

CA216-01-01

MODEL		ITEMS		CUS1600M-12	CUS1600M-24	CUS1600M-36	CUS1600M-48
INPUT							
Input Voltage Range & Input Frequency (*2)		-	85 - 265VAC (47 - 63Hz)				
Efficiency (Typ.) (*12)	115VAC	%	91.2	92	92.3	91.8	
	230VAC	%	93.2	94.5	94.8	94	
Input Current (Typ.) (*1)	115VAC	A	12	16	16	16	
	230VAC	A	6	8	8	8	
Inrush Current (Typ.) (*1)(*3)	115/230VAC	A	50A / 50A at Cold Start				
Power Factor (Typ.) (*1)	115/230VAC	-	0.99/0.95				
Leakage Current (*10)		-	0.25mA max @ 265VAC, 60Hz				
OUTPUT							
Nominal Output Voltage		V	12	24	36	48	
Output Voltage Initial Set Accuracy		-	+/- 1%				
Output Voltage Adjustment Range (*1)(*4)		V	11.7 ~ 12.6	23.4 ~ 26.0	35.1 ~ 39.0	46.8 ~ 52.0	
Maximum Output Current		A	100.0	66.7	44.5	33.4	
Peak Output Current (*13)		A	133.4	66.7	44.5	33.4	
Maximum Output Power		W	1200.0	1600.8	1602.0	1603.2	
Peak Output Power (*13)		W	1600.8	1600.8	1602.0	1603.2	
Maximum Line Regulation (*4)(*6)		mV	60.0	120.0	180.0	240.0	
Maximum Load Regulation (*4)(*7)		mV	120.0	240.0	360.0	480.0	
Temperature Coefficient (*4)		-	Less than 0.02% / °C				
Maximum Ripple & Noise (*1)(*4)(*5)		mV	240.0	360.0	480.0	480.0	
Hold-up time (Typ.) (*1)		ms	12				
Protective function							
Over Current Protection (*8)		A	140.1	70.1	46.8	35.1	
Over Voltage Protection (*9)		V	13.8 ~ 16.2	27.6 ~ 32.4	41.4 ~ 48.6	55.2 ~ 64.8	
Standby Supply							
Nominal Output Voltage (Typ.) (*14)		V	5				
Maximum Output Current (*14)		A	2				
FUNCTION							
Remote ON/OFF Control (*13)		-	Possible				
Power Good (*13)		-	Possible				
Remote Sensing (*13)		-	Possible				
Parallel Operation		-	None				
Series Operation (*13)		-	Possible				
ENVIRONMENT							
Operating Temperature (*11)		-	-20 to +70°C				
Storage Temperature		-	-40 to +75°C				
Operating Humidity		-	10 to 95%RH (No condensing)				
Storage Humidity		-	10 to 95%RH (No condensing)				
Vibration (*16)		-	At no operating, 10-55Hz (Sweep for 1min.) Maximum 19.6m/s2 X,Y,Z 1 hour each				
Shock (*16)		-	Less than 196m/s ²				
Cooling		-	Forced air by build-in intake fan				
ISOLATION							
Withstand Voltage		-	Input-FG : 2kVAC (20mA) 1x MOPP , Input-Output : 4kVAC (20mA) 2x MOPP Output-FG : 1.5kVAC (20mA) 1x MOPP				
Isolation Resistance		-	More than 100MΩ at 25°C,70%RH, Output - FG : 500VDC				

CUS1600M**SPECIFICATIONS**

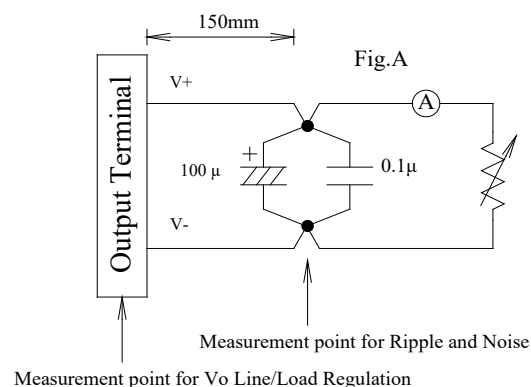
CA216-01-02

MODEL		CUS1600M-12	CUS1600M-24	CUS1600M-36	CUS1600M-48
ITEMS					
STANDARD AND COMPLIANCE					
Safety	-	Approved by IEC/EN62368-1, UL62368-1, CSA62368-1 (Altitude :5000m) Approved by IEC/EN60601-1, ES60601-1, CSA-C22.2 No.60601-1 (Altitude :5000m)			
Conducted Emission	(*1)	Designed to meet EN55011/EN55032-B, FCC-ClassB, VCCI-B			
Radiated Emission	(*1)	Designed to meet EN55011/EN55032-B, FCC-ClassB, VCCI-B			
Harmonic Current	-	Designed to meet IEC61000-3-2,Class A			
Immunity	(*15)	Designed to meet IEC60601-1-2 Ed.4.1, IEC61000-4-2, -3, -4, -5, -6, -8, -11			
Line DIP	-	Designed to meet SEMI-F47 at 200VAC Only			
MECHANICAL					
Weight (Typ.)	kg	1.38			
Size (L x W x H)	mm	203.2x 114.3 x 42.5 (Refer to Outline Drawing)			
OTHERS					
Coating	-	Optional			

*Read instruction manual carefully, before using the power supply unit.

=NOTES=

- *1. At 115VAC/230VAC, Ta=25°C, Nominal output voltage and maximum output power.
- *2. For cases where conformance to various safety specs (UL, CSA, EN) are required, input voltage range will be 100 ~ 240VAC (50-60Hz).
Output derating required when Vin is less than 90VAC, refer to output derating curve for details.
- *3. Not applicable for the in-rush current to Noise Filter for less than 0.2ms.
- *4. Please refer to Fig. A for measurement of Vo, line and load regulation and ripple voltage.
- *5. Ripple & noise are measured at 20MHz by using a 150mm twisted pair of load wires terminated with a 0.1uF and 100uF capacitor.
- *6. 85~265VAC, constant load.
- *7. No load - full load, constant input voltage.
- *8. Hiccup with automatic recovery, however power supply may be latched for protection when output is shorted and manual reset is required (Repower on).
Avoid to operate at over load or short circuit condition.
- *9. OVP circuit shut down the output, manual reset (Repower on) to resume output voltage.
- *10. Measured by the each measuring method of UL, CSA, and EN (at 60Hz), Ta=25°C.
- *11. Refer to output derating curve for details of output derating versus input voltage, output voltage and ambient temperature.
- Load (%) is percent of maximum output power or maximum output current.
- Do not exceed its derating of Maximum Load for both Main Output Channel and Standby Supply.
- *12. At 115VAC/230VAC, Ta=25°C, Nominal output voltage and maximum output power, and Standby Supply at no load.
- *13. Refer to Instruction Manual for details.
- *14. Please refer to various output derating curves for Standby Supply.
- *15. Refer to Immunity Test Data for details.
- *16. Fixed by the 4 mounting holes on the bottom or by the 8 mounting holes on the both sides.



CUS1600M

OUTPUT DERATING

CA216-01-03A

MAIN OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

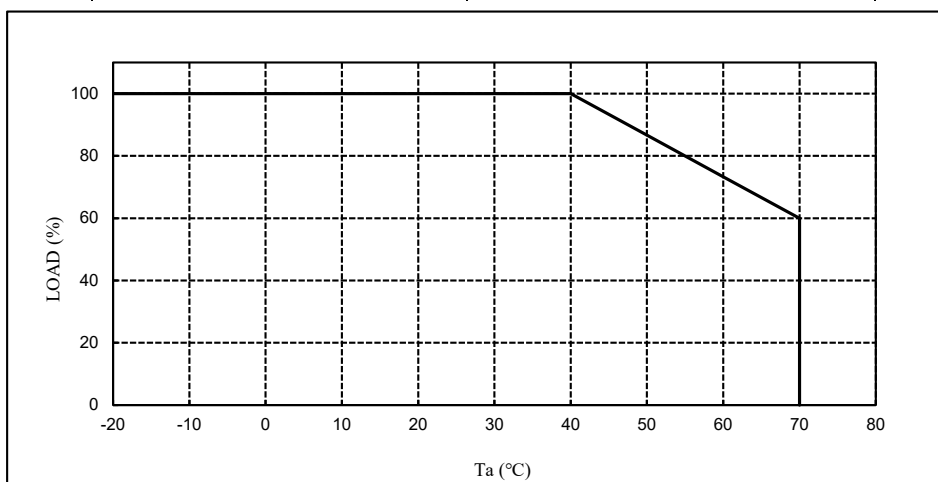
Output derating versus input voltage should be considered. Please refer to the output derating versus input voltage curve for detail.

Load (%) is percent of maximum output power or maximum output current.

If output voltage is raised higher than nominal, maximum power derating versus high output voltage should be considered.

MODEL: CUS1600M-12/24/36/48

Ta (°C)	LOAD (%)
-20 - +40	100
50	86.7
60	73.3
70	60



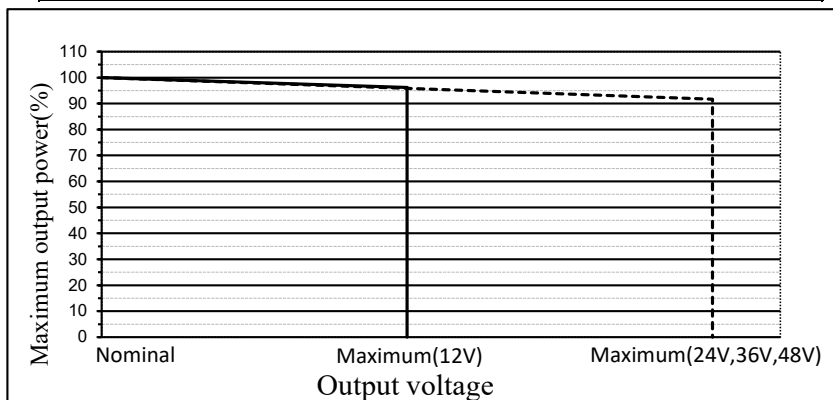
MAIN OUTPUT POWER DERATING VERSUS HIGH OUTPUT VOLTAGE

MODEL: CUS1600M-12

Output voltage	Maximum Output Power (%)
Nominal output voltage	100
Maximum output voltage	95

MODEL: CUS1600M-24/36/48

Output voltage	Maximum Output Power (%)
Nominal output voltage	100
Maximum output voltage	91.7



Note: The maximum voltage of each models.

Model	Maximum Output Voltage
CUS1600M-12	12.6V
CUS1600M-24	26.0V
CUS1600M-36	39.0V
CUS1600M-48	52.0V

CUS1600M

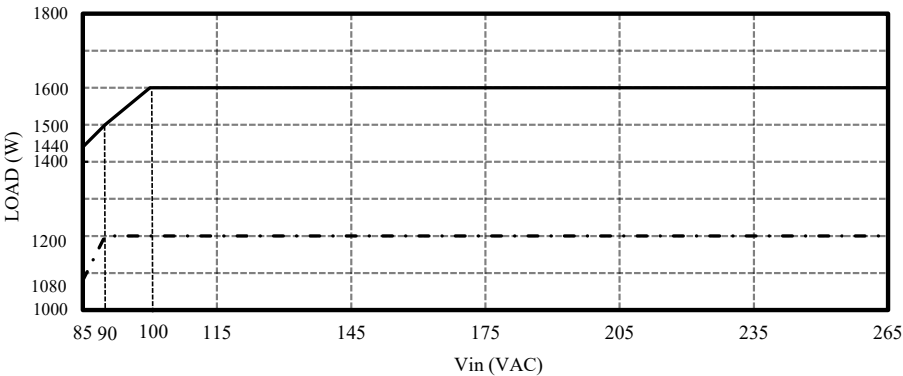
OUTPUT DERATING

CA216-01-04

OUTPUT DERATING VERSUS INPUT VOLTAGE

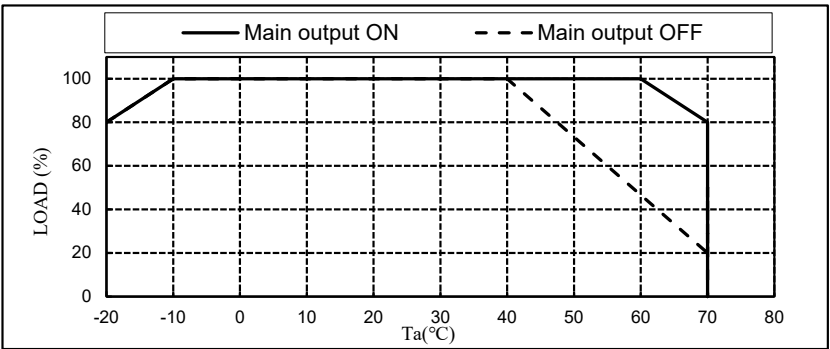
MODEL: CUS1600M-12 - - - - -
MODEL: CUS1600M-24/36/48 _____

Model \ Input	12V	24V	36V	48V
85Vac	1080W 90A	1440W 60A	1440W 40A	1440W 30A
90~100Vac	1200W 100A	1500W 62.5A	1500W 41.7A	1500W 31.25A
100~265Vac	1200W 100A	1600W 66.7A	1600W 44.5A	1600W 33.4A



STANDBY SUPPLY OUTPUT DERATING VERSUS OPERATING AMBIENT TEMPERATURE (Ta)

Ta (°C)	LOAD (%)	
	Main output ON	Main output OFF
-20	80	80
-10 ~ 40	100	100
50	100	73.3
60	100	46.7
70	80	20



MOUNTING METHOD

