

Linear	Desktop
Enclosed or L Bracket	Open Frame
PCB Mount	Rack Mount Hot Swap

AC-DC Selector

Applications	# of Outputs	Output Power (W)												
		5	10	15	30	50	100	300	500	1000	1500	2500		
High Reliability Industrial (Five Year Warranty)	Single				NNS									
					HWS									
					JWS						LZSA			
	Dual			NND										
	Triple					JWT								
Industrial (Three Year Warranty)	Single & Multiple		HK-A (Single Output, 115VAC input)											
							NV							
				MTW						Vega				
									Alpha					
				LS										
Datacom Commercial (One - Two Year Warranty)	Single		KW, KPS, KM											
			ZWS, ZWSAF, ZWSPAF											
					DT									
					H									
					SC, SC120, ZP					SWS				
	Multiple			KW, KM										
					LWD, LWT									
					H									
					DT									
					SC, ZP									
					ZWD, ZWQ									
Programmable	Single							ZUP						
DIN Rail Mount	Single				DSP, DPP, DLP-PU*									
							DLP							

* See website

Low Cost Linear Power Supplies



RoHS

- ◆ Low Output Ripple
- ◆ Single and Multiple Outputs
- ◆ Excellent Line & Load Regulation
- ◆ Worldwide Voltage Taps

Key Market Segments & Applications

Test & Measurement Burn-in & Test, Automated Test, Instrumentation, Measurement, Detection

Low noise applications
Light Industrial

H Features and Benefits

Feature

- ◆ Industry standard footprint
- ◆ Low Output Ripple
- ◆ Tight regulation
- ◆ Operation up to 70C Ambients

Benefit

- ◆ Availability to second source
- ◆ Reduced system interference
- ◆ Better performance in sensitive equipment
- ◆ Easier system integration

Specifications

ITEMS		
AC Input	-	100/120/220/230/240VAC, 47-63Hz (derate by 10% for 50Hz operation)
Efficiency	-	5V: 45%, 12/15V: 55%, 24V: 60%
Transient Response	-	50us for 50% load change
EMI	-	FCC Class B, VDE0871 Level B
Output Adjustment	-	±5% for all outputs (except outputs 2 & 3 on triple output models)
Remote Sense	-	On all single output models, HDC12 & HDC15, and output 1 of triple output models
Line Regulation	-	±0.05% for 10% line change
Load Regulation	-	±0.05% for 50% load change
Ripple and Noise	-	<3mV peak to peak
Overcurrent Protection	-	Foldback with automatic recovery (Contact factory before adjusting)
Overvoltage Protection	-	Standard on 5V outputs set at 6.2V ±0.4V OVP12 module sold separately for other outputs (see model selector)
Cooling	-	Convection or forced air
Operating Temp. Range	-	0 to +70°C, derate 3%/°C above 50°C
Storage Temperature	°C	-55 to +85°C
Temperature coefficient	-	±0.01% per °C
Humidity	-	5 - 95% RH (non condensing)
Leakage Current	uA	<50uA
Vibration	-	MIL-STD-810C, Method 514
Shock	-	MIL-STD-810C, Method 516
Safety Agency Approval	-	UL60950-1, EN60950-1, CE Mark
Size	-	Please see outline drawings
Warranty	-	Two years

Note: See Installation Manual for full details, test methods of parameters and application notes

Output Ratings

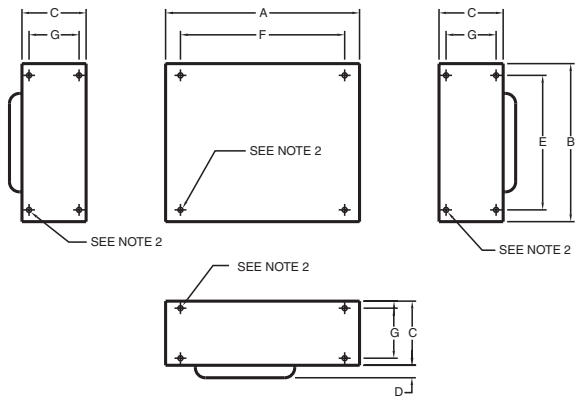
	Model	Output	Output (V)	Max Current (A)	Power (W)
Single Output	HSB5-3-OVP	V1	5	3.0	15.0
	HSC5-6-OVP	V1	5	6.0	30.0
	HSN5-9-OVP	V1	5	9.0	45.0
	HSD5-12-OVP	V1	5	12.0	60.0
	HSB12-1.7	V1	12	1.7	20.4
	HSC12-3.4	V1	12	3.4	40.8
	HSN12-5.1	V1	12	5.1	61.2
	HSB15-1.5	V1	15	1.5	22.5
	HSC15-3	V1	15	3.0	45.0
	HSN15-4.5	V1	15	4.5	67.5
	HSB24-1.2	V1	24	1.2	28.8
	HSC24-2.4	V1	24	2.4	57.6
	HSN24-3.6	V1	24	3.6	86.4
	HSD24-4.8	V1	24	4.8	115.2
	HSB28-1.0	V1	28	1.0	28.0
	HSC28-2.0	V1	28	2.0	56.0
HSN28-3.0	V1	28	3.0	84.0	
HSD28-4.0	V1	28	4.0	112.0	
Dual Output	HDA12-15	V1	+12/15	1.0/0.8	24.0
		V2	-12/15	1.0/0.8	
	HDB12-15	V1	+12/15	1.8/1.5	40.0
		V2	-12/15	1.8/1.5	
HDC12	V1	12*	3.4	80.0	
	V2	12*	3.4		
HDC15	V1	15*	3.0	80.0	
	V2	15*	3.0		
Triple Output	HTC1	V1	5*	3.0	40.0
		V2	+12/15	1.0/0.8	
		V3	-12/15	1.0/0.8	
HTD1	V1	5*	6.0	70.0	
	V2	+12/15	1.7/1.5		
	V3	-12/15	1.7/1.5		
Accessories	OVP12 Adjustable		6.2-34V, 8A continuous, 12A peak		

* Isolated Outputs

Other Lambda Industrial Products

HWS	15 to 1800W single output (switching)
NNS	15 to 90W high reliability (linear)
ZWS	5 to 150W single output, universal input (switching)
VSB & VSC	10 to 150W single output, 115VAC input (switching)

H Outline Drawing



DIMENSIONS:

MODEL	A	B	C	D	E	F	G
HSB A	4.881 (124.0)	3.976 (101.0)	1.614 (41.0)	.314 (8.0)	3.385 (86.0)	4.13 (105.0)	-
	4.881 (124.0)	5.629 (143.0)	2.480 (63.0)	.472 (12.0)	4.881 (124.0)	4.13 (105.0)	1.28 (32.5)
HSC B	4.881 (124.0)	7.007 (178.0)	2.755 (70.0)	.472 (12.0)	6.259 (159.0)	4.13 (105.0)	1.259 (32.0)
	4.881 (124.0)	8.818 (224.0)	2.755 (70.0)	.590 (15.0)	7.992 (203.0)	4.13 (105.0)	1.259 (32.0)
HSN C	4.881 (124.0)	6.496 (165.0)	1.653 (42.0)	.314 (8.0)	5.748 (146.0)	3.38 (86.0)	-
	4.881 (124.0)	7.007 (178.0)	2.755 (70.0)	.472 (12.0)	6.259 (159.0)	4.13 (105.0)	1.259 (32.0)
HSD I	4.881 (124.0)	8.818 (224.0)	2.755 (70.0)	.590 (15.0)	7.992 (203.0)	4.13 (105.0)	1.259 (32.0)
	4.881 (124.0)	8.818 (224.0)	2.755 (70.0)	.590 (15.0)	7.992 (203.0)	4.13 (105.0)	1.259 (32.0)
HDA H	4.881 (124.0)	10.236 (260.0)	2.519 (64.0)	.314 (8.0)	9.251 (235.0)	3.38 (86.0)	1.259 (32.0)
	4.881 (124.0)	11.023 (280.0)	2.755 (70.0)	.590 (15.0)	7.480 (190.0)	4.13 (105.0)	1.259 (32.0)
HDB D	4.881 (124.0)	7.007 (178.0)	2.755 (70.0)	.472 (12.0)	6.259 (159.0)	4.13 (105.0)	1.259 (32.0)
	4.881 (124.0)	8.818 (224.0)	2.755 (70.0)	.590 (15.0)	7.992 (203.0)	4.13 (105.0)	1.259 (32.0)
HDC I	4.881 (124.0)	10.236 (260.0)	2.519 (64.0)	.314 (8.0)	9.251 (235.0)	3.38 (86.0)	1.259 (32.0)
	4.881 (124.0)	11.023 (280.0)	2.755 (70.0)	.590 (15.0)	7.480 (190.0)	4.13 (105.0)	1.259 (32.0)
HTC F	4.881 (124.0)	11.023 (280.0)	2.755 (70.0)	.590 (15.0)	7.480 (190.0)	4.13 (105.0)	1.259 (32.0)
	4.881 (124.0)	11.023 (280.0)	2.755 (70.0)	.590 (15.0)	7.480 (190.0)	4.13 (105.0)	1.259 (32.0)
HTD G	4.881 (124.0)	11.023 (280.0)	2.755 (70.0)	.590 (15.0)	7.480 (190.0)	4.13 (105.0)	1.259 (32.0)
	4.881 (124.0)	11.023 (280.0)	2.755 (70.0)	.590 (15.0)	7.480 (190.0)	4.13 (105.0)	1.259 (32.0)

WEIGHT:

MODEL	LBS
HSB	1.98
HSC	3.96
HSN	5.94
HSD	7.48
HDA	1.98
HDB	3.96
HDC	7.48
HTC	5.06
HTD	7.92

NOTE:
 1. DIMENSIONS ARE IN INCHES EXCEPT DIMENSIONS () ARE IN MM.
 2. .188 (4.8) HOLES FOR CUSTOMER MTG.