

International + Linears

Summary:

- World-wide ac input ranges and safety standards
- Industry standard packages
- Commercial UL/CSA TUV/IEC approved—models to UL/CSA 60950; EN/IEC60950-1
- Burn-in with cycling; 3-year warranty
- Capacitors have highest CV & ripple current ratings
- Medical Approved to UL2601-1/60601-1, IEC60601-1 and CSA601.1
- Medical leakage 10 μ A
- MTBF 200,000+ hours per MIL-HDBK-217D (most units)
- All electrolytic caps rated at 105°C
- Transformer insulation meets Class F (155°C)
- Exceed FCC and CISPR22, Class B conducted emissions
- RoHS Compliant models available (G suffix)
- CE marked to LVD



SPECIFICATIONS

Ac Input
100, 120 and 240 Vac: +10%, -13%; 215 Vac: +12%, -11%; 47 to 63Hz. Tolerance for 230 Vac operation is +15%, -10%. Derate output current 10% for 50 Hz operation.

Dc Output
See voltage rating chart. Adjustment range $\pm 5\%$ minimum except HA series.

Line Regulation
 $\pm 0.05\%$ for a 10% change.

Load Regulation
 $\pm 0.05\%$ for a 50% load change.

Output Ripple
3 mV +0.05% of output voltage, peak to peak maximum. All "3-terminal regulator" outputs: 3 mV +0.2% peak to peak maximum.

Transient Response
<50 microseconds for 50% load change.

Short Circuit Protection
Automatic current limit/foldback.

Overvoltage Protection
Built-in on all 5 V models, set at 6.2 V ± 0.4 V. Other models use optional over-voltage protection.

Remote Sensing

Provided on all models; open sense lead protection built-in (except HA & HTAA series).

Stability

$\pm 0.05\%$ for 24 hours after warmup.

Temperature Rating

0 to 50°C full rated, derated linearly to 40% at 70°C.

Temperature Coefficient

$\pm 0.01\%/^{\circ}\text{C}$ maximum.

Efficiency

5 V units: 45%; 12 and 15 V units: 55%; 20 and 24 V units: 60%.

Logic Inhibit and Current-Share

F & G models.

Medical Shock and Vibration

Per Mil-Std-810D, Method 514.3, Category 1, Procedure 1.
Per Mil-Std-810D, Method 516.3, Procedure III.

Storage

-40 to +85 $^{\circ}\text{C}$.

Commercial Model (Single)	Medical Model	Voltage	Current	Case
HB2-3-A+G		2 V	3 A	B
HC2-6-A+G		2 V	6 A	C
HE2-18-A+G		2 V	18 A	E
	ML5-1-OV-A	5 V	1.0 A	L
HA5-1.5-OV-A+G		5 V	1.5 A	B
HB5-3-OV-A+G		5 V	3 A	B
HC5-6-OV-A+G		5 V	6 A	C
HN5-9-OV-A+G		5 V	9 A	N
HD5-12-OV-A+G		5 V	12 A	D
HE5-18-OV-A+G		5 V	18 A	E
F5-25-OV-A+*G		5 V	25 A	F
G5-35-OV-A+ *(1)		5 V	35 A	G
CP197-A+G		5 V	50 A	G
	ML12-0.5-A	12 V	0.5 A	L
HA15-0.9-A+ (12 V)G		12 V	0.9 A	B
HB12-1-7-A+G	MB12-1-7-A	12 V	1.7 A	B
HC12-3.4-A+G	MC12-3.4-A	12 V	3.4 A	C
HN12-5.1-A+G		12 V	5.1 A	N
HD12-6.8-A+G	MD12-6.8-A	12 V	6.8 A	D
HE12-10-2-A+G		12 V	10.2 A	E
	ML15-0.4-A	15 V	.4 A	L
HA15-0.9-A+G		15 V	0.9 A	B
HB15-1.5-A+G	MB15-1.5-A	15 V	1.5 A	B
HC15-3-A+G	MC15-3-A	15 V	3 A	C
HN15-4.5-A+G		15 V	4.5 A	N
HD15-6-A+G	MD15-6-A	15 V	6 A	D
HE15-9-A+G *		15 V	9 A	E
F15-15-A+G *		15 V	15 A	F
HA24-0.5-A+G		24 V	0.5 A	B
HB24-1.2-A+G	MB24-1.2-A	24 V	1.2 A	B
HC24-2.4-A+G	MC24-2.4-A	24 V	2.4 A	C
HN24-3.6-A+G		24 V	3.6 A	N
HD24-4.8-A+G	MD24-4.8-A	24 V	4.8 A	D
HE24-7.2-A+G *		24 V	7.2 A	E
F24-12-A+G *		24 V	12 A	F
HA24-0.5-A+ (28 V)G		28 V	0.5 A	B
HB28-1-A+G	MB28-1-A	28 V	1 A	B
HC28-2-A+G	MC28-2-A	28 V	2 A	C
HN28-3-A+G		28 V	3 A	N
HD28-4-A+G	MD28-4-A	28 V	4 A	D
HE28-6-A+G *		28 V	6 A	E
F24-12-A+(28 V)G *		28 V	10 A	F
HB48-0.5-A+G		48 V	0.5 A	B
HC48-1-A+G		48 V	1 A	C
HD48-3-A+G **		48 V	3 A	D
HE48-4-A+G		48 V	4 A	E
F48-6-A+G *		48 V	6 A	F

Notes:

1. All single output models have isolated outputs.
2. Model G5-50-OV-A+ not RoHS compliant

Commercial Model (Dual)	Medical Model	Output 1	Output 2	Case
HAA5-1.5-OV-A+G		5 V @ 1.5 A	5 V @ 1.5 A	AA
HBB5-3-OV-A+G		5 V @ 3 A	5 V @ 3 A	BB
HCC5-6-OV-A+G		5 V @ 6 A	5 V @ 6 A	CC
HAA512-A+G	MAA512-A	5 V @ 2 A	9 to 15 V (adj) @ 0.5 A	AA
HBB512-A+G	MBB512-A	5 V @ 3 A	9 to 15 V (adj) @ 1.2 A	BB
HCC512-A+G **	MCC512-A	5 V @ 6 A	9 to 15 V (adj) @ 2.5 A	CC
HAA524-A+G **	MAA524-A	5 V @ 2 A	18 to 24 V (adj) @ 0.3 A	AA
HBB524-A+G	MBB524-A	5 V @ 3 A	18 to 24 V (adj) @ 0.8 A	BB
HCC524-A+G	MCC524-A	5 V @ 6 A	18 to 24 V (adj) @ 2 A	CC
HAD12-0.4-A+G		+12 V @ 0.4 A	-12 V @ 0.4 A	B
	MLL12-0.25-A	+12 V @ 0.25 A	-12 V @ 0.25 A	L
	MLL15-0.2-A	+15 V @ 0.2 A	-15 V @ 0.2 A	L
HAD15-0.4-A+G		+15 V @ 0.4 A	-15 V @ 0.4 A	B
HAA15-0.8-A+G	MAA15-0.8-A	+15 V @ 0.8 A	-15 V @ 0.8 A ***	AA
HBB15-1.5-A+G	MBB15-1.5-A	+15 V @ 1.5 A	-15 V @ 1.5 A ***	BB
HCC15-3-A+G	MCC15-3-A	+15 V @ 3 A	-15 V @ 3 A ***	CC
HDD15-5-A+G		+15 V @ 5 A	-15 V @ 5 A ***	E
HAA24-0.6-A+G		+18 to 24 V @ 0.4/0.6 A	-18 to 24 V @ 0.4/0.6 A	AA
CP323-A+G		+5 V @ 2 A	+12 V @ 4 A	BB

** May require fan cooling

*** No. 2 output usable at -5 V, rate at 1/2 of 15 V current rating.

Commercial Model (Triple)	Medical Model	Output 1	Output 2	Output 3	Case
	MTLL-5W-A	5 V @ 0.5 A	+12 to 15 V @ 0.1 A	-12 to 15 V @ 0.1 A ***	L
HTAA-16W-A+G	MTAA-16W-A	5 V @ 2 A	+12 to 15 V @ 0.4/0.4 A	-12 to 15 V @ 0.4/0.4 A ***	AA
HBAA40W-A+G	MBAA40W-A	5 V @ 3 A	+12 to 15 V @ 1/0.8 A	-12 to 15 V @ 1/0.8 A ***	BAA
HCB8105W-A+G **		5 V @ 3 A	+12 to 15 V @ 3.4/3.0 A	-12 to 15 V @ 3.4/3.0 A ***	CBB
HCAA60W-A+G	MCAA60W-A	5 V @ 6 A	+12 to 15 V @ 1/0.8 A	-12 to 15 V @ 1/0.8 A ***	D
HCB875W-A+G	MCB875W-A	5 V @ 6 A	+12 to 15 V @ 1.7/1.5 A	-12 to 15 V @ 1.7/1.5 A ***	CBB
CP131-A+G		5 V @ 8 A	+12 to 15 V @ 1.7/1.5 A	-12 to 15 V @ 1.7/1.5 A ***	NBB
HD88105W-A+G *		5 V @ 12 A	+12 to 15 V @ 1.7/1.5 A	-12 to 15 V @ 1.7/1.5 A ***	DBB
HDCC150W-A+G *		5 V @ 12 A	+12 to 15 V @ 3.4/3 A	-12 to 15 V @ 3.4/3 A ***	DCC

*Requires fan cooling

** May require fan cooling

***No. 3 output usable at -5 V, rate at 1/2 of 15 V current rating.

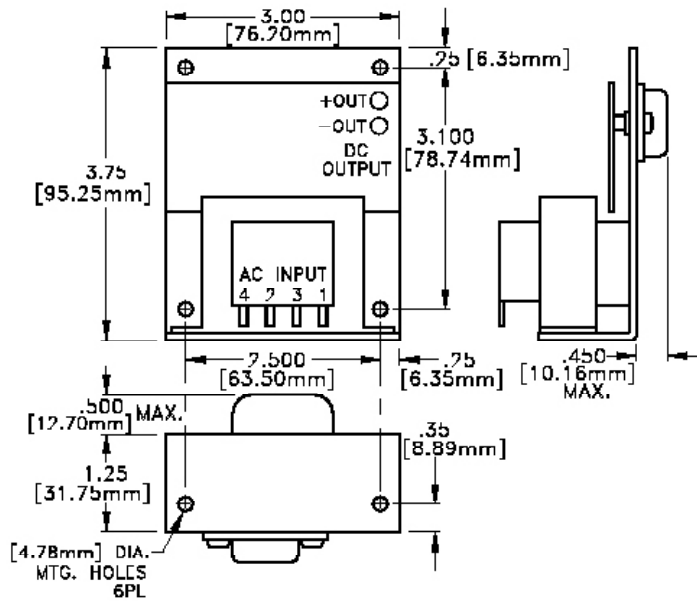
Outputs rated at 9 to 15V, 12 to 15V, or 18 to 24V are user adjustable outputs.

All outputs without + or - sign are isolated outputs and may be referenced as either a positive or negative output.

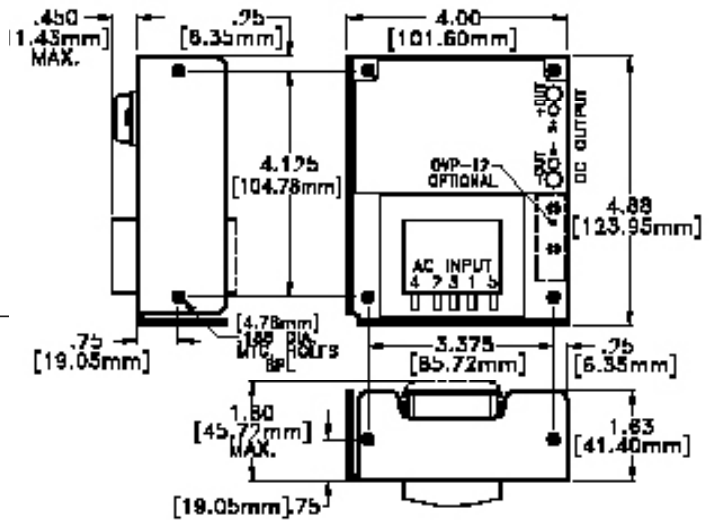
FIXED DISK SERIES

Both models without UL, CSA or TUV

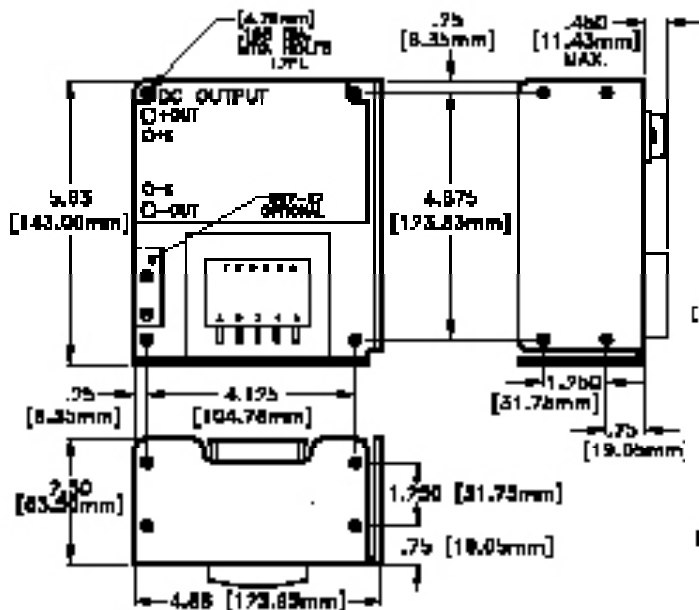
Commercial Model (Dual)	Output 1	Output 2	Output 3	Case
CP379-A+G	+5 V @ 6 A	+ 24 V @ 3.5/6 A PK	-5 or -12 @ 1.2 A	NBB
CP498-A+G	+5 V @ 6 A	+ 12 V @ 5/10 A PK	-12 V @ 0.5 A	NBB



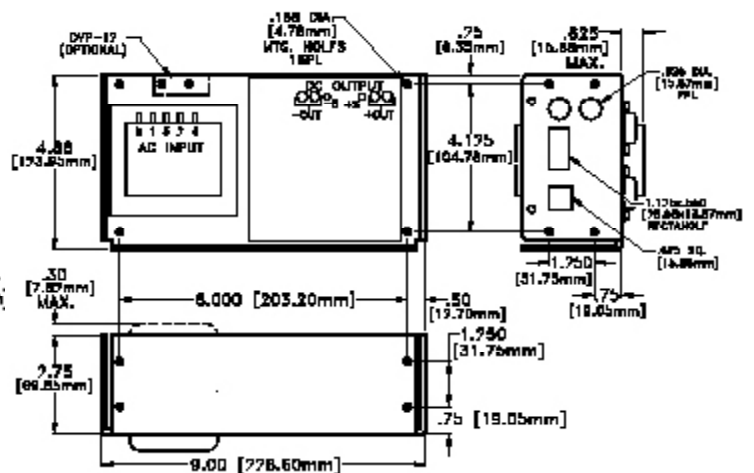
A CASE (WT. 1 LB.)



B CASE (WT. 2 LB.)



C CASE (WT. 4 LB.)



D CASE (WT. 7.5 LB.)

F CASE
(WT. F5: 14 LB.; F15, 24: 18 LB.)

Technical drawing of the front view of the PCB assembly. Dimensions are provided in inches and millimeters. Key features include:

- Top Left:** .718 [5.54mm] DIA. MTG. HOLES (18 PLACES)
- Top Center:** D.C. OUTPUT
- Top Right:** 1.50 [38.10mm] MAX.
- Right Side:** .375 [9.53mm], 4.88 [123.95mm], 4.125 [104.78mm], 2.500 [63.50mm], .675 [16.80mm]
- Bottom Left:** .30 [7.62mm] MAX., 3.50 [88.90mm], CLFARANCE
- Bottom Center:** 16.75 [425.41mm], 16.000 [406.40mm]
- Bottom Right:** .375 [9.53mm], 2.500 [63.50mm], .675 [16.80mm]
- Bottom Right Detail:** DETAIL A-A, showing AC INPUT and 4 pins.

[illegible]

10 [2.54mm] MAX
LEAD PROTRUSION

4.75 [107.95mm]

3.750 [95.25mm]

.25 [6.35mm]

.75 [6.35mm]

1.70 [43.18mm]

7.750 [69.85mm]

3.25 [82.55mm]

.155 [3.96mm] # MTC. HOLFS
4 PLCS.

1 J1 7

OUTPUT 1

OUTPUT 2

OUTPUT 3

OUTPUT 4

OUTPUT 5

OUTPUT 6

OUTPUT 7

OUTPUT 8

OUTPUT 9

OUTPUT 10

OUTPUT 11

OUTPUT 12

OUTPUT 13

OUTPUT 14

OUTPUT 15

OUTPUT 16

OUTPUT 17

OUTPUT 18

OUTPUT 19

OUTPUT 20

OUTPUT 21

OUTPUT 22

OUTPUT 23

OUTPUT 24

OUTPUT 25

OUTPUT 26

OUTPUT 27

OUTPUT 28

OUTPUT 29

OUTPUT 30

OUTPUT 31

OUTPUT 32

OUTPUT 33

OUTPUT 34

OUTPUT 35

OUTPUT 36

OUTPUT 37

OUTPUT 38

OUTPUT 39

OUTPUT 40

OUTPUT 41

OUTPUT 42

OUTPUT 43

OUTPUT 44

OUTPUT 45

OUTPUT 46

OUTPUT 47

OUTPUT 48

OUTPUT 49

OUTPUT 50

OUTPUT 51

OUTPUT 52

OUTPUT 53

OUTPUT 54

OUTPUT 55

OUTPUT 56

OUTPUT 57

OUTPUT 58

OUTPUT 59

OUTPUT 60

OUTPUT 61

OUTPUT 62

OUTPUT 63

OUTPUT 64

OUTPUT 65

OUTPUT 66

OUTPUT 67

OUTPUT 68

OUTPUT 69

OUTPUT 70

OUTPUT 71

OUTPUT 72

OUTPUT 73

OUTPUT 74

OUTPUT 75

OUTPUT 76

OUTPUT 77

OUTPUT 78

OUTPUT 79

OUTPUT 80

OUTPUT 81

OUTPUT 82

OUTPUT 83

OUTPUT 84

OUTPUT 85

OUTPUT 86

OUTPUT 87

OUTPUT 88

OUTPUT 89

OUTPUT 90

OUTPUT 91

OUTPUT 92

OUTPUT 93

OUTPUT 94

OUTPUT 95

OUTPUT 96

OUTPUT 97

OUTPUT 98

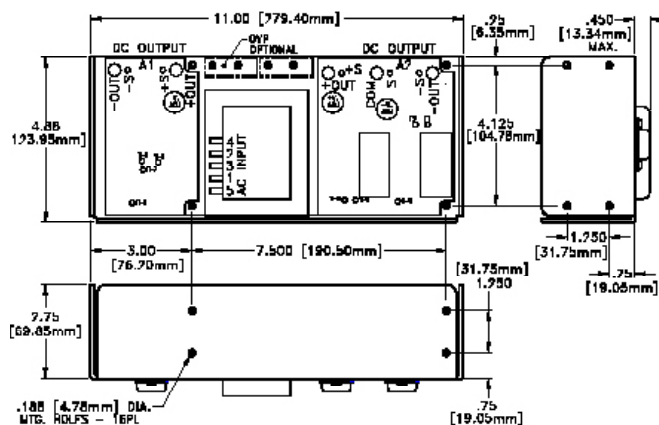
OUTPUT 99

OUTPUT 100

[illegible][illegible]

The drawing shows the mechanical specifications of the DVP-12 power supply unit. The top view indicates a total width of 10.75 inches [260.35mm] and a depth of 4.00 inches [101.60mm]. It features a DC OUTPUT section on the left, an AC INPUT section in the center, and a DC OUTPUT section on the right. The AC INPUT section has a 4-pin connector. The DC OUTPUT section on the right has a 5-pin connector. The side view shows a height of 2.50 inches [63.50mm] and a width of 9.250 inches [234.95mm]. The mounting holes are 1.88 inches [47.8mm] in diameter and there are 16 mounting holes in total. The drawing also shows a 3.375 inch [85.73mm] dimension for the side panel and a 1.250 inch [31.75mm] dimension for the side panel thickness.

CBB CASE (WT. 8 LB.)



DBB CASE (WT. 11 LB.)



DCC CASE (WT. 12 LB.)



NBB CASE (WT. 12 LB.)



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

SL Power:

[MC12-3.4-A](#) [ML5-1-OV-A](#) [MTLL-5W-A](#) [ML15-0.4-A](#) [MD24-4.8-A](#) [MC24-2.4-A](#) [MB24-1.2-A](#) [MBAA40W-A](#) [MLL15-0.2-A](#) [ML12-0.5-A](#) [MCC512-A](#) [MC28-2-A](#) [MCC524-A](#) [MCC15-3-A](#) [MLL12-0.25-A](#) [MB28-1-A](#) [MCAA60W-A](#) [MB12-1.7-A](#) [HA5-1.5-OV-A+G](#) [HA15-0.9-A+G](#) [HA24-0.5-A+G](#) [MBB15-1.5-A](#) [MTAA-16W-AG](#)