参考資料

TEST DATA OF MODULE T

(AME series)

Regulated DC Power Supply
September 22, 2021

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CONTENTS

(Final Page 12)

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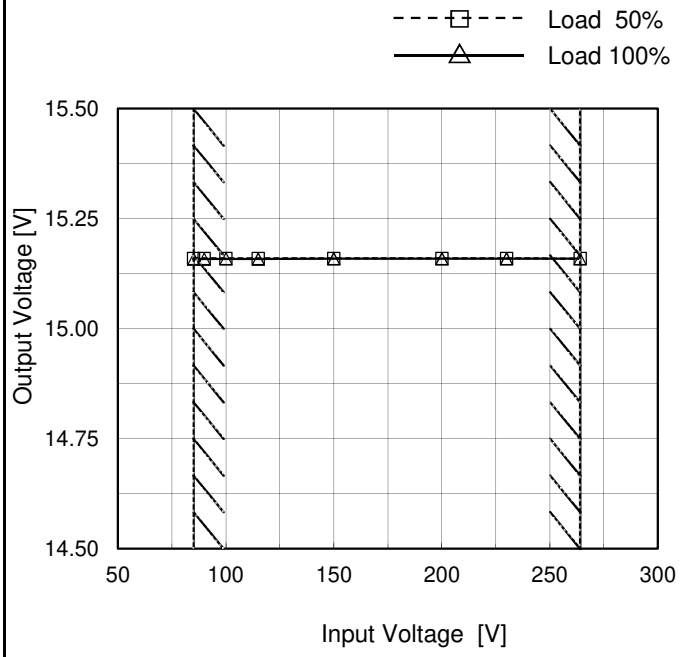
Model	MODULE T
Item	Line Regulation
Object	+15V16A

Temperature 25°C
Testing Circuitry Figure A

1. Graph



Note:
Hatched line shows the input voltage range.

2. Values

Input Voltage [V]	Output Voltage [V]	
	Load 50%	Load 100%
85	15.160	15.158
90	15.160	15.158
100	15.160	15.159
115	15.160	15.158
150	15.160	15.159
200	15.160	15.159
230	15.160	15.159
264	15.159	15.159
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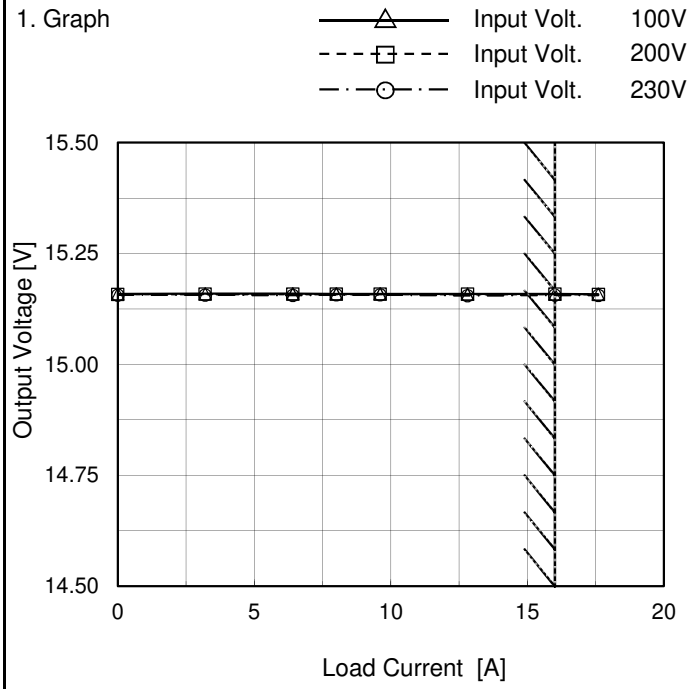
Model	MODULE T
Item	Load Regulation
Object	+15V16A

Temperature 25°C
Testing Circuitry Figure A

1. Graph



Note: Hatched 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	15.159	15.158	15.156
3.2	15.159	15.159	15.157
6.4	15.159	15.158	15.156
8.0	15.159	15.158	15.157
9.6	15.159	15.158	15.157
12.8	15.159	15.158	15.155
16.0	15.159	15.159	15.156
17.6	15.159	15.158	15.156
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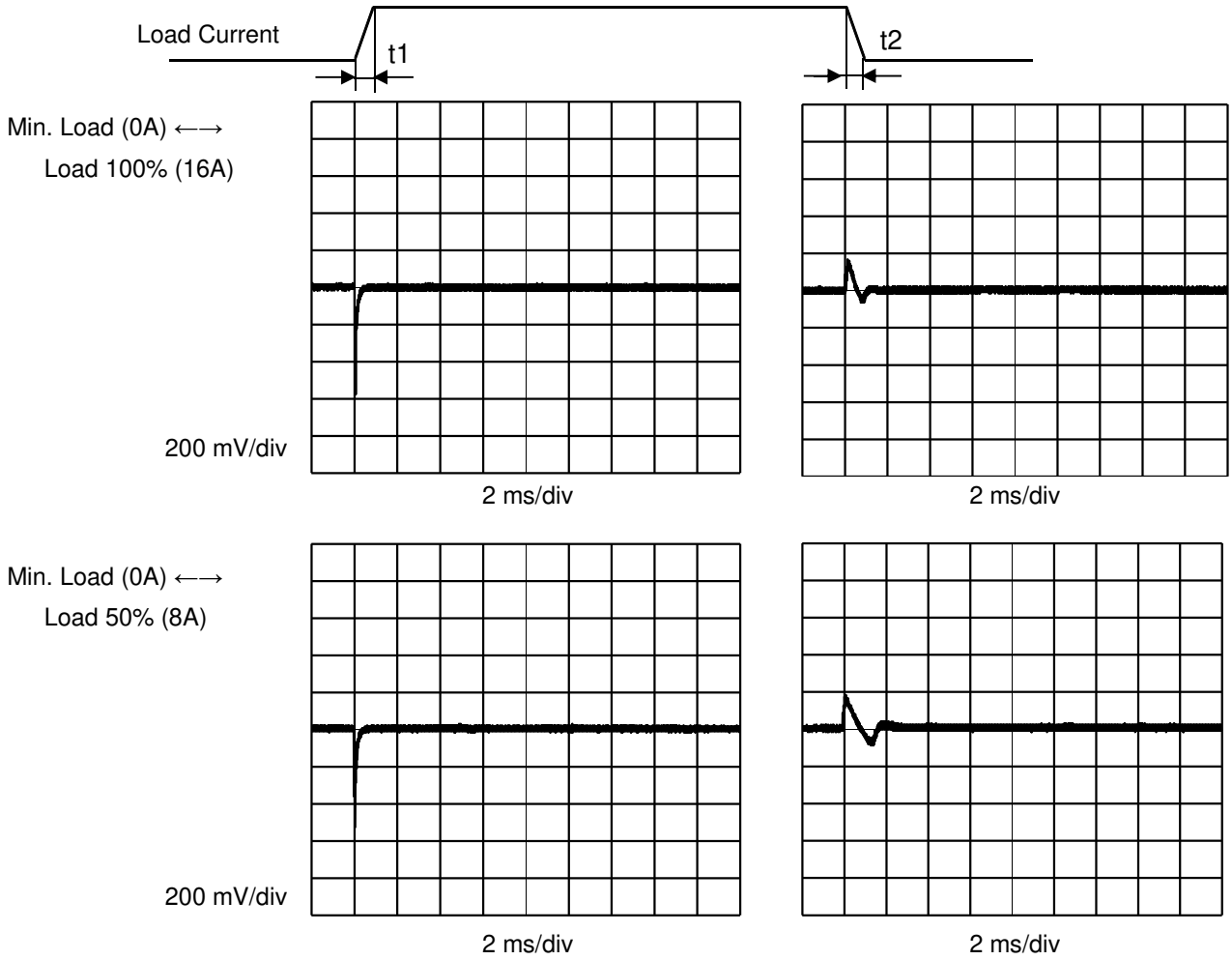
Model	MODULE T		
Item	Dynamic Load Response	Temperature Testing Circuitry	25° C Figure A
Object	+15V16A		

Input Volt. 100 V

Cycle 1000 ms

Response t1=t2=50us. Typ



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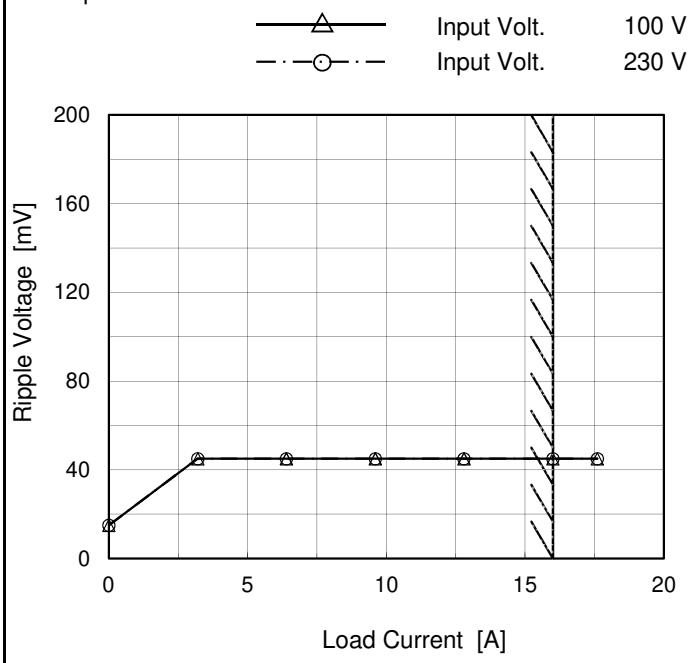
Model	MODULE T
Item	Ripple Voltage (by Load Current)
Object	+15V16A

Temperature 25°C
Testing Circuitry Figure B

1. Graph



Note:
Measured by 20MHz Oscilloscope.

Ripple Voltage is shown as p-p in the figure below.

Hatched line shows the range of the rated load current.

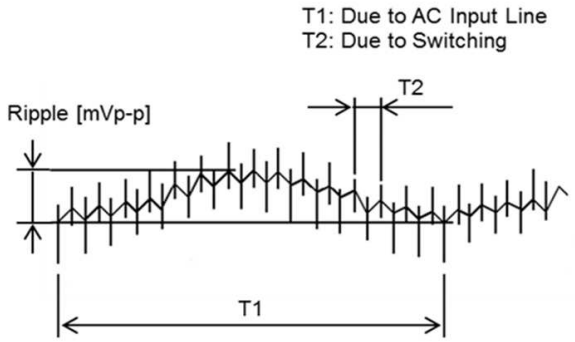


Fig. Complex Ripple Wave Form

2. Values

Load Current [A]	Ripple Voltage [mV] Input Volt. 100[V]	Ripple Voltage [mV] Input Volt. 230[V]
0.0	15	15
3.2	45	45
6.4	45	45
9.6	45	45
12.8	45	45
16.0	45	45
17.6	45	45
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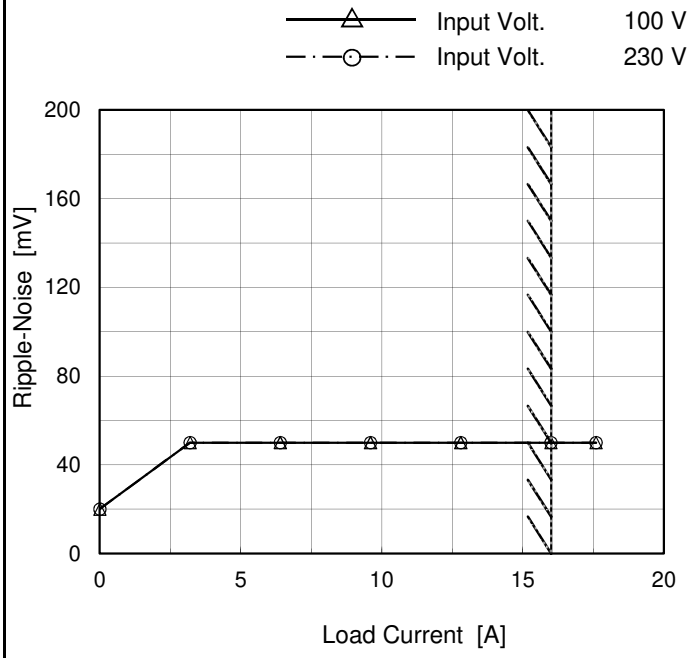
COSEL

Model	MODULE T
Item	Ripple Noise
Object	+15V16A

Temperature 25°C
Testing Circuitry Figure B

1. Graph



Note:
Measured by 20MHz Oscilloscope.

Ripple Noise is shown as p-p in the figure below.

Hatched line shows the range of the rated load current.

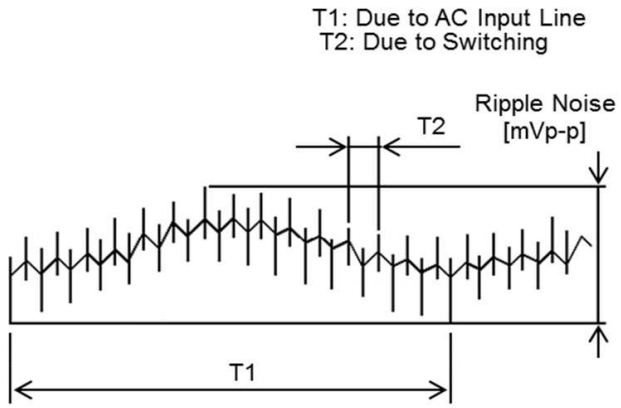


Fig. Complex Ripple Wave Form

2. Values

Load Current [A]	Ripple Noise [mV]	
	Input Volt. 100[V]	Input Volt. 230[V]
0.0	20	20
3.2	50	50
6.4	50	50
9.6	50	50
12.8	50	50
16.0	50	50
17.6	50	50
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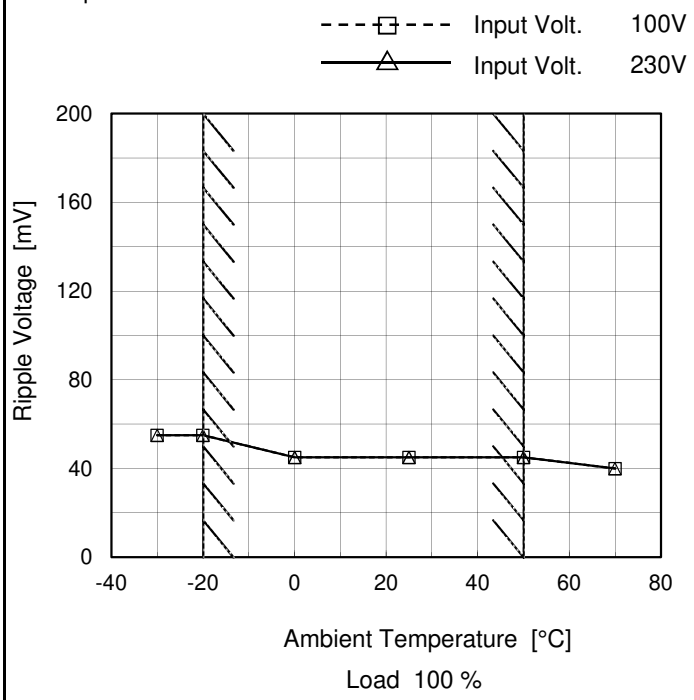
COSEL

Model	MODULE T
Item	Ripple Voltage (by Ambient Temp.)
Object	+15V16A

Testing Circuitry Figure B

1. Graph



Note:
Measured by 20MHz Oscilloscope.

Hatched line shows the range of the rated operating temperature.

2. Values

Ambient Temperature [°C]	Ripple Voltage [mV]	
	Input Volt. 100 [V]	Input Volt. 230 [V]
-30	55	55
-20	55	55
0	45	45
25	45	45
50	45	45
70	40	40
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-

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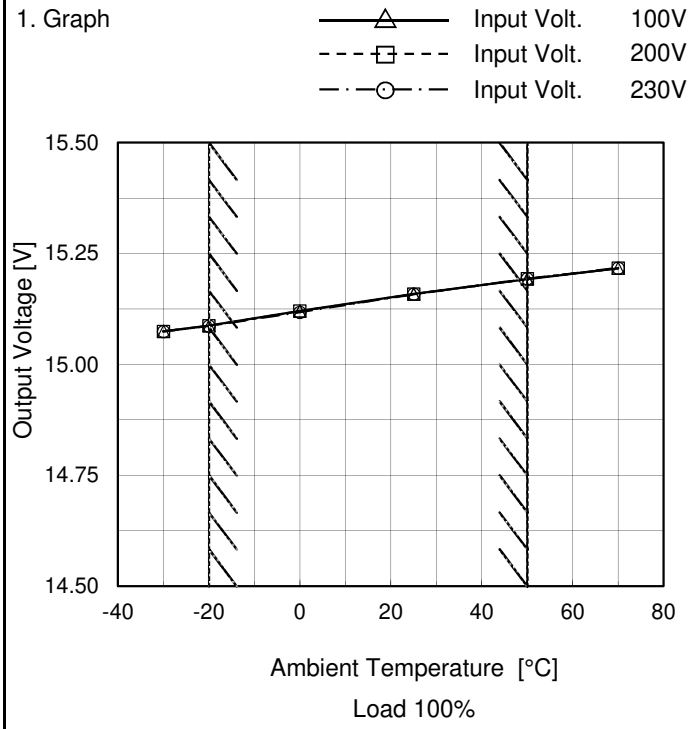
Model	MODULE T
Item	Ambient Temperature Drift
Object	+15V16A

Testing Circuitry Figure A

1. Graph



Note:
Hatched line shows the range of the rated operating temperature.

2. Values

Ambient Temperature [°C]	Output Voltage [V]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
-30	15.075	15.074	15.074
-20	15.087	15.087	15.087
0	15.120	15.120	15.118
25	15.159	15.159	15.158
50	15.192	15.193	15.193
70	15.217	15.217	15.217
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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Model	MODULE T
Item	Output Voltage Accuracy
Object	+15V16A

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 - 16A

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

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

2. Values

Item	Temperature [°C]	Input Voltage[V]	Output		Output Voltage Accuracy	
			Current[A]	Voltage[V]	Value [mV]	Ratio [%]
Maximum Voltage	50	264	16	15.198	±61	±0.4
Minimum Voltage	-20	85	0	15.077		

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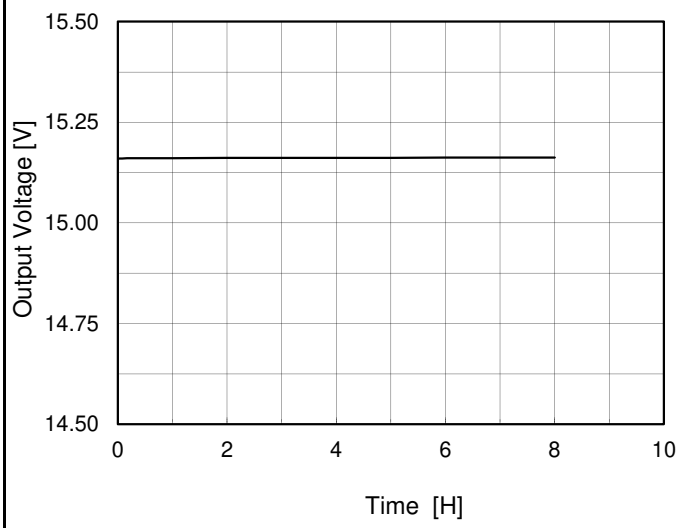
Model	MODULE T
Item	Time Lapse Drift
Object	+15V16A

Temperature 25°C
Testing Circuitry Figure A

1. Graph



Input Volt. 100V
Load 100%

2. Values

Time since start [H]	Output Voltage [V]
0.0	15.160
0.5	15.161
1.0	15.161
2.0	15.161
3.0	15.162
4.0	15.162
5.0	15.162
6.0	15.162
7.0	15.163
8.0	15.163

BC-11802

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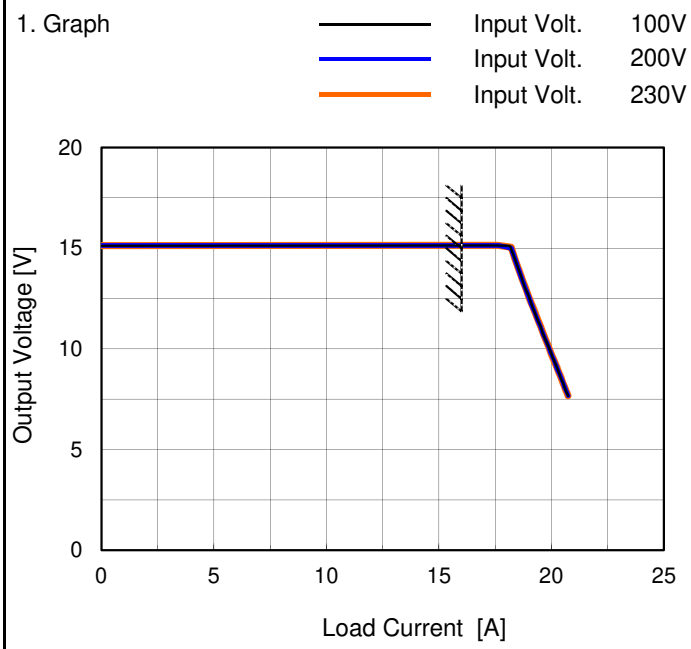
Model	MODULE T
Item	Overcurrent Protection
Object	+15V16A

Temperature 25°C
Testing Circuitry Figure A

1. Graph



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

Hiccup mode activates when the output voltage is below 7.5V.

2. Values

Output Voltage [V]	Load Current [A]		
	Input Volt. 100[V]	Input Volt. 200[V]	Input Volt. 230[V]
14.3	18.52	18.54	18.54
13.5	18.67	18.70	18.70
12.0	19.24	19.27	19.27
10.5	19.74	19.76	19.77
9.0	20.26	20.26	20.27
7.5	20.74	20.74	20.75
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--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-
--	-	-	-

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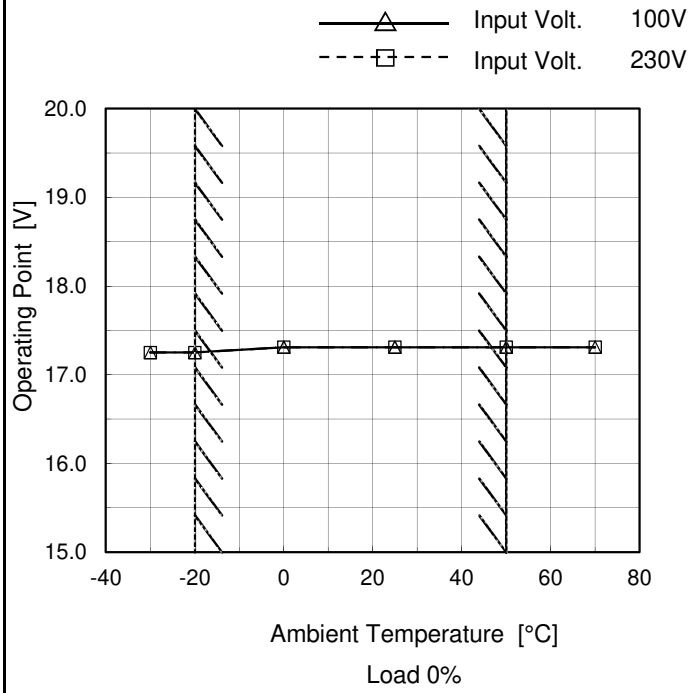
Model	MODULE T
Item	Overvoltage Protection
Object	+15V16A

Testing Circuitry Figure A

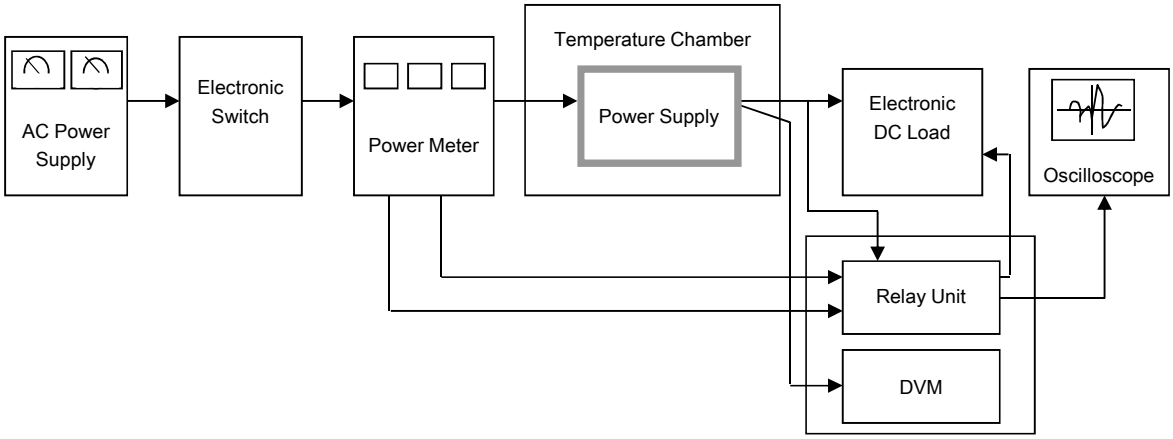
1. Graph



Note:
Hatched line shows the range of the rated operating temperature.

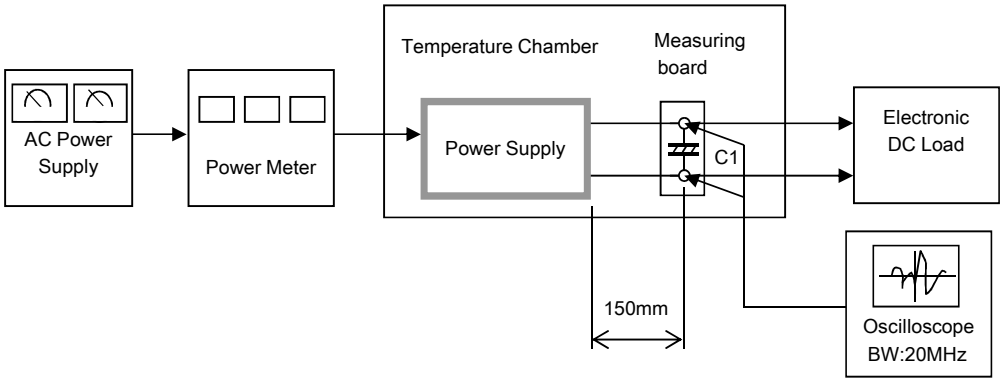
2. Values

Ambient Temperature [°C]	Operating Point [V]	
	Input Volt. 100[V]	Input Volt. 230[V]
-30	17.25	17.25
-20	17.25	17.25
0	17.31	17.31
25	17.31	17.31
50	17.31	17.31
70	17.31	17.31
--	-	-
--	-	-
--	-	-
--	-	-
--	-	-



Data Acquisition/Control Unit

Figure A



C1= 22 μF
(Electrolytic capacitor)

Figure B