

Regulated DC/DC Converter 60Watt

2:1 Input Range

KW60 Series

FEATURES:

- Input/Output Isolation
- Efficiency up to 86% @ FL
- Switching Frequency - 100KHz Min.
- Short Circuit Protection
- Six Sided Shielding
- Compact Size
- Single, Dual, Triple Outputs
- Epoxy Encapsulated

SPECIFICATIONS

INPUT

Voltage Range
 12Vdc Input: 9-18Vdc
 24Vdc Input: 18-36Vdc
 48Vdc Input: 36-72Vdc

OUTPUT

Voltage Accuracy: $\pm 1\%$
 Line Regulation: $\pm 0.1\%$
 Load Regulation: $\pm 0.5\%$
 Ripple & Noise (20MHz BW): 50 mV P-P Max
 Transient Response: < 250 usec
 Protection: Over current protection
 Short circuit protection

GENERAL

Efficiency Up to 86% @ FL
 Isolation Voltage: 500 Vdc Min.
 (Up to 3000 Vdc Min. Optional)
 Isolation Resistance: 100 Mohms
 Switching Frequency: 100KHz Min.

ENVIRONMENTAL

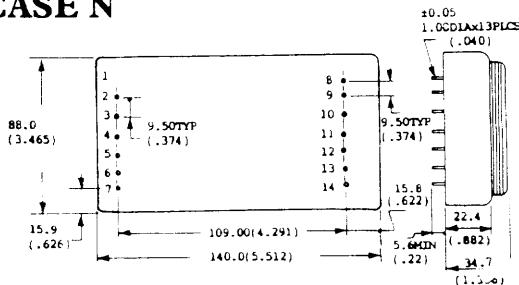
Operating Temperature Range: -25°C to +71°C
 Storage Temperature Range: -50°C to +105°C
 Temperature Coefficient: 0.02%/°C Max
 Cooling: Free air convection
 EMI/RFI: Five-sided shield
 Six-sided shield (optional)

Typical at 25°C under full load and nominal input voltage unless otherwise specified.

60W DC/DC CONVERTER

	INPUT VOLTAGE	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	MODEL NO.	CASE	PRICE 1-9 QTY.
SINGLE OUTPUT	12 VDC (9-18)	5	12000	KW60-12S5	N	\$159.00
		12	5000	KW60-12S12	N	\$159.00
		15	4000	KW60-12S15	N	\$159.00
	24 VDC (18-36)	5	12000	KW60-24S5	N	\$159.00
		12	5000	KW60-24S12	N	\$159.00
		15	4000	KW60-24S15	N	\$159.00
	48 VDC (36-72)	5	12000	KW60-48S5	N	\$159.00
		12	5000	KW60-48S12	N	\$159.00
		15	4000	KW60-48S15	N	\$159.00
DUAL OUTPUT	12 VDC (9-18)	± 5	± 6000	KW60-12-5	N	\$169.00
		± 12	± 2500	KW60-12-12	N	\$169.00
		± 15	± 2000	KW60-12-15	N	\$169.00
	24 VDC (18-36)	± 5	± 6000	KW60-24-5	N	\$169.00
		± 12	± 2500	KW60-24-12	N	\$169.00
		± 15	± 2000	KW60-24-15	N	\$169.00
	48 VDC (36-72)	± 5	± 6000	KW60-48-5	N	\$169.00
		± 12	± 2500	KW60-48-12	N	\$169.00
		± 15	± 2000	KW60-48-15	N	\$169.00
TRIPLE OUTPUT	12 VDC (9-18)	5/+ 12/- 12	6000/2000/500	KW60-12S5-12	N	\$189.00
		+ 5/+ 15/- 15	6000/1500/500	KW60-12S5-15	N	\$189.00
		$\pm 5/12$	$\pm 5500/500$	KW60-12S12-5	N	\$189.00
	24 VDC (18-36)	5/+ 12/- 12	6000/2000/500	KW60-24S5-12	N	\$189.00
		+ 5/+ 15/- 15	6000/1500/500	KW60-24S5-15	N	\$189.00
		$\pm 5/12$	$\pm 5500/500$	KW60-24S12-5	N	\$189.00
	48 VDC (36-72)	5/+ 12/- 12	6000/2000/500	KW60-48S5-12	N	\$189.00
		+ 5/+ 15/- 15	6000/1500/500	KW60-48S5-15	N	\$189.00
		$\pm 5/12$	$\pm 5500/500$	KW60-48S12-5	N	\$189.00

CASE N



Bottom View:
 All Dimensions in mm (inches).

Pin Connections

Pin No.	Pin Function		
	Single	Dual	Triple*
1	No Pin	No Pin	No Pin
2	- Input	- Input	- Input
3	- Input	- Input	- Input
4	+ Input	+ Input	+ Input
5	+ Input	+ Input	+ Input
6	Remote On/Off	Remote On/Off	Remote On/Off
7	Case	Case	Case
8	- Output	On	- Sense
9	- Output	Common	Com1
10	+ Output	+ Output	+ 5Vdc
11	+ Output	+ Output	+ Sense
12	- Sense	Common	+ Output V2
13	Trim	- Output	Com2
14	+ Sense	- Output	- Output V3

* For ± 5 Vdc/12Vdc Triple Voltage Units
 V2 = -5Vdc, V3 = +12Vdc

Low Profile (0.75") 60 Watt High Density DC/DC Converters

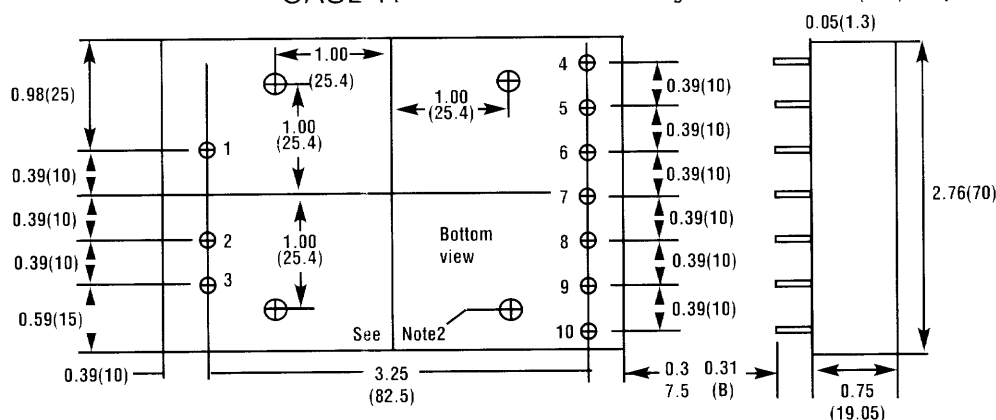
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PIN CONNECTIONS

Pin#	Single Output	Dual Output	3.3Vdc/5.0Vdc
1	+V Input	+V Input	+V Input
2	-V Input	-V Input	-V Input
3	ON/OFF	ON/OFF	ON/OFF
4	Trim	Trim	Trim
5	+V Output	+V Output	+3.3V Output
6	+V Output	+V Output	+3.3V Output
7	Ground	Ground	Ground
8	Ground	Ground	Ground
9	No Pin	-V Output	+5.0V Output
10	No Pin	-V Output	+5.0V Output

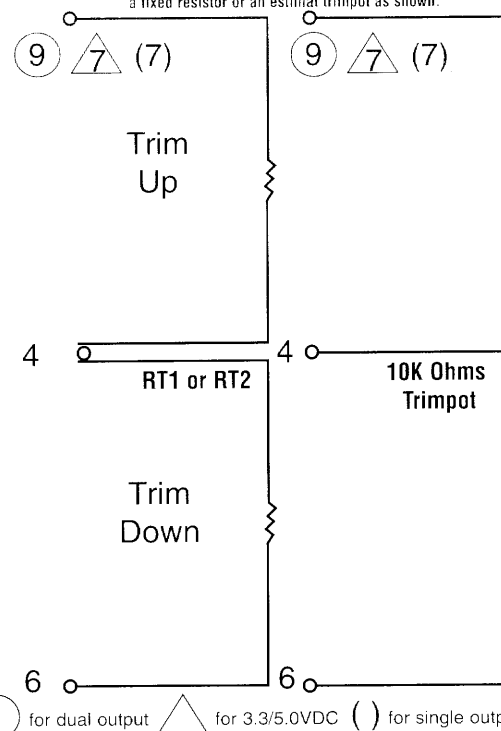
CASE R

Notes: 1. All dimensions in inches (mm).
2. Mounting Inserts: 4-4x.10(2.5)Deep.



External Output Trimming

Output may optionally be externally trimmed (+10%) with a fixed resistor or an estimate trimpot as shown.



SINGLE OUTPUT

DUAL OUTPUT

	INPUT VOLTAGE (Vdc)	OUTPUT VOLTAGE (Vdc)	OUTPUT CURRENT (A)	% EFF	MODEL NUMBER
	9-18	3.3	15	78	MWA60-12S33
	9-18	5	12	81	MWA60-12S5
	9-18	12	5	82	MWA60-12S12
	9-18	15	4	82	MWA60-12S15
	18-36	3.3	15	79	MWA60-24S33
	18-36	5	12	83	MWA60-24S5
	18-36	12	5	84	MWA60-24S12
	18-36	15	4	84	MWA60-24S15
	36-72	3.3	15	80	MWA60-48S33
	36-72	5	12	84	MWA60-48S5
	36-72	12	5	85	MWA60-48S12
	36-72	15	4	85	MWA60-48S15
	9-18	±5	+10/-2	81	MWA60-12-5
	9-18	±12	±2.5	82	MWA60-12-12
	9-18	±15	±2.0	82	MWA60-12-15
	9-18	3.3, 5.0	6/6	79	MWA60-12D33/5
	18-36	±5	+10/-2	83	MWA60-24-5
	18-36	±12	±2.5	84	MWA60-24-12
	18-36	±15	±2.0	84	MWA60-24-15
	18-36	3.3, 5.0	6/6	80	MWA60-24D33/5
	36-72	±5	+10/-2	84	MWA60-48-5
	36-72	±12	±2.5	85	MWA60-48-12
	36-72	±15	±2.0	85	MWA60-48-15
	36-72	3.3, 5.0	6/6	81	MWA60-48D33/5

PRICING (1-9 Qty)

Single Output	2:1	\$119.00
	4:1	Contact Factory
Dual Output	2:1	\$123.50
	4:1	Contact Factory

*Contact factory for quantity discount.

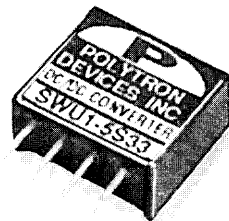
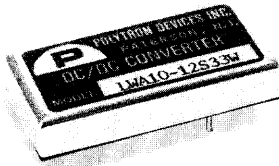
20-72 Vdc input and 9-36Vdc input now available

*For 4:1 input voltage, use prefix "MWB60" in place of "MWA60" in model number.
For 9-36Vdc input, use 24 after 60-
For 20-72Vdc input, use 48 after 60-

3.3 Vdc OUTPUT DC/DC CONVERTERS

SELECTION GUIDE

NEW



**Many
Other
Outputs
Available.**

**For Pin Connections,
Detailed Specifications,
Price and Delivery,
CONTACT FACTORY AT:
PH: 973-345-5885
FAX: 973-345-1264**

E-MAIL: polytron@erofs.com

3.3 SINGLE OUTPUT, ISOLATED

WATTS	OUTPUT CURRENT (Amps, Max)	INPUT VOLTAGE NOMINAL (Range) (Volts)	PACKAGE DIMENSIONS (Inches)	REGULATION LINE, LOAD (Max)	RIPPLE NOISE	EFF. % (Min)	POLYTRON MODEL NO.
0.5-1.0	154	5 (±10%)	0.5"x0.4"x.25"	±10%, ±15%	100mVp-p max	65	MTW-5S33
0.5	154mA	3.3 (±10%) 5 (±10%) 12 (±10%) 24 (±10%) 48 (±10%)	.45"x.39"x.28"	±1.2%/1% of Vin 15% max	150mVp-p max	75%	SWU0.5-3S33 SWU0.5-5S33 SWU0.5-12S33 SWU0.5-24S33 SWU0.5-48S33
2	600mA	9-18 18-36 36-75	1.25"x0.8"x0.4"	±0.5%, ±0.2%	±1mVp-p of Vout max	65 66 68	TWA2-12S33 TWA2-24S33 TWA2-48S33
1.8	500mA	9-18 18-36 36-72	1.25"x0.8"x0.4"	±0.2%, ±0.2%	50mVp-p	76	TWA1.8-12S33CB TWA1.8-24S33CB TWA1.8-48S33CB
3.3	1000mA	9-18 18-36 36-72	1.25"x0.8"x0.4"	±0.2%, ±0.2%	50mVp-p	78 77 79	TWA3.3-12S33CB TWA3.3-24S33CB TWA3.3-48S33CB
3.3	1000mA	9-18 18-36 36-72	1.0"x2.0"x0.375"	±0.2%, ±0.2%	75mVp-p	73	LWA3-12S33 LWA3-24S33 LWA3-48S33
6.6	2000mA	9-18 18-36 36-72	1.25"x0.8"x0.4"	±0.2%, ±0.2%	50mVp-p	81 80 80	TWA6.6-12S33 TWA6.6-24S33 TWA6.6-48S33
6.6	2000mA	9-18 18-36 36-72	1.0"x2.0"x0.375"	±1.0%, ±1.0%	50mVp-p	79	LWA6.6-12S33 LWA6.6-24S33 LWA6.6-48S33
10	3000mA	9-18 18-36 36-72	2"x2"x0.40"	±1%, ±1%	1% p-p max	75	KW10-12S3.3 KW10-24S3.3 KW10-48S3.3
13.2	4000mA	9-18 18-36 36-72	1.0"x2.0"x0.375"	±1.0%, ±1.0%	50mVp-p	80	LWA13.2-12S33 LWA13.2-24S33 LWA13.2-48S33
13.2	4000mA	9-18 18-36 36-72	2.0"x1.6"x0.4"	±0.2%, ±0.25%	75mVp-p	77	MWA13.2-12S33 MWA13.2-24S33 MWA13.2-48S33
20	6000mA	9-18 18-36 36-72	2"x2"x0.40"	±1%, ±1%	50mVp-p	82	KW20-12S3.3-B2A KW20-24S3.3-B2A KW20-48S3.3-B2A
33	10A	9-18 18-36 36-72	2.6"x3.0"x0.375"	±0.5%, ±0.5%	1% pk-pk of Vout	78	MWA33-12S33 MWA33-24S33 MWA33-48S33
50	15A	9-18 18-36 36-72	3.94"x2.76"x0.75"	±0.5%, ±0.5%	1% pk-pk of Vout	78	MWA50-12S33 MWA50-24S33 MWA50-48S33

+5/+3.3 DUAL OUTPUT, ISOLATED

2.6	+5V/285A +3.3/360A	18-36	1.25"x0.80"x0.40"	±0.2%, ±0.2%	50mVp-p	79	TWA2.6-24S5S3.3CB
33	+5V/4A +3.3/4A	9-18 18-36 36-72	2.6"x3.0"x0.375"	±1%, ±1%	1%Pk-Pk of Vout	78 78 78	MWA40-12S5S3.3 MWA40-24S5S3.3 MWA40-48S5S3.3
50	+5V/6A +3.3/6A	9-18 18-36 36-72	3.94"x2.76"x0.75"	±0.5%, ±0.5%	1%Pk-Pk	78 80 81	MWA60-12S5S3.3 MWA60-24S5S3.3 MWA60-48S5S3.3

+3.3/±12 TRIPLE OUTPUT, ISOLATED

17	3000/±300	9-18 18-36 36-72	2.0"x1.6"x0.4"	±1%, ±2%	120mVp-p	78 79 80	MWA17-12S3.3-12 MWA17-24S3.3-12 MWA17-48S3.3-12
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+3.3/±15 TRIPLE OUTPUT, ISOLATED

17	3000mA/ ±250mA	9-18 18-36 36-72	2.0"x1.6"x0.4"	±1%, ±2%	120mVp-p	78 79 80	MWA17-12S3.3-15 MWA17-24S3.3-15 MWA17-48S3.3-15
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