参考資料

COSEL

TEST DATA OF MODULE C

(ACE series)

Regulated DC power supply
Jun.7.2003

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COSEL CO.,LTD.

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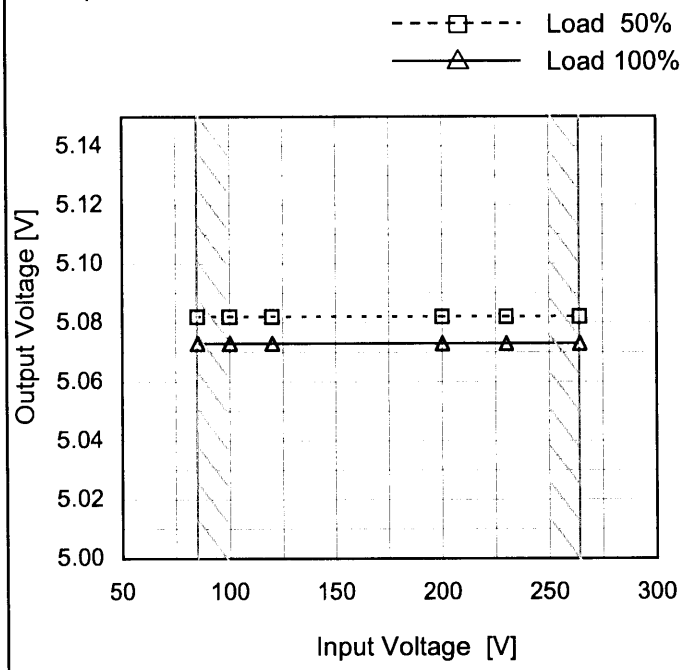
COSEL

Model	MODULE C
Item	Line Regulation
Object	+5V26A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Note: Slanted line shows the range of the rated input voltage.

2.Values

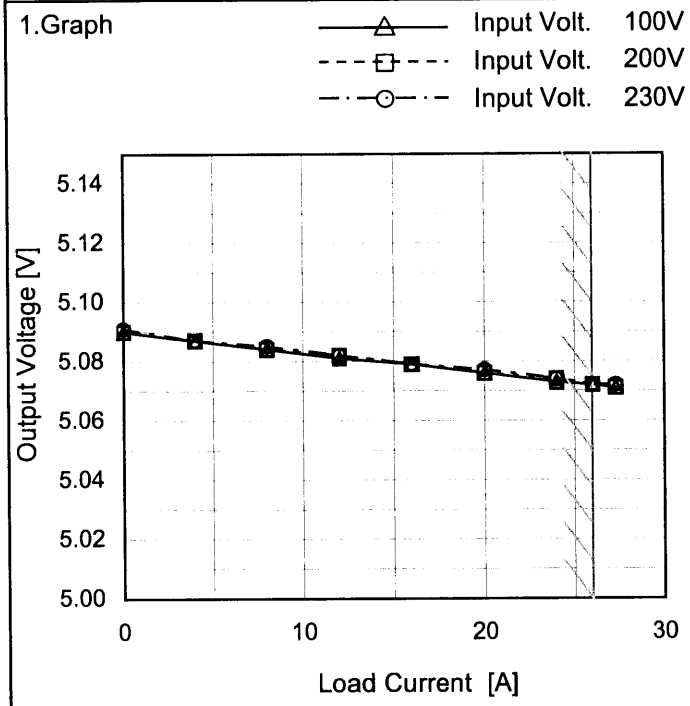
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
85	5.082	5.073
100	5.082	5.073
120	5.082	5.073
200	5.082	5.073
230	5.082	5.073
264	5.082	5.073
--	-	-
--	-	-
--	-	-

COSEL

Model	MODULE C
Item	Load Regulation
Object	+5V26A

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	5.090	5.090	5.091
4.0	5.087	5.087	5.087
8.0	5.084	5.084	5.085
12.0	5.081	5.082	5.082
16.0	5.079	5.079	5.079
20.0	5.076	5.076	5.077
24.0	5.073	5.074	5.074
26.0	5.072	5.072	5.072
27.3	5.071	5.071	5.072
--	-	-	-
--	-	-	-

COSEL

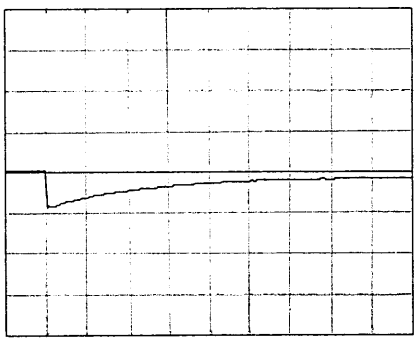
Model	MODULE C
Item	Dynamic Load Response
Object	+5V26A

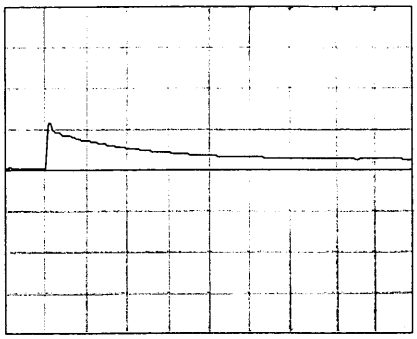
Temperature 25°C
Testing Circuitry Figure A

Input Volt. 100 V
Cycle 1000 mS

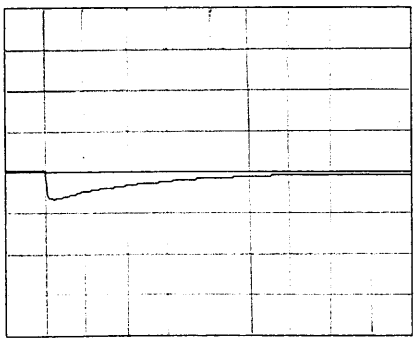
Load Current

Min. Load ⟷
Load 100 %

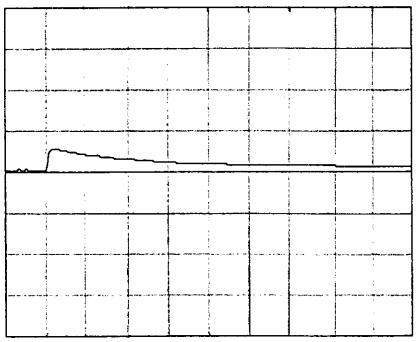




Min. Load ⟷
Load 50 %



100 mV/div



10 ms/div

* The characteristic of AC200V is equal.

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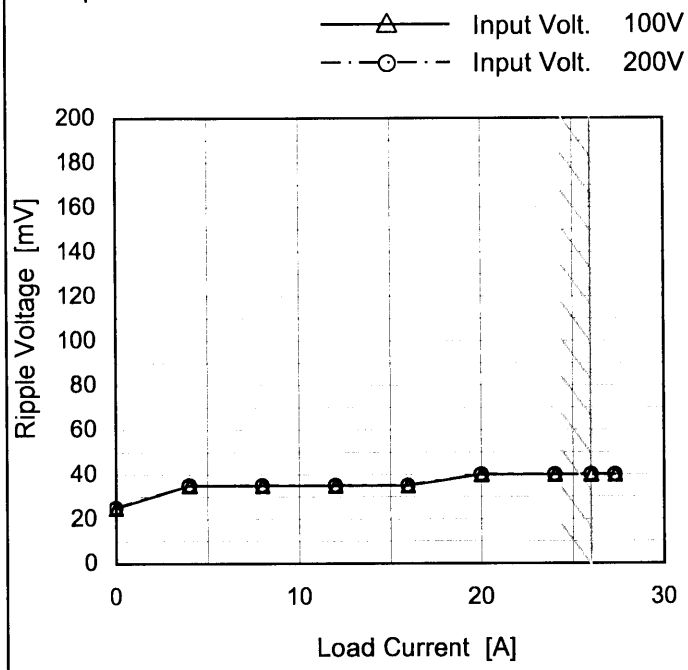
Model	MODULE C
Item	Ripple Voltage (by Load Current)
Object	+5V26A

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.

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

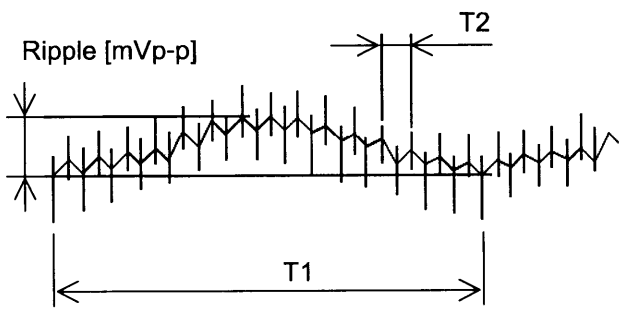


Fig. Complex Ripple Wave Form

2.Values

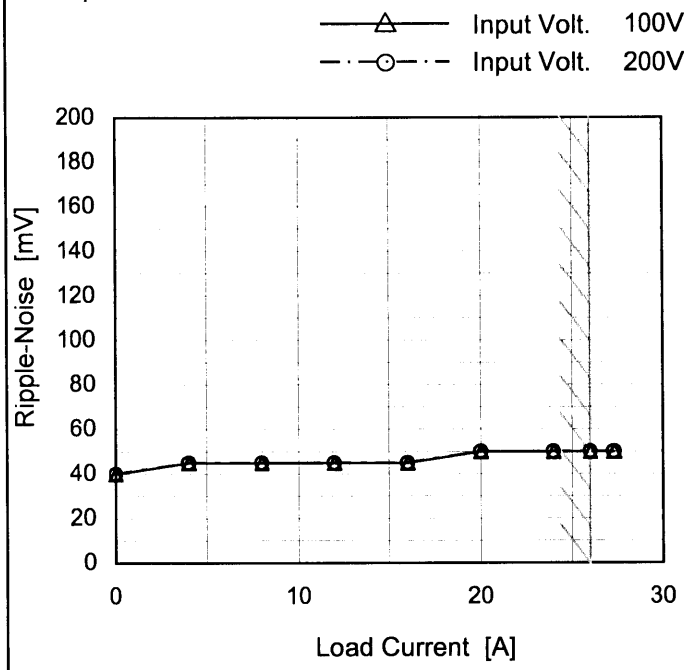
Load Current [A]	Ripple Voltage [mV]	
	Input Volt. 100 [V]	Input Volt. 200 [V]
0.0	25	25
4.0	35	35
8.0	35	35
12.0	35	35
16.0	35	35
20.0	40	40
24.0	40	40
26.0	40	40
27.3	40	40
--	-	-
--	-	-

COSEL

Model	MODULE C
Item	Ripple-Noise
Object	+5V26A

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]	Input Volt. 200 [V]
0.0	40	40
4.0	45	45
8.0	45	45
12.0	45	45
16.0	45	45
20.0	50	50
24.0	50	50
26.0	50	50
27.3	50	50
--	-	-
--	-	-

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

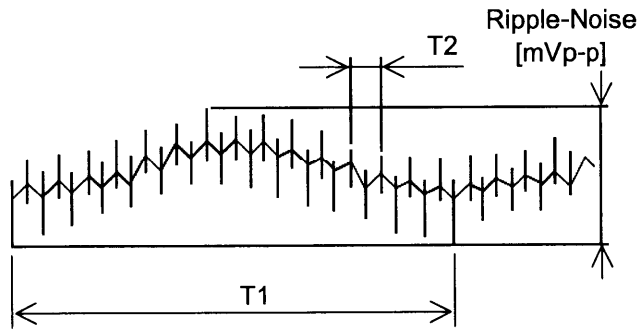


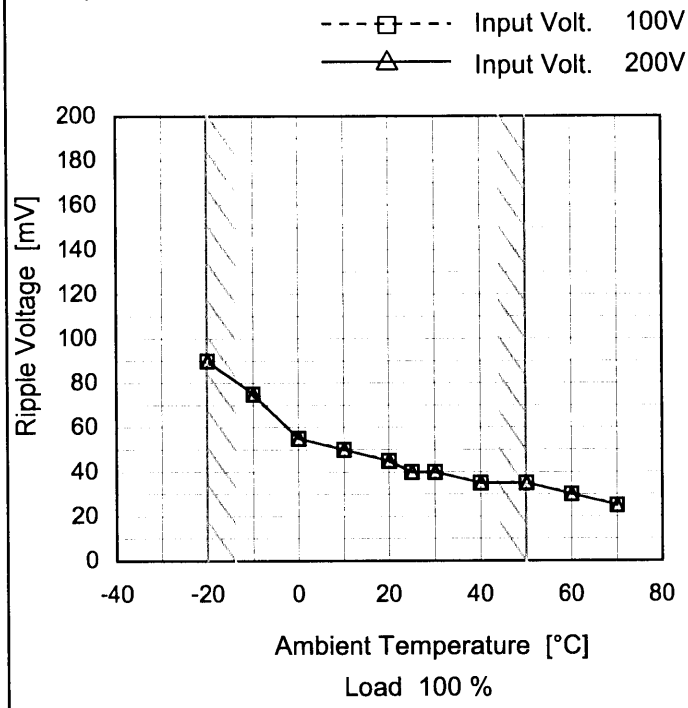
Fig. Complex Ripple Wave Form

COSEL

Model	MODULE C
Item	Ripple Voltage (by Ambient Temp.)
Object	+5V26A

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	90	90
-10	75	75
0	55	55
10	50	50
20	45	45
25	40	40
30	40	40
40	35	35
50	35	35
60	30	30
70	25	25

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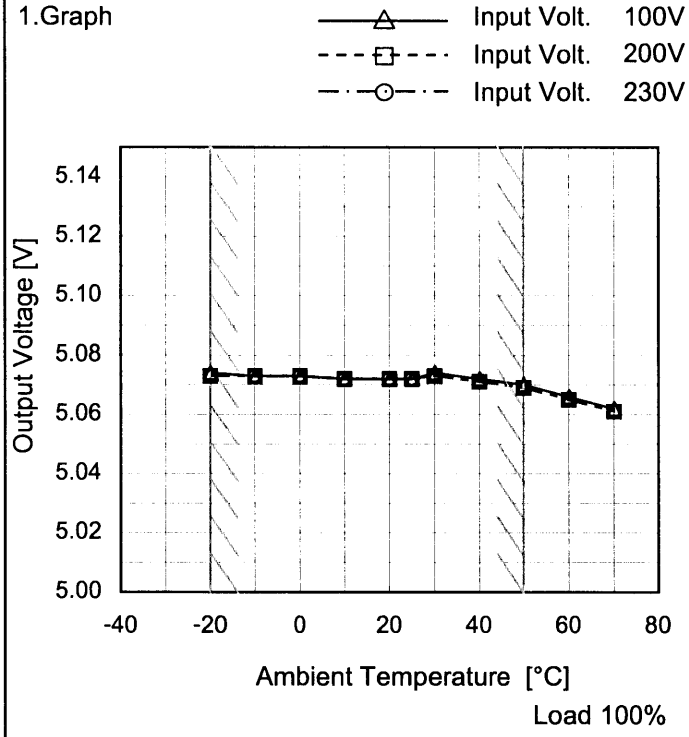
Model	MODULE C
Item	Ambient Temperature Drift
Object	+5V26A

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	5.074	5.073	5.073
-10	5.073	5.073	5.073
0	5.073	5.073	5.073
10	5.072	5.072	5.072
20	5.072	5.072	5.072
25	5.072	5.072	5.072
30	5.074	5.073	5.073
40	5.072	5.071	5.071
50	5.070	5.069	5.069
60	5.066	5.065	5.065
70	5.062	5.061	5.061

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Model	MODULE C
Item	Output Voltage Accuracy
Object	+5V26A

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 - 26A

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

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

2.Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ration [%]
Maximum Voltage	25	264	0	5.091	±12	±0.2
Minimum Voltage	50	132	26	5.067		

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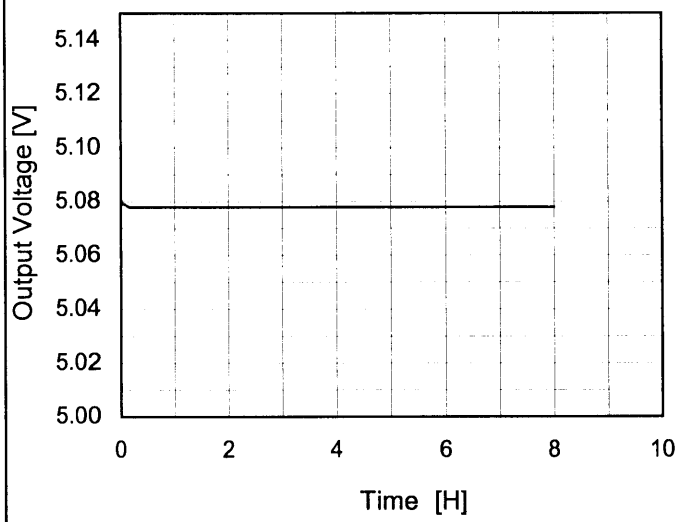
Model	MODULE C
Item	Time Lapse Drift
Object	+5V26A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



Input Volt. 100V
Load 100%

* The characteristic of AC200V is equal.

2.Values

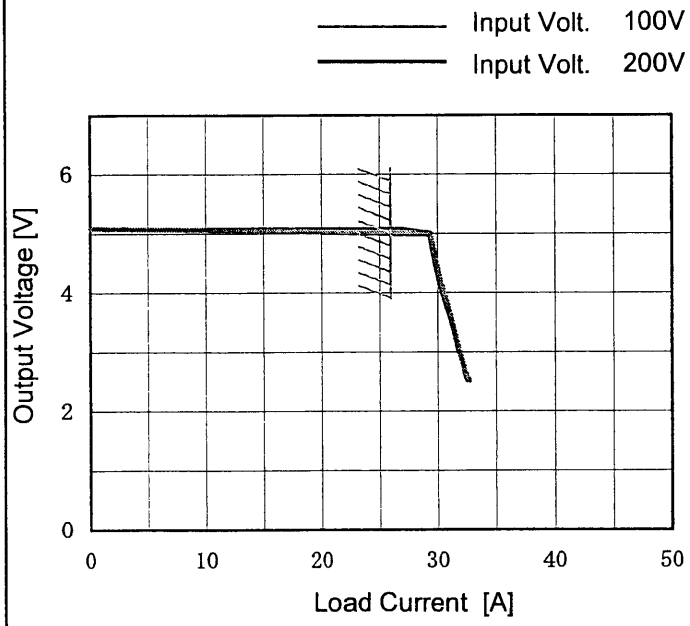
Time since start [H]	Output Voltage [V]
0.0	5.081
0.5	5.078
1.0	5.078
2.0	5.078
3.0	5.078
4.0	5.078
5.0	5.078
6.0	5.078
7.0	5.078
8.0	5.078

COSEL

Model	MODULE C
Item	Overcurrent Protection
Object	+5V26A

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 2.5V to 0V.

2.Values

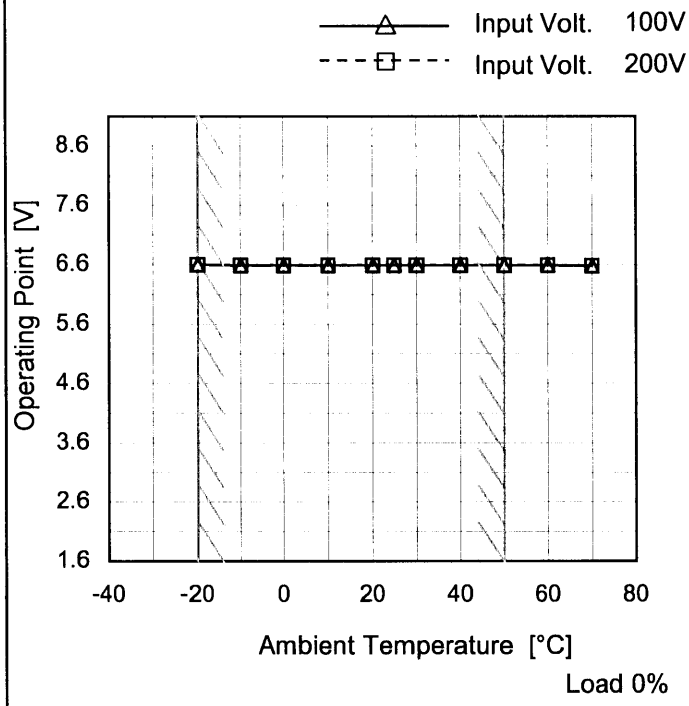
Output Voltage [V]	Load Current [A]	
	Input Volt. 100[V]	Input Volt. 200[V]
5.00	26.00	26.00
4.75	29.10	29.57
4.50	29.27	29.77
4.00	29.81	30.46
3.50	30.53	31.16
3.00	31.38	31.82
2.50	32.14	32.61
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-

COSEL

Model	MODULE C
Item	Overvoltage Protection
Object	+5V26A

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	6.57	6.57
-10	6.56	6.56
0	6.56	6.56
10	6.56	6.56
20	6.56	6.56
25	6.56	6.56
30	6.56	6.56
40	6.56	6.56
50	6.56	6.56
60	6.56	6.56
70	6.55	6.55

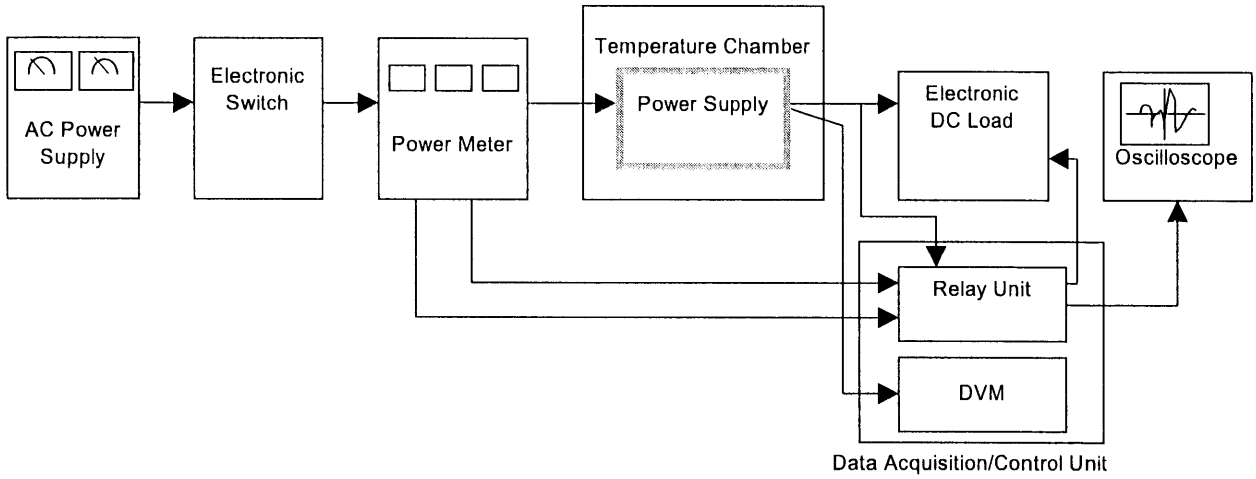


Figure A

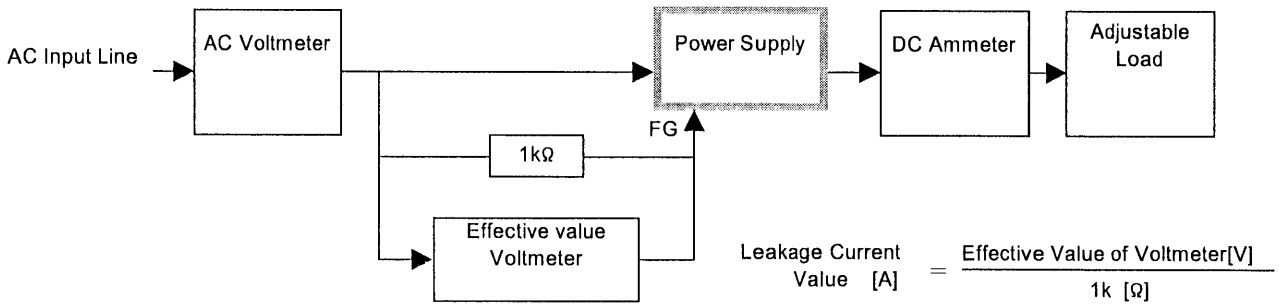


Figure B (DEN-AN)

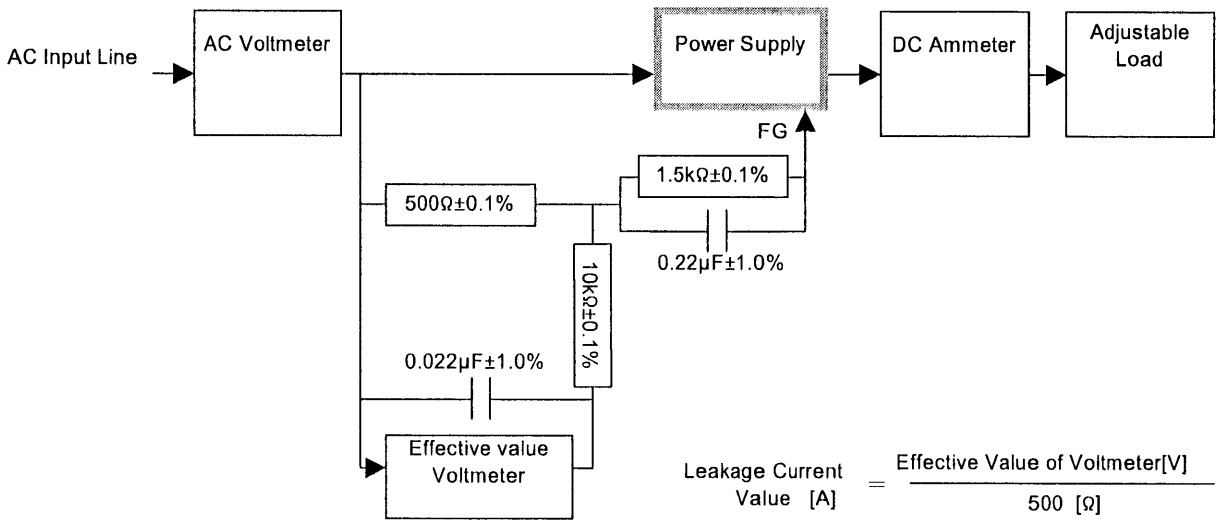


Figure B (IEC60950)