DENSEI-LAMBDA

HK15A

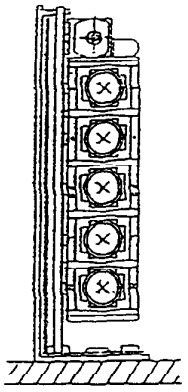
SPECIFICATIONS

PA777-01-01 A

	Item		Model	HK15A-5	HK15A-12	HK15A-15	HK15A-24
1	Nominal Output Voltage		V	5	12	15	24
2	Maximum Output Current		A	3.0	1.3	1.0	0.7
3	Maximum Output Power		W	15.0	15.6	15.0	16.8
4	Efficiency (Typ)	(*1)	%	69	74	75	77
5	Input Voltage Range	(*2)	-	85-132VAC (47-440Hz) or 110-175VDC			
6	Input Current (Typ)	(*1)	-	0.4A at 100VAC			
7	Inrush Current (Typ)		-	30A at 100VAC			
8	Output Voltage Range		-	±10%			
9	Maximum Ripple & Noise		mV	120	150	150	150
10	Maximum Line Regulation	(*3)	mV	20	48	60	96
11	Maximum Load Regulation	(*4)	mV	40	96	120	150
12	Over Current Protection	(*5)	-	105%～			
13	Over Voltage Protection	(*6)	-	115%～			
14	Hold-Up Time (Typ)	(*1)	-	20ms			
15	Series Operation		-	Possible			
16	Operating Temperature	(*7)	-	0℃ to +50℃ (100%), 60℃ (50%)			
17	Operating Humidity		-	30% to 90% RH			
18	Storage Temperature		-	-30℃ to +85℃			
19	Storage Humidity		-	10% to 95% RH			
20	Cooling		-	Convection Cooled			
21	Temperature Coefficient	(*8)	-	1% (Typ) at 0℃ to +50℃			
22	Withstand Voltage	(*9)	-	Input - Chassis , Input - Output : 2kVAC (20mA) Output Chassis : 500VAC (100mA) for 1min			
23	Isolation Resistance		-	More than 100M Ohm at 25℃ and 70%RH Output-FG 500VDC			
24	Vibration		-	10-55Hz (sweep 1 min) less than 19.6m/s^2 X, Y, Z 1 h each			
25	Shock		-	Less than 196.1m/s^2			
26	Safety		-	Built to meet UL1950, CSA234 & DENTORI			
27	Conducted Radio Noise		-	Built to meet FCC class B, VCCI - B			
28	Weight		-	170g			
29	Size (W.H.D.)		mm	23.5 . 68 . 80 (Refer to Outline Drawing)			

* NOTES :

1 : At 100VAC and Maximum Output Power, Ta = 25℃
2 : For cases where conformance to various safety specs (UL, CSA) are required to be described as 100 - 120VAC, 50/60Hz on name plate.
3 : From 85 to 132VAC or 110 to 175VDC. constant load.
4 : From No Load to Full Load, constant input voltage.
5 : Current limiting with automatic recovery.
Avoid to operate over load or dead short for more than 30 seconds.
6 : Over voltage clamping by zener diode.
7 : At standard mounting (vertical).
8 : Constant input voltage & load.
9 : Refer to instruction manual for testing procedure.



Standard Mounting

DENSEI-LAMBDA

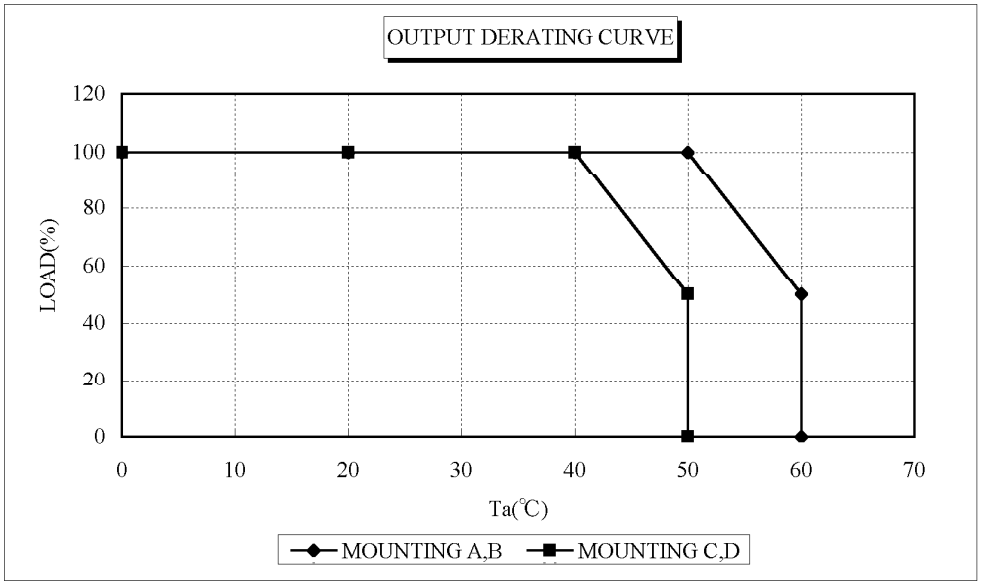
OUTPUT DERATING

PA777-01-02B

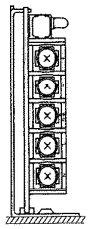
HK15A

* COOLING : CONVENTION COOLING

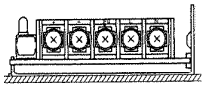
Ta(−C)	LOAD(%)			
	MOUNTING A	MOUNTING B	MOUNTING C	MOUTING D
0	100	100	100	100
20	100	100	100	100
40	100	100	100	100
50	100	100	50	50
60	50	50	-	-



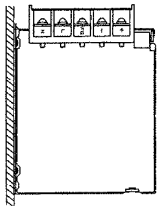
MOUNTING A



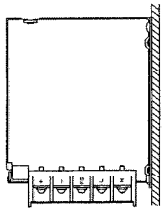
MOUNTING B



MOUNTING C



MOUNTING D



DENSEI-LAMBDA

HK15A

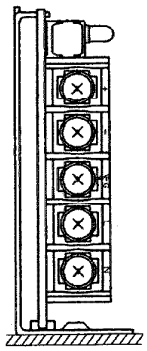
SPECIFICATIONS

PA777-01-03 A

	Item	Model	HK15A-3
1	Nominal Output Voltage	-	3.3V
2	Maximum Output Current	-	3.0A
3	Maximum Output Power	-	9.9W
4	Efficiency (Typ) (*1)	-	66%
5	Input Voltage Range (*2)	-	85-132VAC (47-440Hz) or 110-175VDC
6	Input Current (Typ) (*1)	-	0.3A at 100VAC
7	Inrush Current (Typ)	-	30A at 100VAC
8	Output Voltage Range	-	±10%
9	Maximum Ripple & Noise	-	120mV
10	Maximum Line Regulation (*3)	-	20mV
11	Maximum Load Regulation (*4)	-	40mV
12	Over Current Protection (*5)	-	105% ~
13	Over Voltage Protection (*6)	-	115% ~
14	Hold-Up Time (Typ) (*1)	-	20ms
15	Series Operation	-	Possible
16	Operating Temperature (*7)	-	0℃ to +50℃ (100%), 60℃ (50%)
17	Operating Humidity	-	30% to 90% RH
18	Storage Temperature	-	-30℃ to +85℃
19	Storage Humidity	-	10% to 95% RH
20	Cooling	-	Convection Cooled
21	Temperature Coefficient (*8)	-	1% (Typ) at 0℃ to +50℃
22	Withstand Voltage (*9)	-	Input - Chassis , Input - Output : 2kVAC (20mA) Output - Chassis : 500VAC (100mA) for 1min
23	Isolation Resistance	-	More than 100M Ohm at 25℃ and 70%RH Output-FG 500VDC
24	Vibration	-	10-55Hz (sweep 1 min) less than 19.6m/s^2 X, Y, Z 1 h each
25	Shock	-	Less than 196.1m/s^2
26	Safety	-	Built to meet UL1950, CSA234 & DENTORI
27	Conducted Radio Noise	-	Built to meet FCC class B, VCCI - B
28	Weight	-	170g
29	Size (W.H.D.)	mm	23.5 . 68 . 80 (Refer to Outline Drawing)

* NOTES :

1 : At 100VAC and Maximum Output Power, Ta = 25℃
2 : For cases where conformance to various safety specs (UL, CSA) are required to be described as 100 - 120VAC, 50/60Hz on name plate.
3 : From 85 to 132VAC or 110 to 175VDC, constant load.
4 : From No Load to Full Load, constant input voltage.
5 : Current limiting with automatic recovery.
Avoid to operate over load or dead short for more than 30 seconds.
6 : Over voltage clamping by zener diode.
7 : At standard mounting (vertical).
8 : Constant input voltage & load.
9 : Refer to instruction manual for testing procedure.



Standard Mounting

DENSEI-LAMBDA

HK15A

SPECIFICATIONS

PA777-01-04 A

	ITEMS / MODEL			HK15A-28
1	Nominal Output Voltage		-	28V
2	Maximum Output Current		-	0.6A
3	Maximum Output Power		-	16.8W
4	Efficiency (Typ)	(*1)	-	77%
5	Input Voltage Range	(*2)	-	85～132VAC(47～440Hz) or 110～175VDC
6	Input Current (Typ)	(*1)	-	0.4A at 100VAC
7	In-rush Current (Typ)		-	30A at 100VAC
8	Output Voltage Range		-	±10%
9	Maximum Ripple & Noise		-	200mV
10	Maximum Line Regulation	(*3)	-	112mV
11	Maximum Load Regulation	(*4)	-	160mV
12	Over Current Protection	(*5)	-	105%～
13	Over Voltage Protection	(*6)	-	115%～
14	Hold-Up Time (Typ)	(*1)	-	20ms
15	Series Operation		-	Possible
16	Operating Temperature	(*7)	-	0℃ to +50℃(100%), 60℃(50%)
17	Operating Humidity		-	30% to 90% RH
18	Storage Temperature		-	-30℃ to +85℃
19	Storage Humidity		-	10% to 95% RH
20	Cooling		-	Convection Cooled
21	Temperature Coefficient	(*8)	-	1%(Typ) at 0℃ to +50℃
22	Withstand Voltage	(*9)	-	Input-Chassis, Input-Output : 2kVAC (20mA) Output-Chassis : 500VAC (100mA) for 1min.
23	Isolation Resistance		-	More than 100MΩ at 25℃ and 70% RH Output-FG 500VDC
24	Vibration		-	10-55Hz (sweep 1 min) less than 19.6m/s^2 X,Y,Z 1 h each
25	Shock		-	Less than 196.1m/s^2
26	Safety		-	Built to meet UL1950, CSA234 & DENTORI
27	Conducted Radio Noise		-	-
28	Weight		-	170g
29	Size (W・H・D)		mm	23.5×68×80 (Refer to Outline Drawing)

==NOTES==

*1: At 100VAC & Maximum Output Power,Ta = 25 ℃ .

*2: For cases where conformance to various safety specs (UL,CSA) are required to be described as 100-120VAC, 50/60Hz on name plate.

*3: From 85 to 132VAC or 110 to 175VDC, constant load.

*4: From No load to Full load, constant input voltage.

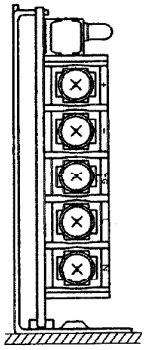
*5: Current limiting with automatic recovery.
Avoid to operate over load or dead short for more than 30 seconds.

*6: Over voltage clamping by zener diode.

*7: At standard mounting (vertical).

*8: Constant input voltage & load.

*9: Refer to instruction manual for testing procedure.



Standard Mounting