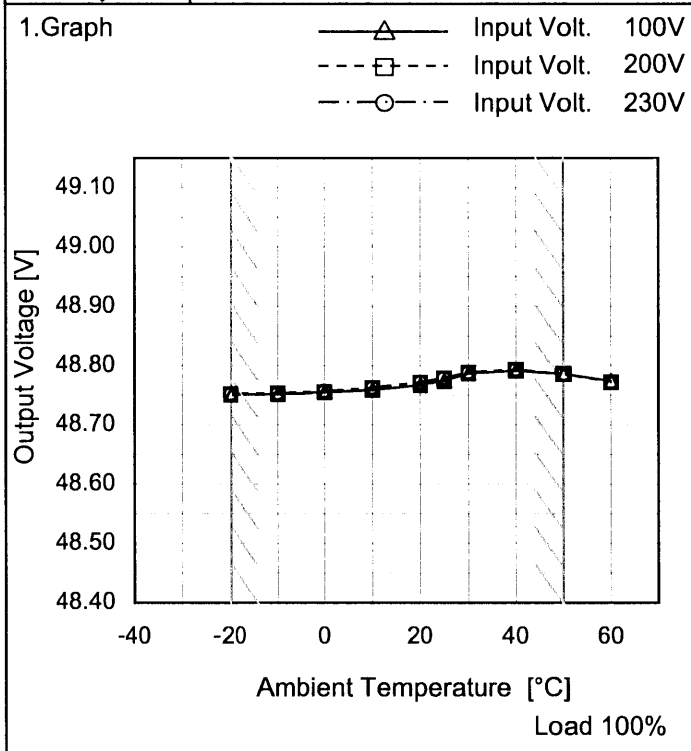
Model	MODULE K
Item	Ambient Temperature Drift
Object	+48V3.2A

Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated ambient temperature.

2.Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
-20	48.751	48.752	48.752
-10	48.752	48.753	48.753
0	48.755	48.755	48.756
10	48.759	48.762	48.762
20	48.767	48.771	48.771
25	48.774	48.778	48.778
30	48.787	48.788	48.788
40	48.791	48.793	48.793
50	48.786	48.785	48.785
60	48.774	48.772	48.772
--	-	-	-

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Model	MODULE K
Item	Output Voltage Accuracy
Object	+48V3.2A

Testing Circuitry Figure A

1.Output Voltage Accuracy

This is defined as the value of the output voltage, regulation load, ambient temperature and input voltage varied at random in the range as specified below.

Temperature : -20 - 50°C
Input Voltage : 85 - 264V
Load Current : 0 - 3.2A

* Output Voltage Accuracy = ±(Maximum of Output Voltage - Minimum of Output Voltage) / 2

* Output Voltage Accuracy (Ration) = $\frac{\text{Output Voltage Accuracy}}{\text{Rated Output Voltage}} \times 100$

2.Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	25	264	0	48.794	±20	±0.1
Minimum Voltage	-20	85	3.2	48.754		

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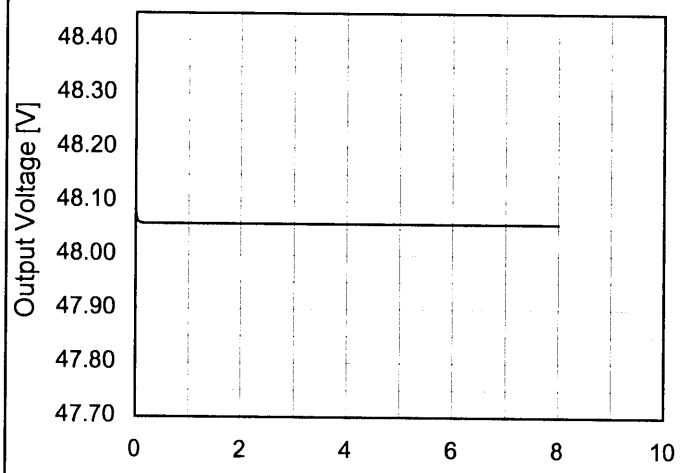
Model	MODULE K
Item	Time Lapse Drift
Object	+48V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 100V
Load 100%

* The characteristic of AC200V is equal.

2.Values

Time since start [H]	Output Voltage [V]
0.0	48.084
0.5	48.059
1.0	48.059
2.0	48.059
3.0	48.059
4.0	48.059
5.0	48.059
6.0	48.059
7.0	48.059
8.0	48.059

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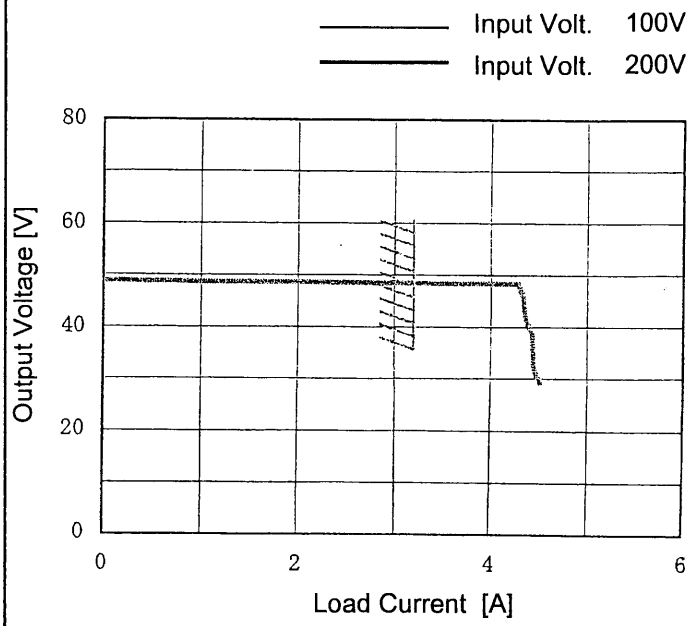
Model	MODULE K
Item	Overcurrent Protection
Object	+48V3.2A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

Intermittent operation occurs when the output voltage is from 28.8V to 0V.

2.Values

Output Voltage [V]	Load Current [A]	
	Input Volt. 100[V]	Input Volt. 200[V]
48.0	3.20	3.20
45.6	4.33	4.34
43.2	4.36	4.35
38.4	4.42	4.43
33.6	4.45	4.45
28.8	4.51	4.52
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-

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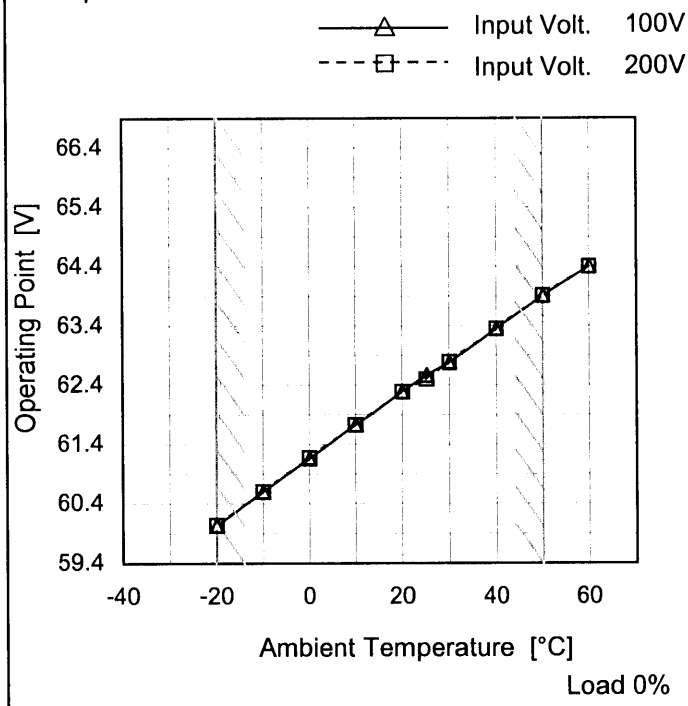
Model	MODULE K
Item	Overvoltage Protection
Object	+48V3.2A

Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated ambient temperature.

2.Values

Ambient Temperature [°C]	Operating Point [V]	
	Input Volt. 100[V]	Input Volt. 200[V]
-20	60.02	60.02
-10	60.58	60.58
0	61.14	61.15
10	61.71	61.71
20	62.27	62.27
25	62.55	62.48
30	62.76	62.77
40	63.33	63.33
50	63.89	63.89
60	64.38	64.38
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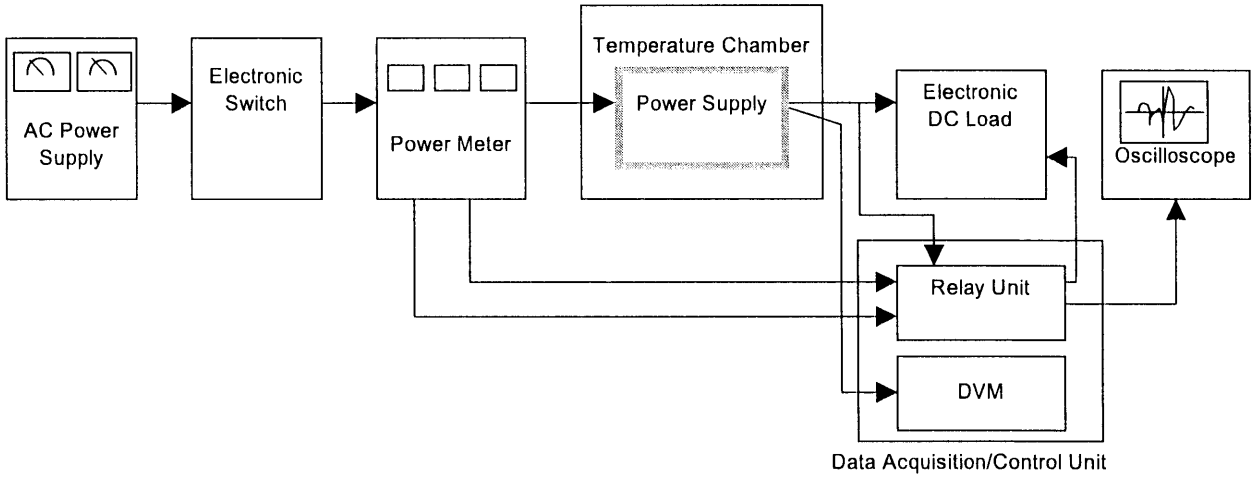

Figure A

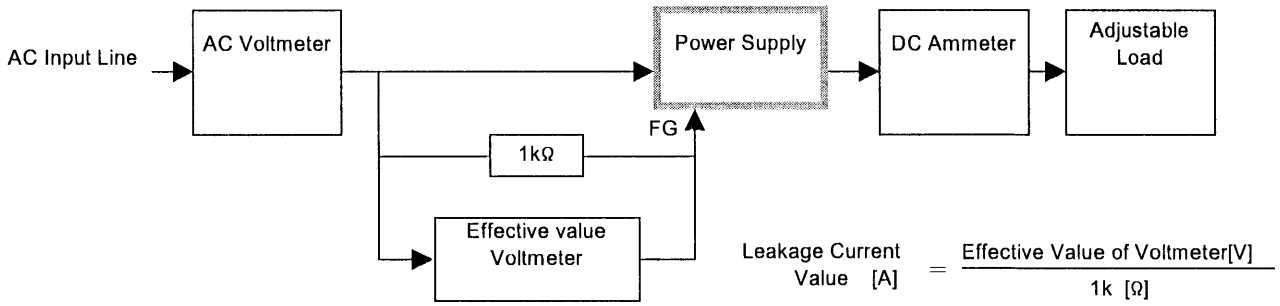

Figure B (DEN-AN)

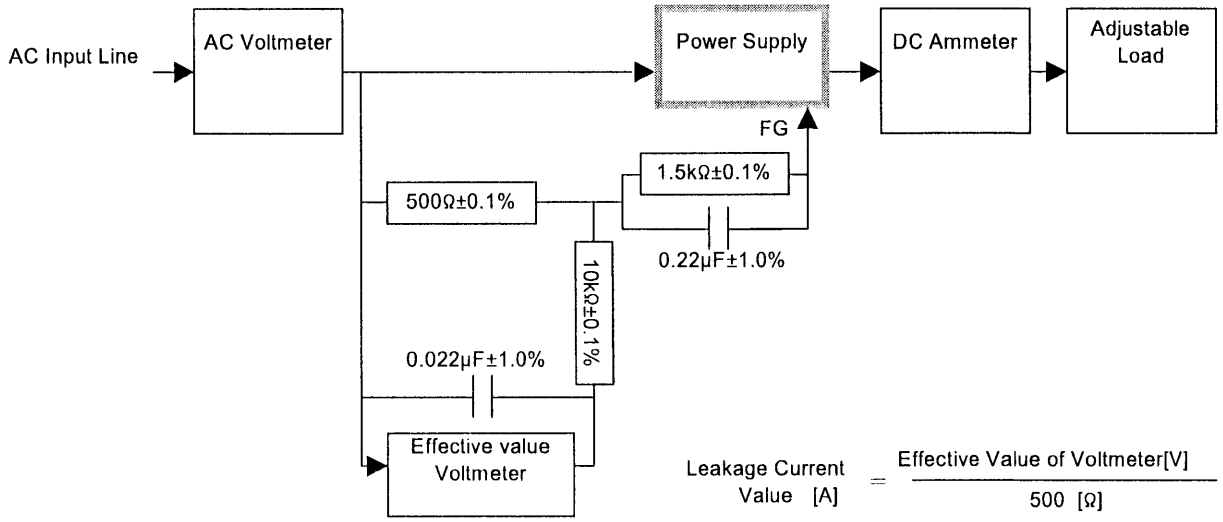

Figure B (IEC60950)