

KDW SERIES

30W-40W WIDE INPUT RANGE

DANUBE

FEATURES

- 30W-40W DIL PACKAGE
- SIX-SIDE SHIELDED CASE
- INDUSTRY STANDARD PACKAGE
- 9-18V,18-36V,36-72V WIDE INPUT RANGE
- 100% BURN IN
- HIGH EFFICIENCY
- RoHS COMPLIANT
- 3 YEARS WARRANTY



OUTPUT SPECIFICATIONS		INPUT SPECIFICATIONS	
Voltage Set-point Accuracy	+/-2% max.	Input Voltage Range	2:1 Input Range
Temperature Coefficient	+/-0.05%/°C	Input Filter	Pi Network
Ripple & Noise(20MHz BW) ¹	100mVp-p max.	Remote ON/OFF Control	Table 1
Line Regulation ²	+/-0.5% max.	GENERAL SPECIFICATIONS	
Load Regulation ³	+/-0.5% max.	Efficiency	80% min.
Minimum load	10% of Full Load	Isolation Voltage ⁴	1500 VDC min.
Short Circuit Protection	Continuous	Isolation Resistance	10 ⁹ ohms min.
Over Voltage Protection	Built-in	Isolation Capacitance	1200pF max.
External Trim Adj. Range	+/-10%	Switching Frequency	100 KHz min.
ENVIRONMENTAL SPECIFICATIONS		MTBF ⁵	>700,000 Hours
		Weight	110g typ.
		Case Material	Six-Side Shielded Case
		Case Size	50.8mm*50.8mm*21mm
		Potting Material	Epoxy(UL94V-0)
Operating Temperature	-40°C to +71°C	Radiated Emissions	EN55032 Class A
Storage Temperature	-55°C to +100°C		
Cooling	Free-Air Convection		

ALL SPECIFICATIONS TYPICAL AT NOMINAL LINE, FULL LOAD, AND 25 °C UNLESS OTHERWISE NOTED.

¹ Measured with 1uF ceramic capacitor connect to the output pins.

² High Line to Low Line.

³ Load Regulation is for output load current change from 10% to 100%.

⁴ For 10 seconds.

⁵ MIL-HDBK-217F @25 °C, Ground Benign.

● **SELECTION GUIDE**
2:1 30W-40W OUTPUT

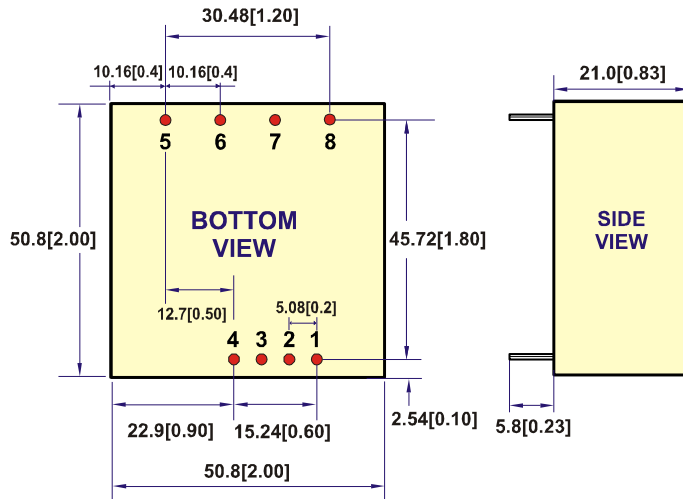
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁶ CURRENT(mA)		EFF (%) ⁷	CAPACITOR LOAD (Max.)
				FULL LOAD	NO LOAD		
KDWS-1212	9-18	12	3000	3650	40	82	1800uF
KDWS-1215	9-18	15	2400	3655	40	82	1500uF
KDWS-1224	9-18	24	1500	3640	40	82	1000uF
KDWS-2412	18-36	12	3000	1820	18	82	1800uF
KDWS-2415	18-36	15	2400	1810	18	83	1500uF
KDWS-2424	18-36	24	1667	1950	18	85	1000uF
KDWD-2412	18-36	+/-12	+/-1650	1960	18	85	+/-820uF
KDWD-2415	18-36	+/-15	+/-1300	1960	18	85	+/-680uF
KDWS-4812	36-72	12	3000	910	9	82	1800uF
KDWS-4815	36-72	15	2400	902	9	83	1500uF
KDWS-4824	36-72	24	1667	976	9	85	1000uF
KDWD-4812	36-72	+/-12	+/-1650	980	9	85	+/-820uF
KDWD-4815	36-72	+/-15	+/-1300	980	9	85	+/-680uF

Note: Other input to output voltages may be available. Please contact factory.

⁶ NOMINAL INPUT VOLTAGE.

⁷ NOMINAL INPUT VOLTAGE, FULL LOAD.

● MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS



All dimensions are in millimeters[inches]

Note: **SINGLE OUTPUT for 24V: PIN 5 = NO PIN

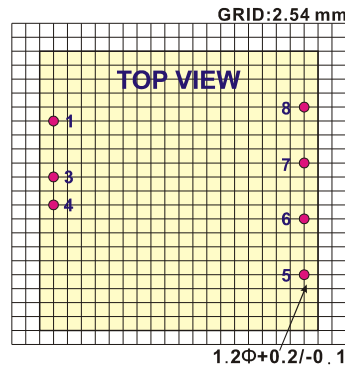
PIN	SINGLE	DUAL
1	Remote On/Off	
2	NO PIN	
3	-Vin	-Vin
4	+Vin	+Vin
5	NC	+Vout
6	+Vout	Common
7	-Vout	-Vout
8	TRIM	TRIM

NOTE:

All dimensions are in millimeters [inches]

Pin Size is Tolerance 1.0Φ ±0.10mm

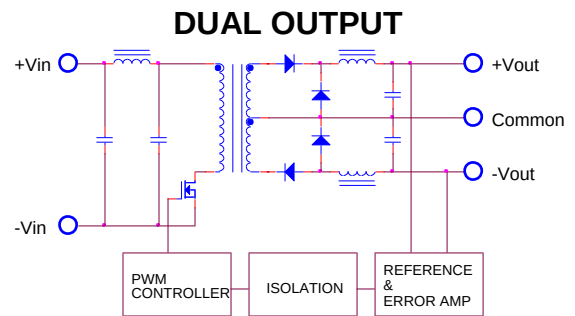
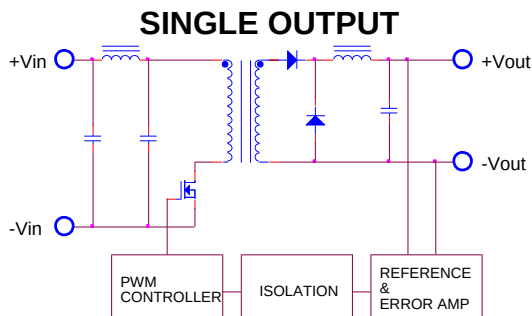
Tolerance .X or .XX= $\pm 0.8\text{mm}$



● Table1 (Remote On/Off Control)

Remote On/Off Control			
Control Input	PIN1	Control Common	PIN3
Control Voltage		Converter Shutdown Idle Current	10mA
ON	>+2.5VDC or Open Circuit	Logic Compatibility	CMOS or Open
OFF	<+0.8VDC or Jumper to PIN3		Collector TTL

● SIMPLIFIED SCHEMATIC

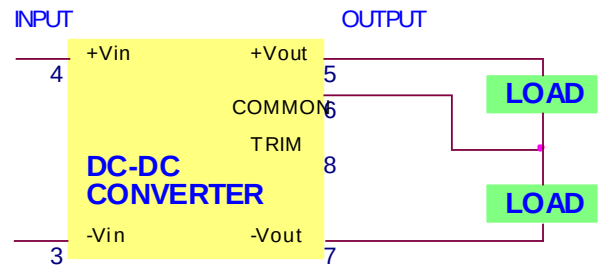
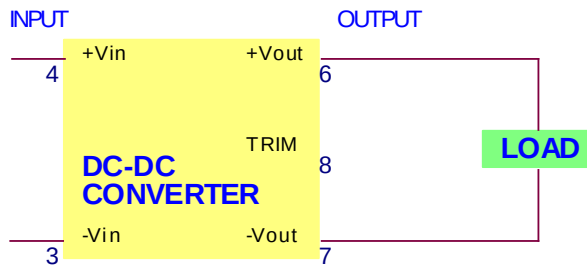


● TYPICAL APPLICATIONS

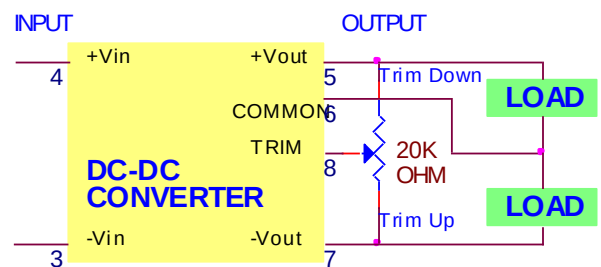
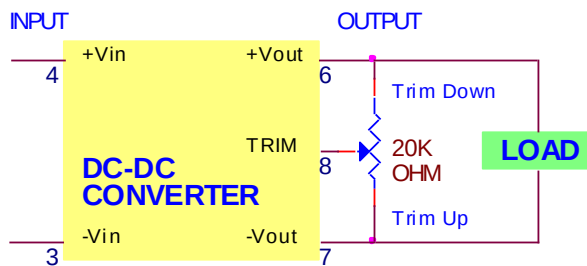
SINGLE OUTPUT

DUAL OUTPUT

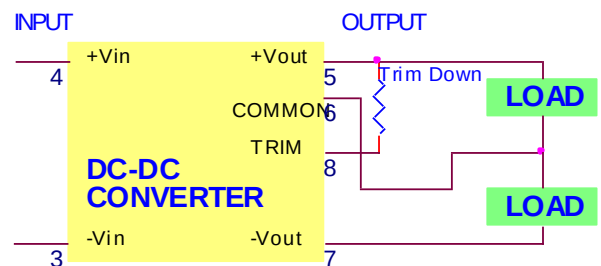
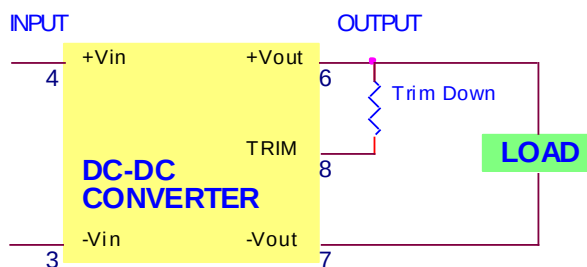
FIXED VOLTAGE OUTPUT



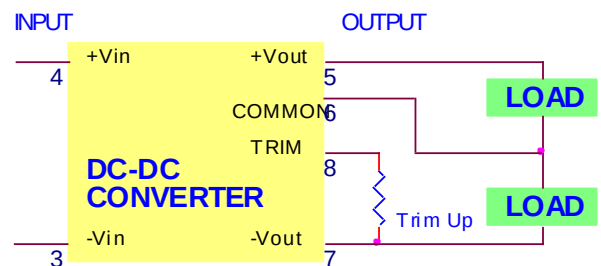
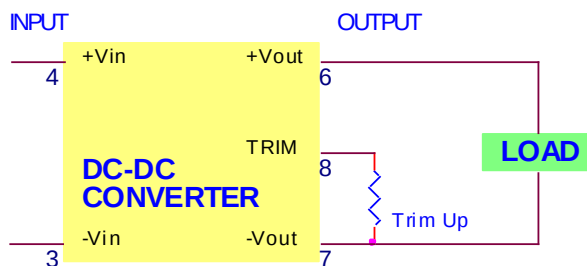
TRIM CONNECTIONS USING A TRIMPOT



FIXED-VALUE TRIM DOWN RESISTOR



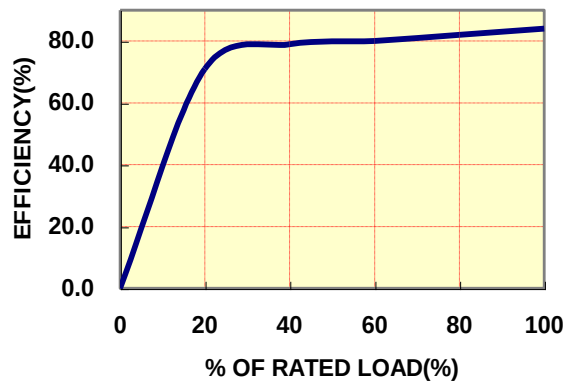
FIXED-VALUE TRIM UP RESISTOR



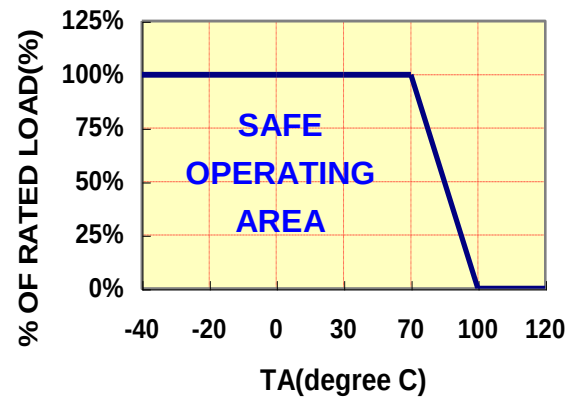
● TYPICAL PERFORMANCE CURVES

Specifications typical at $T_a=25^{\circ}\text{C}$, nominal input voltage, rated output current unless otherwise specified.

OUTPUT LOAD VS EFFICIENCY



TEMPERATURE DERATING



● INPUT FUSE SELECTION GUIDE

9-18V	18-36V	36-72V
INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)
10000mA Slow-Blow Type	6000mA Slow-Blow Type	3000mA Slow-Blow Type

The diagram shows a yellow box labeled 'DC-DC CONVERTER'. On the left side, there are two input terminals labeled '+Vin' (top) and '-Vin' (bottom). A fuse is connected in series with the '+Vin' line, and the connection point before the fuse is labeled 'INPUT'. On the right side, there are two output terminals labeled '+Vout' (top) and '-Vout' (bottom). The connection point after the '+Vout' terminal is labeled 'OUTPUT'.

Note: Certain applications may require the installation of external fuse in front of the input.

KDW SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the KDW series.

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 220 KHz is required.

External output capacitance is not required for operation; however it is recommended that 10uF tantalum and 0.1uF ceramic capacitance be selected for reduced system noise.

Negative Outputs:

A negative output voltage may be obtained by connecting the +OUT to circuit ground and connecting -OUT as the negative output.

Remote ON/OFF:

The remote ON/OFF pin may be left floating if this function is not use. It is recommended to drive this pin with an open collector arrangement or a relay contact. When the ON/OFF pin is pulled low with respect to the -VIN, the converter is placed in a low power drain state.

Output TRIM:

The TRIM pin may be used to adjust the output +/-10% from the nominal setting .this function allows adjustment for voltage drops in the system wiring. If the TRIM function is not required the pin may be left floating.

FOR MORE INFORMATION CALL:

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