LW Series (5 W WIDE INPUT RANGE DC-DC CONVERTER)

FEATURES

- 5W DIL PACKAGE
- 4.5-9,9-18V,18-36V,36-72V WIDE INPUT RANGE
- SHORT CIRCUIT PROTECTION
- LOW COST
- NO EXTERNAL COMPONENTS REQUIRED
- REGULATED OUTPUT
- TYPICAL EFFICIENCY 80%
- 100% BURNED IN
- INDUSTRY STANDARD PACKAGE
- MTBF > 800,000 HOURS



OUTPUT SPECIFICATIONS

Voltage Setpoint Accuracy	+/-2% max
Temperature Coefficient	+/-0.03%/ °C
Ripple & Noise (20MHz BW)	100mVp-p max
Line Regulation[1]	+/-0.2% max
Load Regulation[2]	+/-0.2% max
Short Circuit Protection	Continuous

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25 °C to +71 °C
Storage Temperature	-55 °C to +125 °C
Cooling	Free-Air Convection

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

INPUT SPECIFICATIONS

Input Voltage Range	2:1 INPUT RANGE
Input Filter	Pi Network

GENERAL SPECIFICATIONS

Efficiency	70% min
Isolation Voltage[3]	1000 VDC min
Isolation Resistance	10^9 ohms min
Switching Frequency	50 KHz min
MTBF	800,000 Hours
Weight	31.2g Typ
Case Material	Five-Side Shielded Case
Case Size	50.8mm*25.4mm*11.2mm

[1] *High Line to Low Line.*

[2] *Load Regulation is for output load current change from 10% to 100%.*

[3] *For 10 seconds*

● SELECTION GUIDE(1)
2:1 5W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT[4] CURRENT(mA)		EFF (%)[5]	ISOLATION (VDC)
				FULL LOAD	NO LOAD		
LWS-0505E	4.5-9	5	1000	1535	30	65	1000
LWS-0512E	4.5-9	12	417	1420	30	70	1000
LWS-0515E	4.5-9	15	333	1390	20	72	1000
LWS-1203.3E	9-18	3.3	1500	589	33	70	1000
LWS-1205E	9-18	5	1000	556	30	75	1000
LWS-1209E	9-18	9	556	520	30	80	1000
LWS-1212E	9-18	12	417	519	28	80	1000
LWS-1215E	9-18	15	333	514	28	81	1000
LWD-1205E	9-18	+/-5	+/-500	556	29	75	1000
LWD-1209E	9-18	+/-9	+/-278	525	28	79	1000
LWD-1212E	9-18	+/-12	+/-208	519	28	80	1000
LWD-1215E	9-18	+/-15	+/-167	514	28	81	1000
LWS-2403.3E	18-36	3.3	1500	290	16	71	1000
LWS-2405E	18-36	5	1000	270	14	77	1000
LWS-2409E	18-36	9	556	257	14	81	1000
LWS-2412E	18-36	12	417	254	13	82	1000
LWS-2415E	18-36	15	333	251	13	83	1000
LWD-2405E	18-36	+/-5	+/-500	270	14	77	1000
LWD-2409E	18-36	+/-9	+/-278	257	14	81	1000
LWD-2412E	18-36	+/-12	+/-208	254	13	82	1000
LWD-2415E	18-36	+/-15	+/-167	251	12	83	1000
LWS-4803.3E	36-72	3.3	1500	135	10	77	1000
LWS-4805E	36-72	5	1000	135	8	77	1000
LWS-4809E	36-72	9	556	126	7	83	1000
LWS-4812E	36-72	12	417	126	7	83	1000
LWS-4815E	36-72	15	333	123	7	85	1000
LWD-4805E	36-72	+/-5	+/-500	135	8	77	1000
LWD-4809E	36-72	+/-9	+/-278	126	7	83	1000
LWD-4812E	36-72	+/-12	+/-208	126	7	83	1000
LWD-4815E	36-72	+/-15	+/-167	123	7	85	1000

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

[4] *NOMINAL INPUT VOLTAGE.*

[5] *NOMINAL INPUT VOLTAGE,FULL LOAD.*

SELECTION GUIDE(2)
4:1 5W OUTPUT

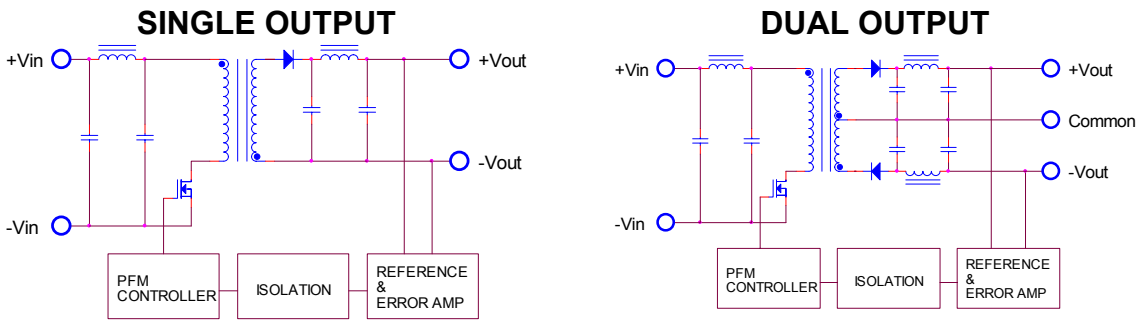
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT[6] CURRENT(mA)		EFF (%)[7]	ISOLATION (VDC)
				FULL LOAD	NO LOAD		
LWS-1203.3T	9-36	3.3	1500	555	20	75	1000
LWS-1205T	9-36	5	1000	535	30	78	1000
LWS-1209T	9-36	9	556	548	30	76	1000
LWS-1212T	9-36	12	417	525	28	79	1000
LWS-1215T	9-36	15	333	520	28	80	1000
LWD-1205T	9-36	+/-5	+/-500	530	28	77	1000
LWD-1212T	9-36	+/-12	+/-208	527	28	79	1000
LWD-1215T	9-36	+/-15	+/-167	520	28	80	1000
LWS-2403.3T	18-72	3.3	1500	277	14	75	1000
LWS-2405T	18-72	5	1000	277	14	75	1000
LWS-2409T	18-72	9	556	267	14	78	1000
LWS-2412T	18-72	12	417	260	13	80	1000
LWS-2415T	18-72	15	333	257	13	81	1000
LWD-2412T	18-72	+/-12	+/-208	257	13	81	1000
LWD-2415T	18-72	+/-15	+/-167	257	12	81	1000

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

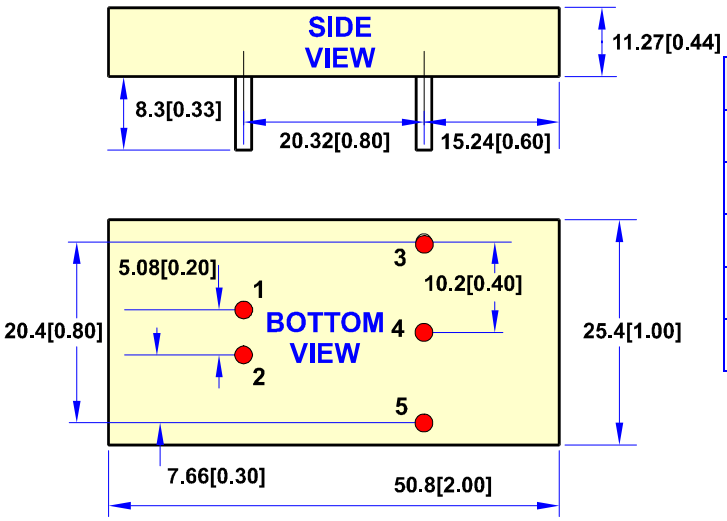
[6] *NOMINAL INPUT VOLTAGE.*

[7] *NOMINAL INPUT VOLTAGE,FULL LOAD.*

SIMPLIFIED SCHEMATIC



MECHANICAL DIMENSIONS

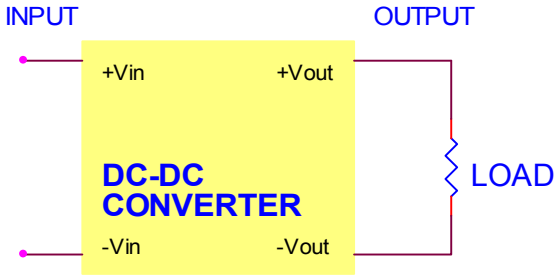


PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	NO PIN	Common
5	-Vout	-Vout

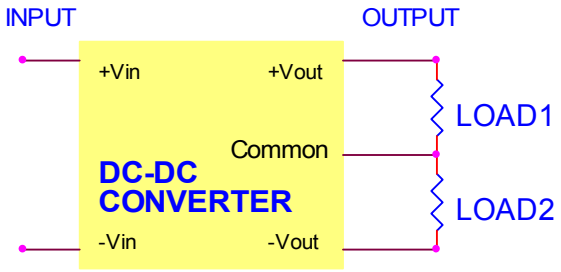
All dimensions are in millimeters[inches]

TYPICAL APPLICATIONS

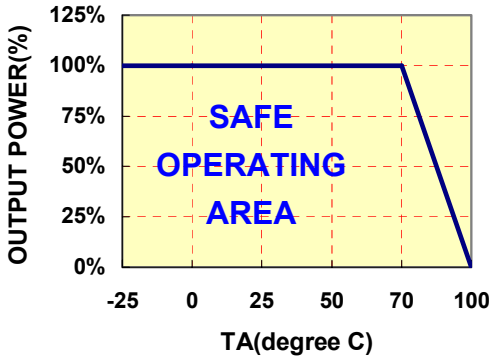
SINGLE OUTPUT



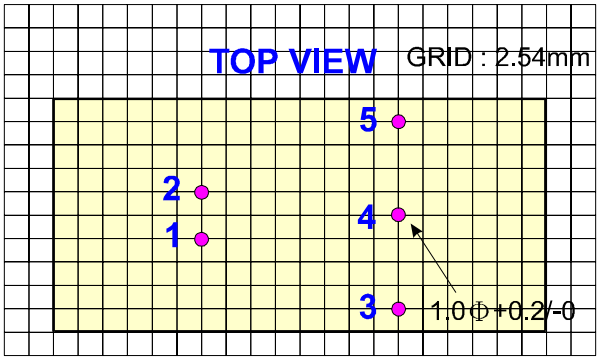
DUAL OUTPUT



TEMPERATURE DERATING



RECOMMENDED FOOTPRINT DETAILS



LW SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

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

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 100KHz 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.

Additional output capacitance may be added for increased filtering, but should not exceed 220uF.

Negative Outputs:

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

FOR MORE INFORMATION CALL:

Power Systems – The Power Solution

Ilsfeld-Auenstein (Germany) Dörnet 8 Tel: + 49 / 70 62 / 67 59 – 6 Fax: + 49 / 70 62 / 67 59 -80

E-mail: Info@Power-Systems.de Home Page: www.Power-Systems.de