HMS150

SPECIFICATIONS

A278-01-01

	ITEMS / MODEL			HMS150 -5	HMS150 -12	HMS150 -15	HMS150 -24	HMS150 -48
1	Nominal Output Voltage		V	5	12	15	24	48
2	Maximum Output Current		A	30	13	10	6.5	3.3
3	Maximum Output Power		W	150.0	156.0	150.0	156.0	158.4
4	Efficiency (Typ.) (*1)	100VAC	%	85	85	86	88	89
		200VAC	%	87	88	89	90	91
5	Input Voltage Range (*2)		-	85 - 265VAC (47 - 63Hz) or 80 - 370VDC 75-85VAC : Operation time within 20 seconds.				
6	Input Current (Typ.) (*1)		A	1.9/0.95				
7	Inrush Current (Typ.) (*1)(*3)		-	14A at 100VAC, 28A at 200VAC, Ta=25°C, Cold Start				
8	PFHC		-	Designed to meet IEC61000-3-2				
9	Power Factor (Typ.) (*1)		-	0.98/0.93				
10	Output Voltage Range		V	4.0 - 6.4	9.0 - 14.4	12.0 - 18.0	19.2 - 28.8	38.4 - 52.8
11	Maximum Ripple & Noise	0≤Ta≤70°C	mV	120	150	150	150	200
	(*4)	-10≤Ta<0°C	mV	160	180	180	180	240
12	Maximum Line Regulation (*5)		mV	20	48	60	96	192
13	Maximum Load Regulation (*6)		mV	40	96	120	150	240
14	Temperature Coefficient		-	Less than 0.02% / °C				
15	Over Current Protection (*7)		A	31.5 ≤	13.6 ≤	10.5 ≤	6.82 ≤	3.46 ≤
16	Over Voltage Protection (*8)		V	6.67 - 7.73	15.0 - 17.4	18.8 - 21.8	30.0 - 34.8	55.2 - 64.8
17	Hold-up Time (Typ.) (*1)		-	20ms				
18	Leakage Current (*9)		-	Less than 0.5mA. 0.2mA (Typ) at 100VAC / 0.4mA (Typ) at 230VAC				
19	Remote Sensing		-	Possible				
20	Remote ON/OFF Control		-	-				
21	Parallel Operation		-	-				
22	Series Operation		-	Possible				
23	Operating Temperature (*10)		-	-10 to +70°C (-10 to +50°C:100%, +60°C:60%, +70°C:20%)				
24	Operating Humidity		-	30 to 90%RH (No Condensing)				
25	Storage Temperature		-	-30 to +85°C				
26	Storage Humidity		-	10 to 95%RH (No Condensing)				
27	Cooling		-	Convection Cooling				
28	Withstand Voltage		-	Input - FG : 2kVAC (20mA), Input - Output : 3kVAC (20mA) Output - FG : 500VAC (20mA) for 1min				
29	Isolation Resistance		-	More than 100MΩ at 25°C and 70%RH Output - FG : 500VDC				
30	Vibration		-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s^2 Constant, X,Y,Z 1hour each.				
31	Shock		-	Less than 196.1m/s^2				
32	Line DIP		-	Designed to meet SEMI-F47 (200VAC Line only)				
33	Conducted Emission (*11)		-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B				
34	Radiated Emission (*11)		-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B				
35	Immunity (*11)		-	Designed to meet IEC61000-6-2 IEC61000-4-2, -3, -4, -5, -6, -8, -11				
36	Weight (Typ)		-	520g				
37	Size (W x H x D)		mm	42 x 82 x 160 (Refer to Outline Drawing)				

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

=NOTES=

*1. At 100VAC/200VAC, Ta=25°C, nominal output voltage and maximum output power.

*2. Output derating needed when input voltage less than 95VDC and 90VAC.
Refer to OUTPUT DERATING CURVE.(A278-01-02_, A278-01-03_)

*3. Not applicable for the inrush current to Noise Filter for less than 0.2ms.

*4. Measure with JEITA RC-9131B probe, Bandwidth of scope :100MHz.

*5. 85 - 265VAC, constant load.

*6. No load-Full load, constant input voltage.

*7. 5V : Constant current limit and Hiccup with automatic recovery.
12V - 48V : Constant current limit with automatic recovery.
Avoid to operate at over load or short circuit condition.

*8. OVP circuit will shut down output, manual reset (Re power on).

*9. Measured by the each measuring method of IEC60950-1 (at 60Hz), Ta=25°C.

*10. Output Derating
- Derating at standard mounting. Refer to OUTPUT DERATING CURVE.(A278-01-02_, A278-01-03_)
- Load (%) is percent of maximum output power or maximum output current, do not exceed its derating of maximum load.

*11. The power supply is considered a component which will be installed into a final equipment.
The final equipment should be re-evaluated that it meets EMC directives.

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OUTPUT DERATING (AC INPUT)

A278-01-02

・Derating to input voltage : 85VAC ≦ Vin ≦ 265VAC

Ta(°C)	LOAD(%) MOUNTING A	LOAD(%) MOUNTING B,C,D
-10 to +30	100	100
50	100	60
60	60	35
70	20	10

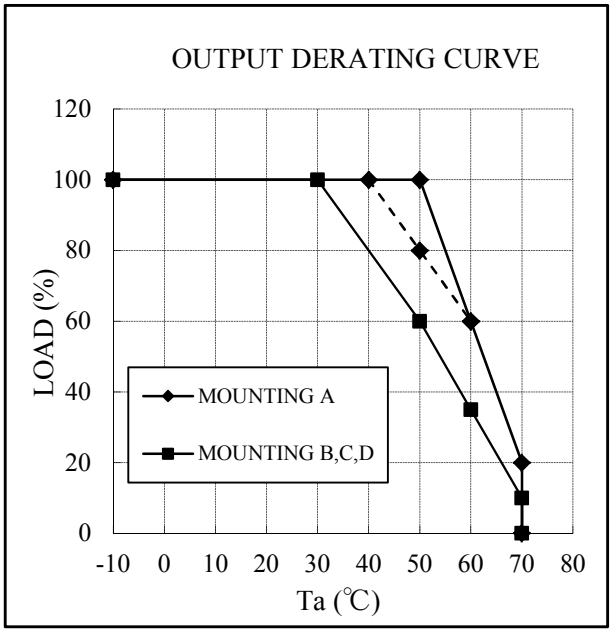
・Derating to input voltage : 75VAC ≦ Vin < 85VAC *1

Ta(°C)	LOAD(%) MOUNTING A	LOAD(%) MOUNTING B,C,D
-10 to +50	60	60
60	60	35
70	20	10

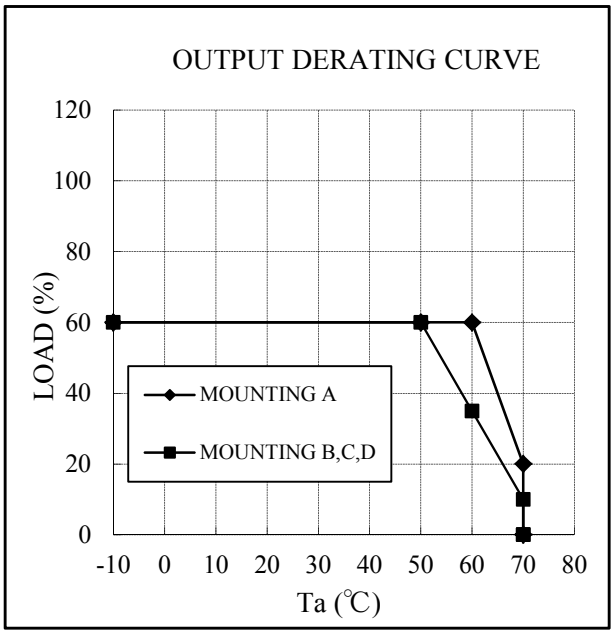
*1. Operation time within 20 seconds.

・Derating to input voltage : 85VAC ≦ Vin ≦ 265VAC

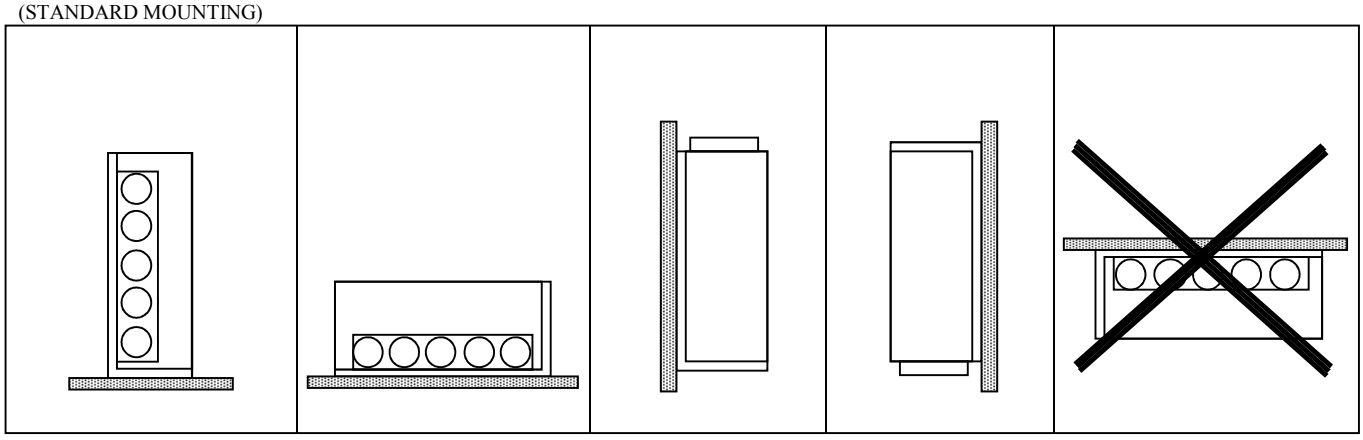
*Refer to dotted line for output derating curve, when input voltage range is "85≦Vin<90" for the MOUNTING A.



・Derating to input voltage : 75VAC ≦ Vin < 85VAC



MOUNTING A (STANDARD MOUNTING) | MOUNTING B | MOUNTING C | MOUNTING D | DON'T USE



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OUTPUT DERATING (DC INPUT)

A278-01-03

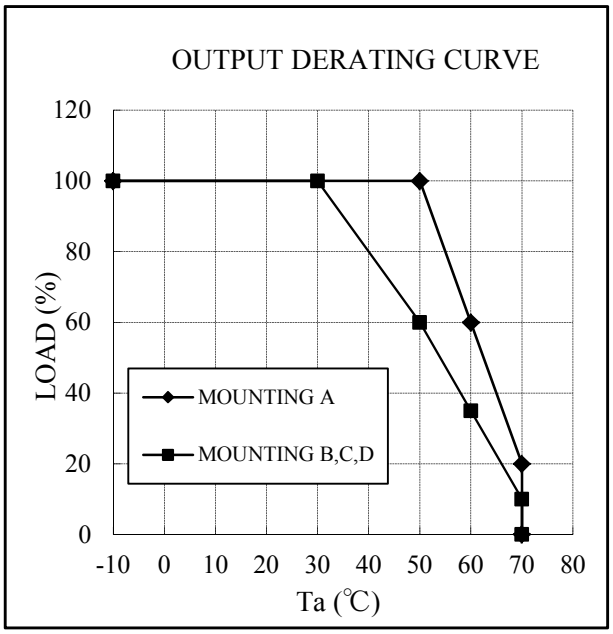
・Derating to input voltage : 95VDC ≦ Vin ≦ 370VDC

Ta(°C)	LOAD(%) MOUNTING A	LOAD(%) MOUNTING B,C,D
-10 to +30	100	100
50	100	60
60	60	35
70	20	10

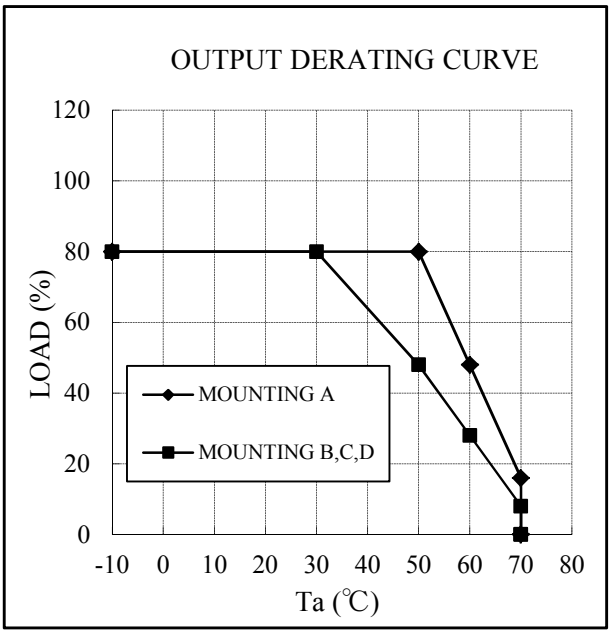
・Derating to input voltage : 80VDC ≦ Vin < 95VDC

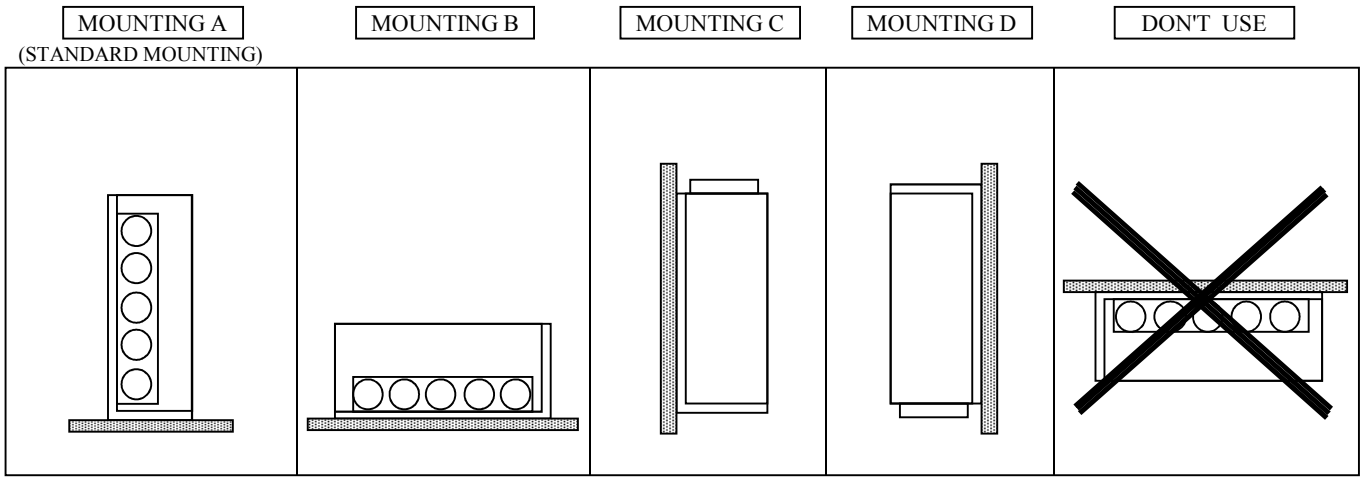
Ta(°C)	LOAD(%) MOUNTING A	LOAD(%) MOUNTING B,C,D
-10 to +30	80	80
50	80	48
60	48	28
70	16	8

・Derating to input voltage : 95VDC ≦ Vin ≦ 370VDC



・Derating to input voltage : 80VDC ≦ Vin < 95VDC





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