For Reference

TEST DATA OF TECS65F-5

Regulated DC Power Supply
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Approved by : Satoshi Uetani
Design Manager

Prepared by : Riku Nishimura
Design Engineer

COSEL CO.,LTD.

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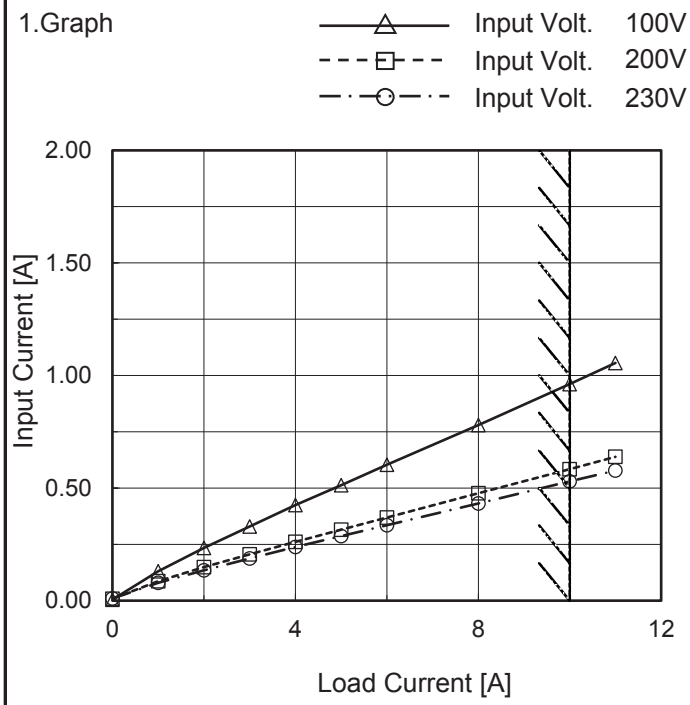
Model	TECS65F-5
Item	Input Current (by Load Current)
Object	———————

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]	Input Current [A]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0	0.005	0.008	0.010
1	0.130	0.087	0.079
2	0.234	0.148	0.135
3	0.330	0.206	0.187
4	0.424	0.262	0.238
5	0.513	0.316	0.287
6	0.603	0.369	0.335
8	0.781	0.477	0.432
10	0.962	0.584	0.530
11	1.056	0.639	0.578
--	-	-	-

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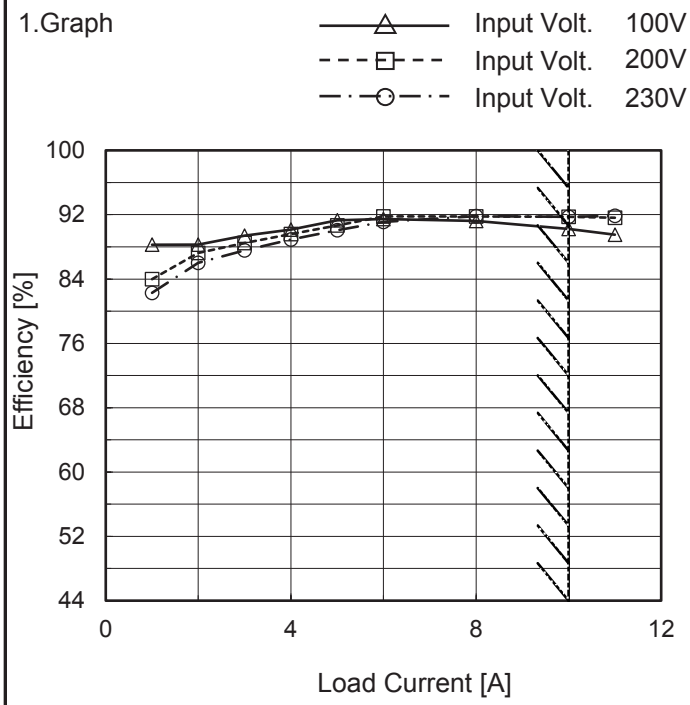
Model	TECS65F-5
Item	Efficiency (by Load Current)
Object	————————

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]	Efficiency [%]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0	-	-	-
1	88.3	84.0	82.3
2	88.3	87.2	86.0
3	89.4	88.5	87.6
4	90.2	89.6	88.9
5	91.3	90.7	90.1
6	91.5	91.8	91.1
8	91.2	91.8	91.8
10	90.2	91.7	91.7
11	89.5	91.6	91.8
--	-	-	-

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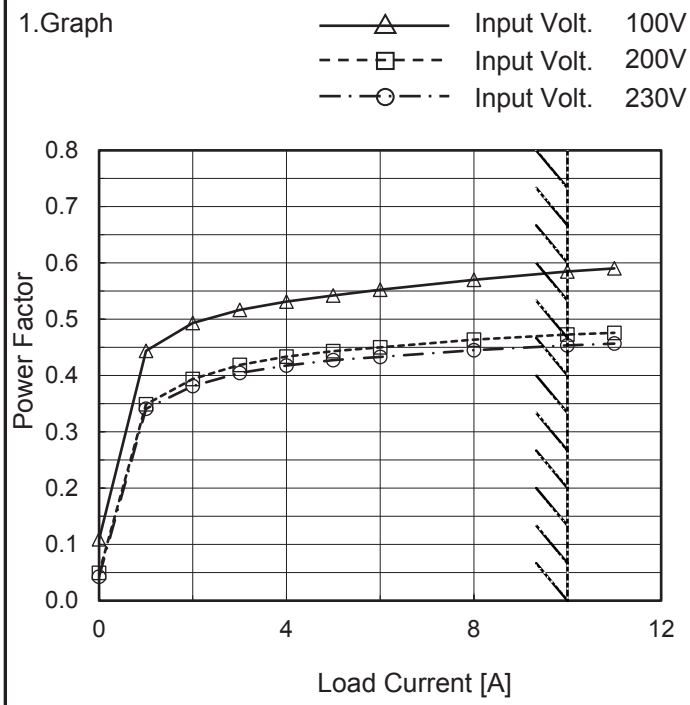
Model	TECS65F-5
Item	Power Factor (by Load Current)
Object	————————

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]	Power Factor		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0	0.109	0.049	0.043
1	0.444	0.349	0.341
2	0.493	0.394	0.381
3	0.517	0.419	0.404
4	0.532	0.433	0.418
5	0.542	0.443	0.427
6	0.552	0.450	0.433
8	0.570	0.464	0.445
10	0.585	0.473	0.454
11	0.590	0.476	0.457
--	-	-	-

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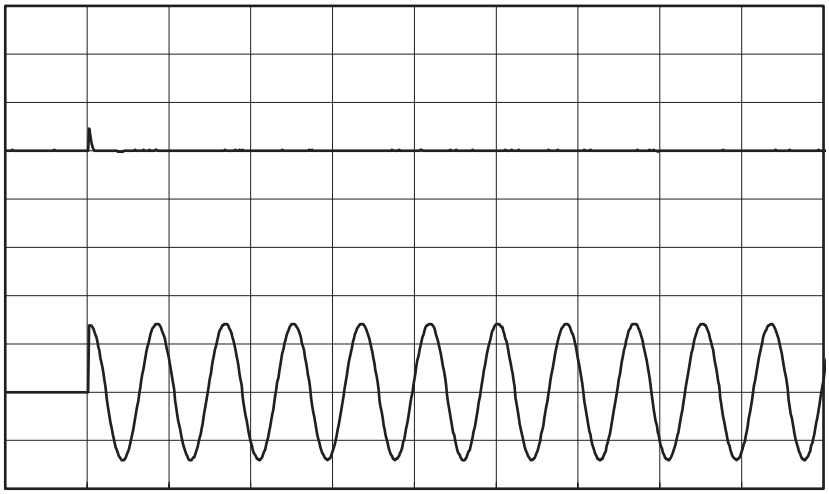
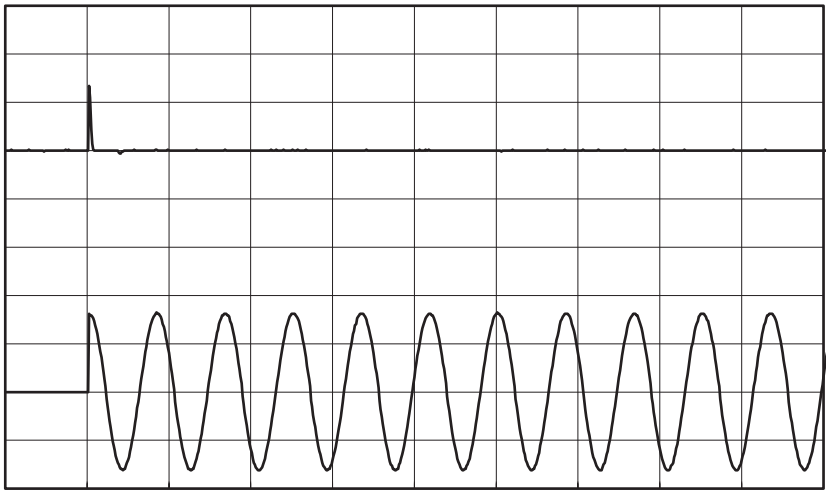
Model	TECS65F-5
Item	Inrush Current
Object	————————

Temperature 25°C
Testing Circuitry Figure A



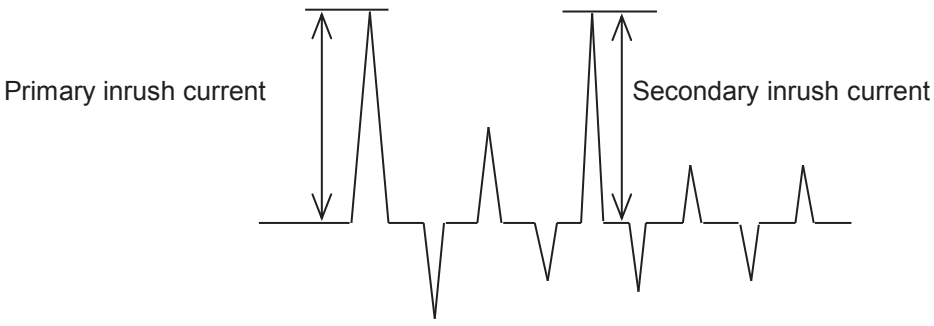
Input Voltage 100 V
Frequency 60 Hz
Load 100 %

Primary inrush current :
23.0 A
Secondary inrush current :
3.0 A



Input Voltage 230 V
Frequency 60 Hz
Load 100 %

Primary inrush current :
67.0 A
Secondary inrush current :
2.0 A



Model	TECS65F-5	
Item	Leakage Current	Temperature 25°C Testing Circuitry Figure C
Object	———————————	

1.Results

[mA]

Standards	Testing Circuitry	Measuring Method	Input Volt.			Note
			100 [V]	230 [V]	264 [V]	
DEN-AN	Figure C-1	Both phases	0.03	0.07	0.08	Operation
		One of phases	0.05	0.11	0.13	Stand by
IEC62368-1	Figure C-2	Both phases	0.03	0.07	0.08	Operation
		One of phases	0.05	0.11	0.13	Stand by
	Figure C-3	Both phases	0.03	0.07	0.08	Operation
		One of phases	0.05	0.11	0.13	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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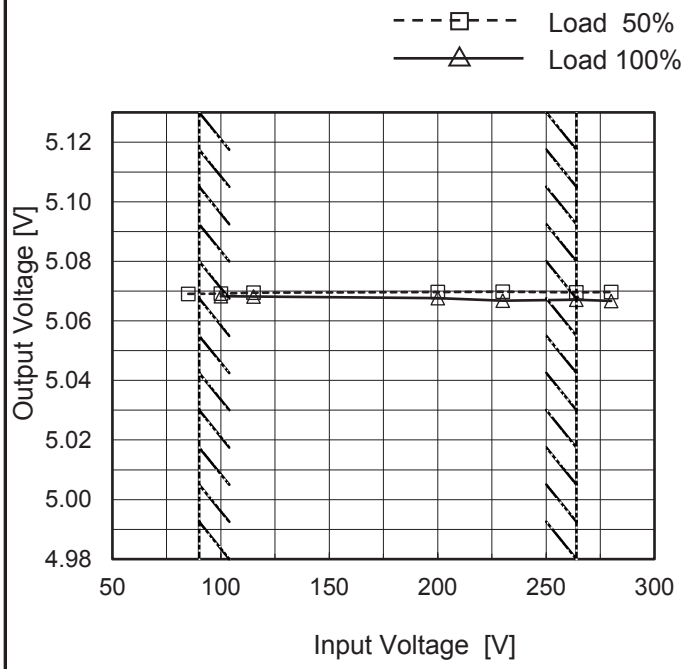
Model	TECS65F-5
Item	Line Regulation
Object	+5V10A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

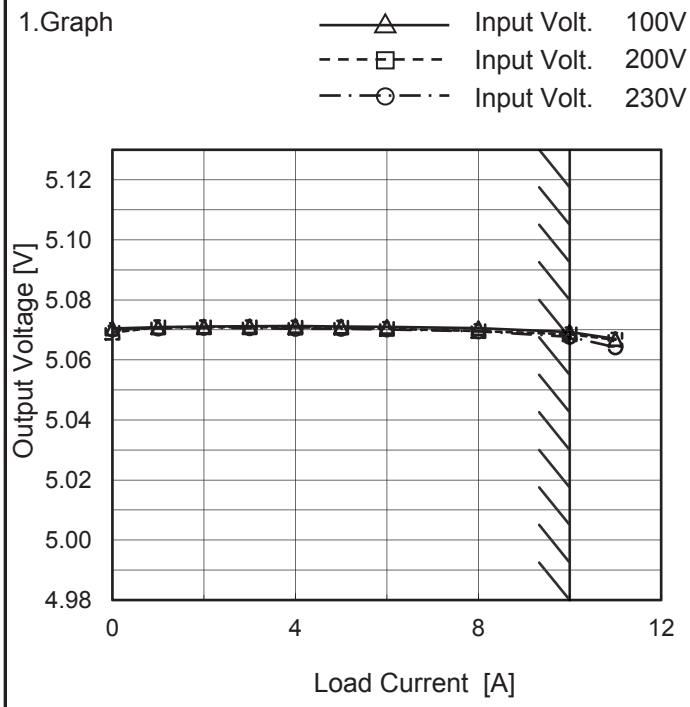
Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
85	5.069	-
100	5.069	5.068
115	5.070	5.068
200	5.070	5.068
230	5.070	5.067
264	5.070	5.067
280	5.070	5.067
--	-	-
--	-	-

COSEL

Model	TECS65F-5
Item	Load Regulation
Object	+5V10A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

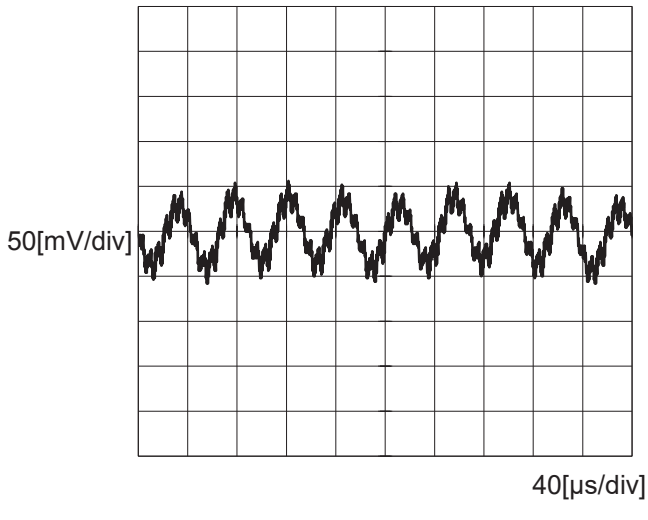
Load Current [A]	Output Voltage [V]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0	5.071	5.069	5.070
1	5.071	5.071	5.071
2	5.071	5.071	5.071
3	5.071	5.071	5.071
4	5.071	5.071	5.070
5	5.071	5.071	5.070
6	5.071	5.070	5.070
8	5.071	5.070	5.070
10	5.069	5.069	5.068
11	5.067	5.067	5.064
--	--	--	--

Item	Ripple-Noise
Object	+5V10A

Temperature 25°C
Testing Circuitry Figure B

1.Graph

Input Voltage 230V
Load 100%



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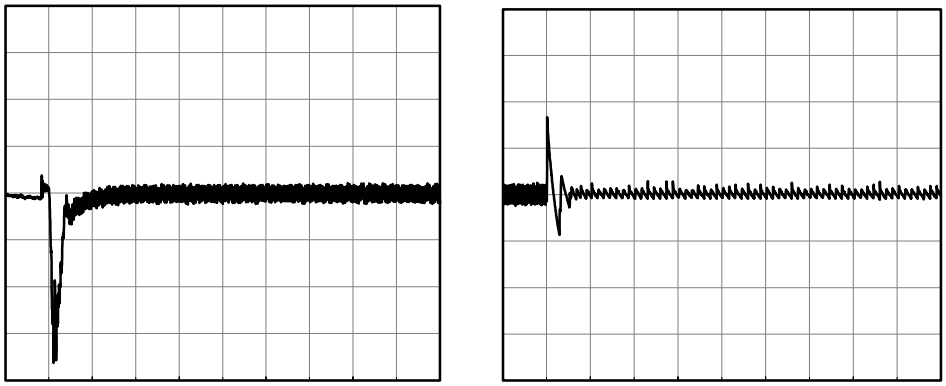
Model	TECS65F-5	
Item	Dynamic Load Response	Temperature 25°C Testing Circuitry Figure A
Object	+5V10A	

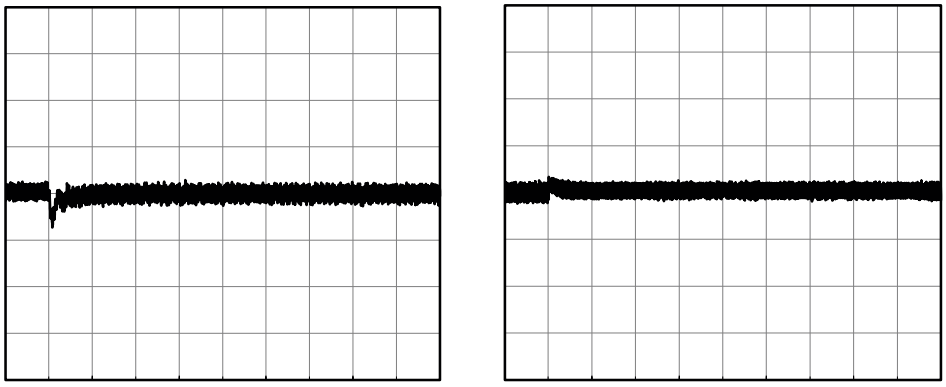
Input Volt. 230 V
Cycle 1000 ms

Response. t1=t2=50µs. Typ

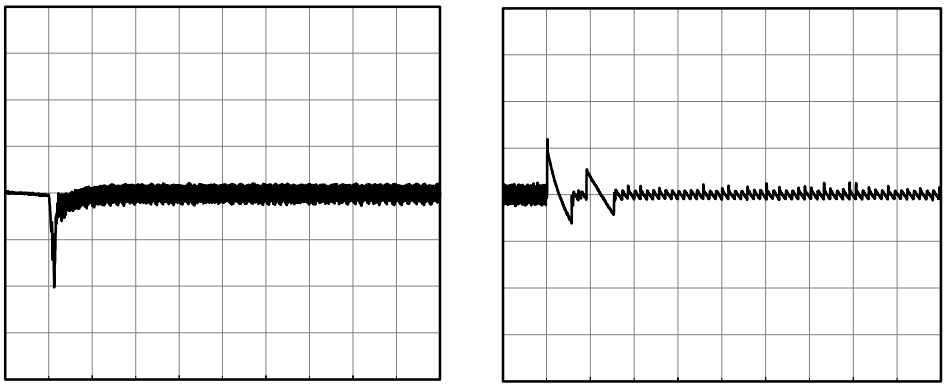
Load 0%(0A) ←→
Load 100%(10A)



Load 50%(5A) ←→
Load 100%(10A)



Load 0%(0A) ←→
Load 50%(5A)



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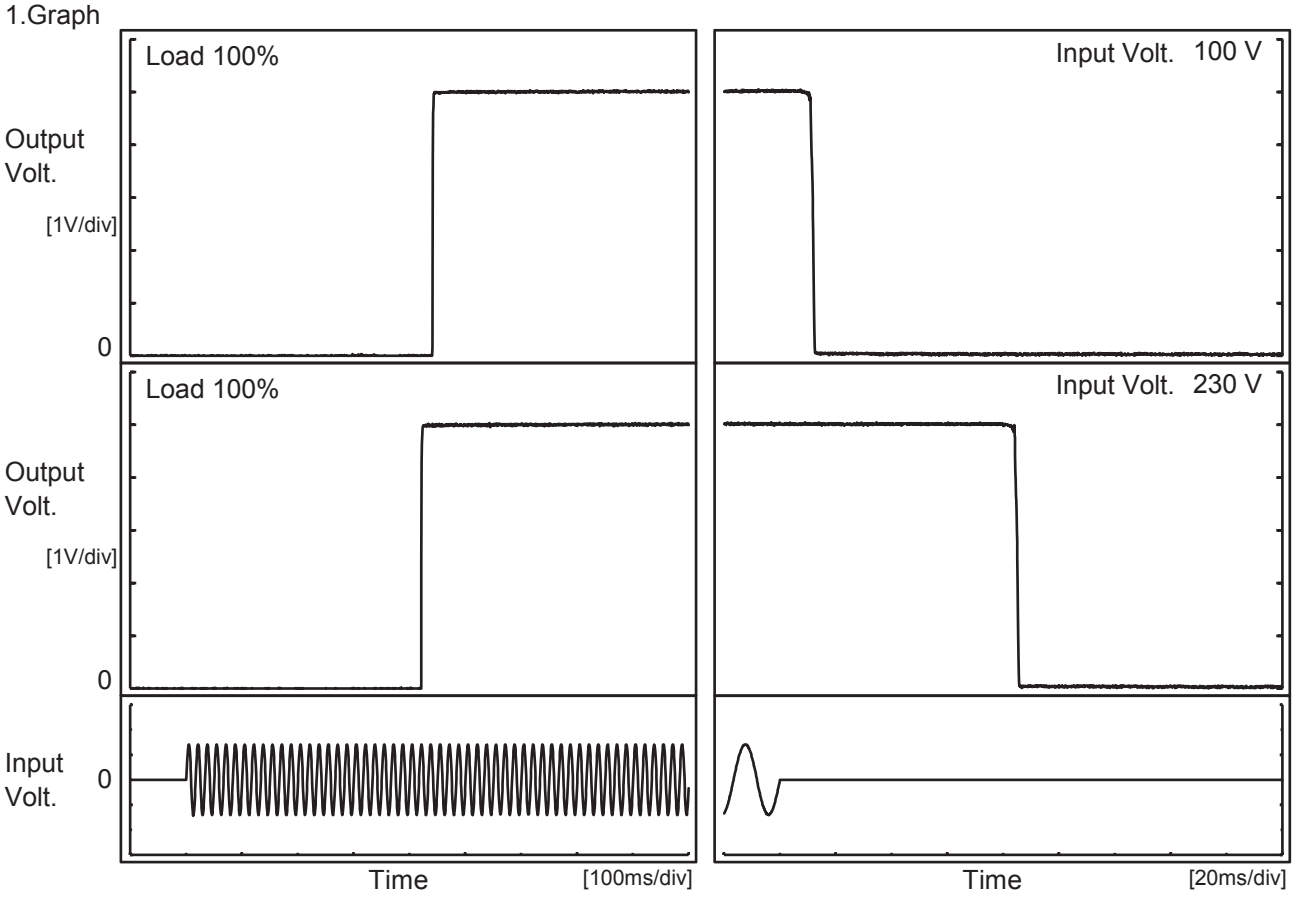
Model	TECS65F-5	
Item	Rise and Fall Time	Temperature 25°C Testing Circuitry Figure A
Object	+24V2.75A	

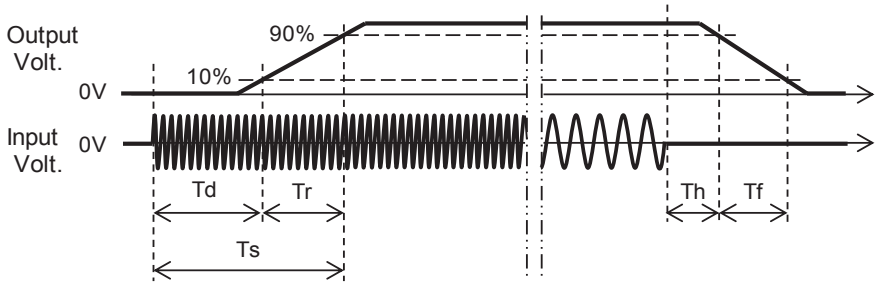
1.Graph



2.Values

[ms]

Input Volt. \ Time	Td	Tr	Ts	Th	Tf
100 V	442.0	1.5	443.5	11.2	1.2
230 V	421.5	1.0	422.5	84.3	1.3

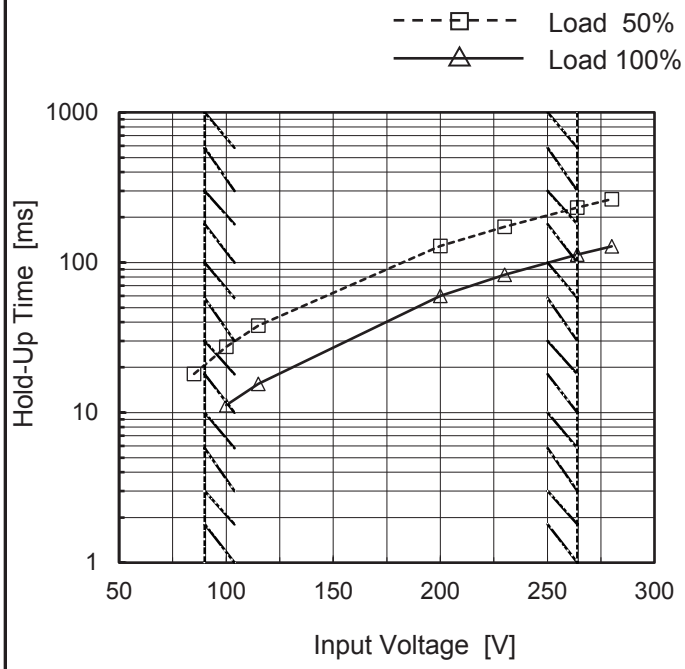


COSEL

Model	TECS65F-5
Item	Hold-Up Time
Object	+5V10A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



This duration covers from Shut-off of input voltage to the moment when output voltage descends to the rated range of voltage accuracy.
Note: Slanted line shows the range of the rated input voltage.

2.Values

Input Voltage [V]	Hold-Up Time [ms]	
	Load 50%	Load 100%
85	18	-
100	27	11
115	38	16
200	129	60
230	173	83
264	232	113
280	264	128
--	-	-
--	-	-

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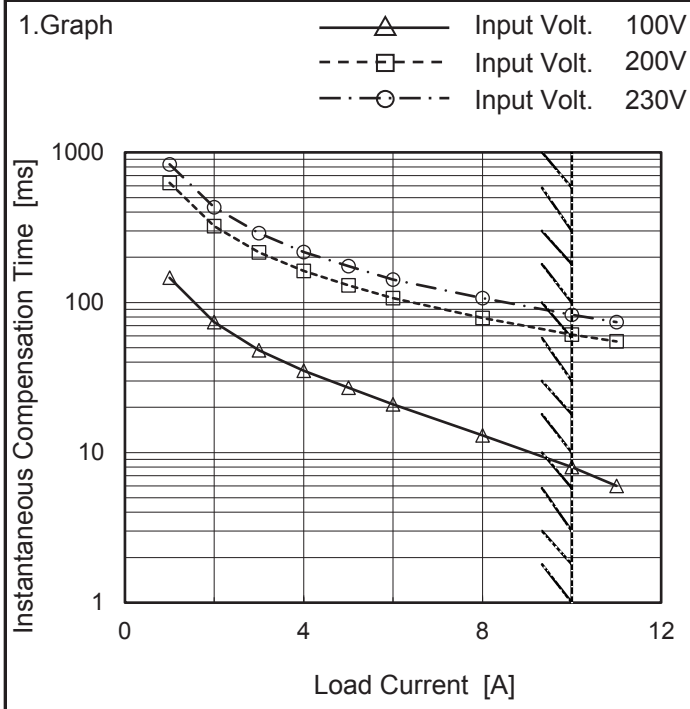
Model	TECS65F-5
Item	Instantaneous Interruption Compensation
Object	+5V10A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

2.Values

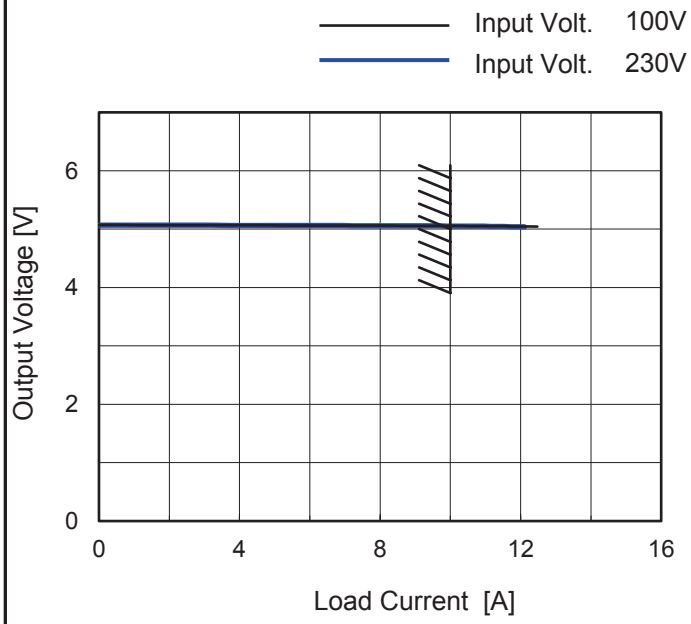
Load Current [A]	Time [ms]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
0	-	-	-
1	146	627	833
2	74	322	430
3	48	216	289
4	35	162	217
5	27	130	175
6	21	107	142
8	13	79	107
10	8	61	83
11	6	55	74
--	-	-	-

COSEL

Model	TECS65F-5
Item	Overcurrent Protection
Object	+5V10A

Temperature 25°C
Testing Circuitry Figure A

1.Graph



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

Overcurrent protection is Hiccup mode.

2.Values

Output Voltage [V]	Load Current [A]	
	Input Volt. 100[V]	Input Volt. 230[V]
5.00	12.48	12.11
4.75	-	-
4.50	-	-
4.00	-	-
3.50	-	-
3.00	-	-
2.50	-	-
2.00	-	-
1.50	-	-
1.00	-	-
0.50	-	-
0.00	-	-

Model	TECS65F-5	
Item	Ambient Temperature Drift	Testing Circuitry Figure A
Object	+5V10A	

1.Values

Load 100%

Ambient Temperature[℃]	Output Voltage [V]		
	Input Volt. 100V	Input Volt. 200V	Input Volt. 230V
-10	5.094	5.093	5.092
25	5.070	5.069	5.067
50	5.053	5.052	5.051

Item	Minimum Input Voltage for Regulated Output Voltage	Testing Circuitry Figure A
Object	+5V10A	

1.Values

Ambient Temperature[℃]	Input Voltage [V]	
	Load 50%	Load 100%
-10	62	64
25	63	65
50	63	65

Item	Overvoltage Protection	Testing Circuitry Figure A
Object	+5V10A	

1.Values

Load 0%

Ambient Temperature[℃]	Operating Point [V]	
	Input Volt. 100V	Input Volt. 230V
-10	5.79	5.79
25	5.79	5.79
50	5.71	5.71

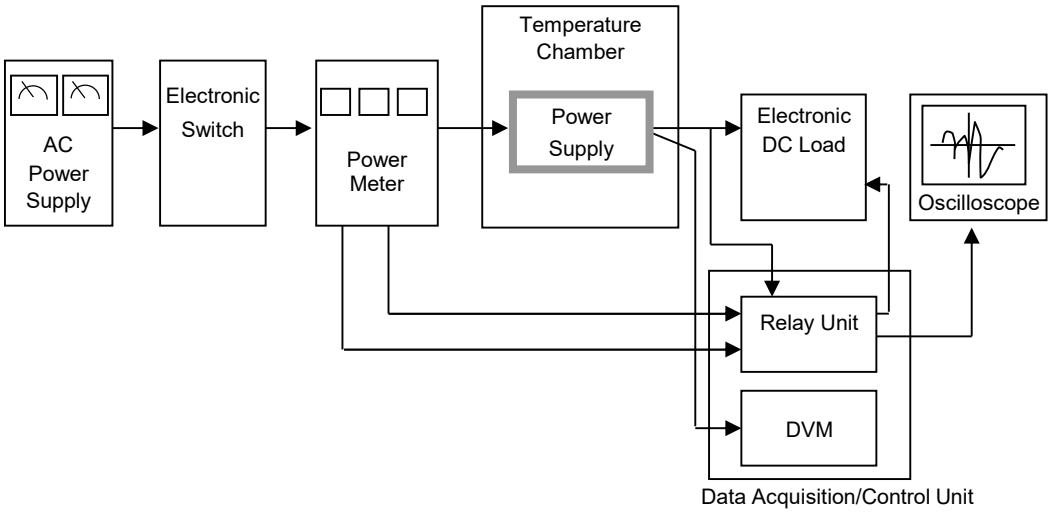


Figure A

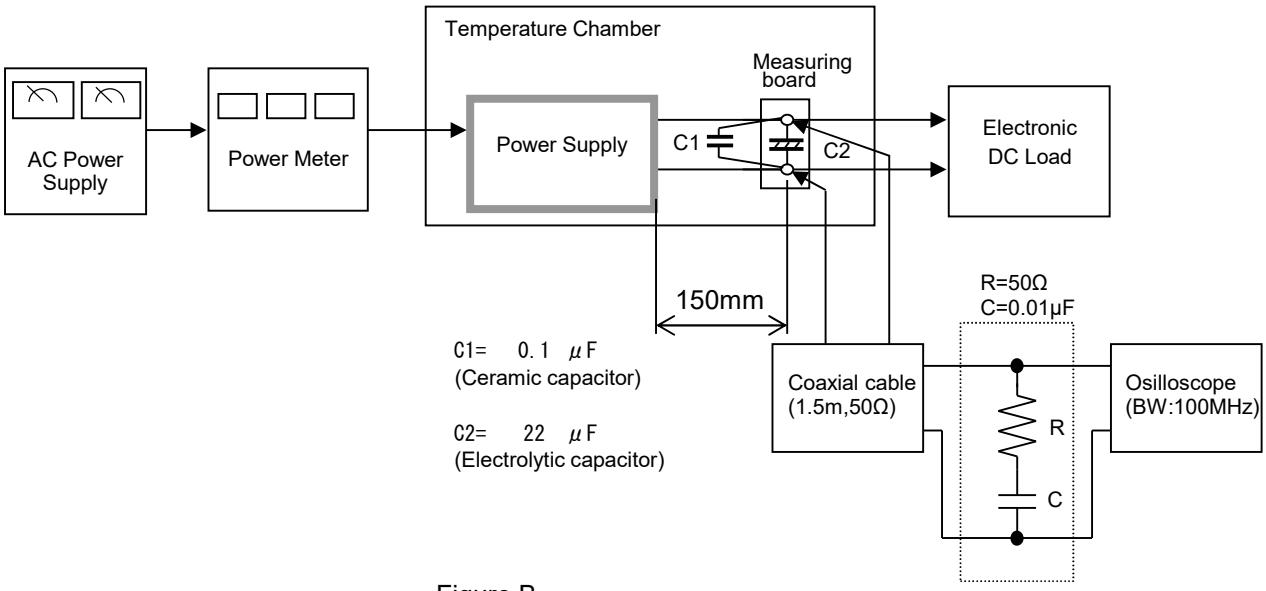


Figure B

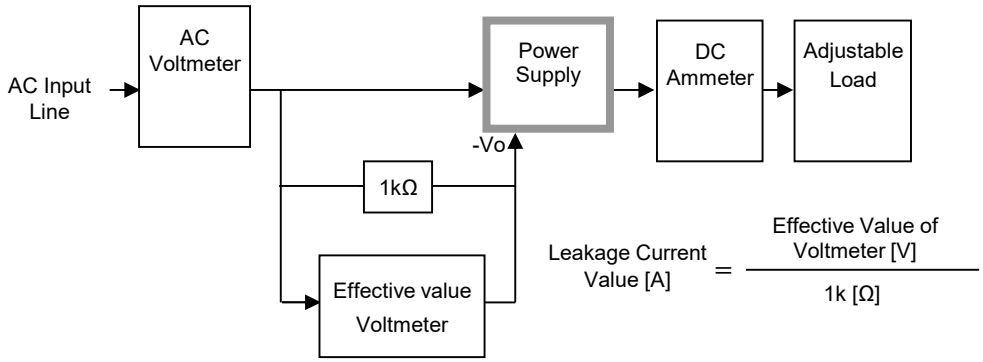


Figure C-1 (DEN-AN)

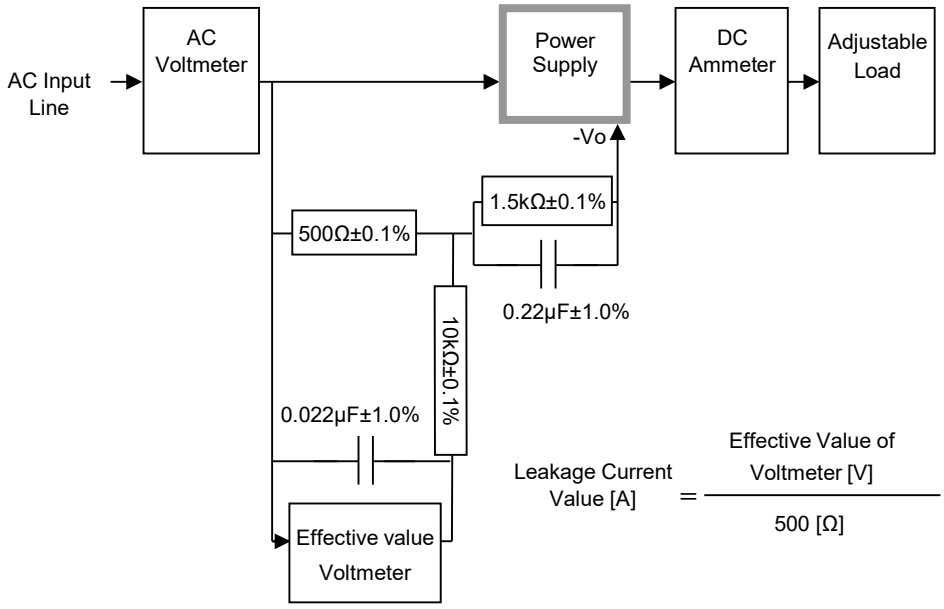


Figure C-2 (IEC62368-1 refer to IEC60990 Fig.4)

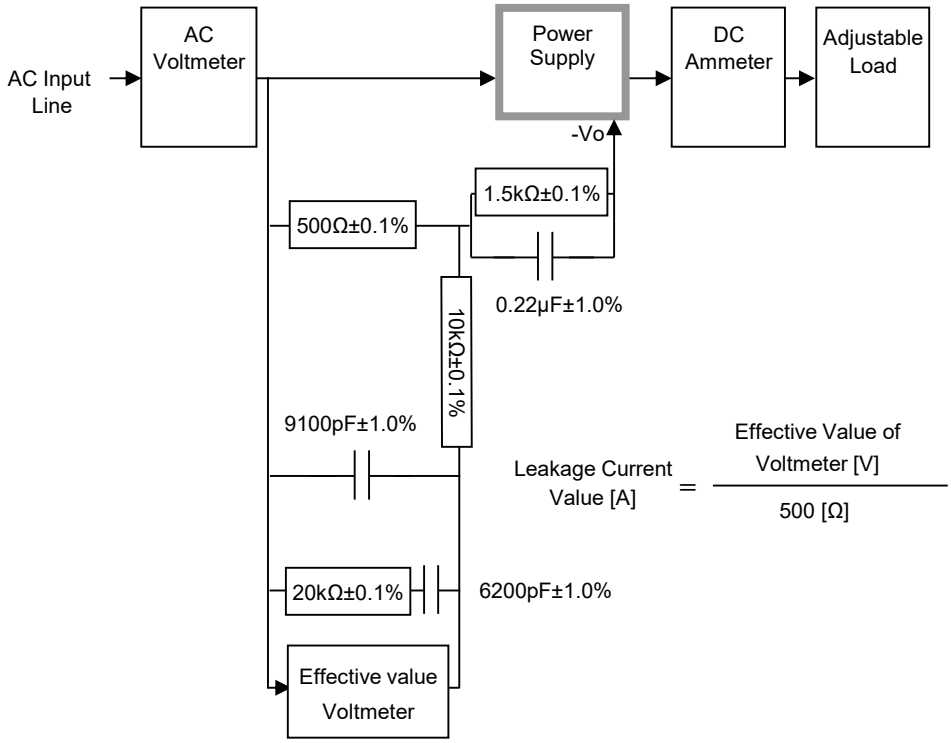


Figure C-3 (IEC62368-1 refer to IEC60990 Fig.5)