

FCW SERIES

15W WIDE INPUT RANGE



FEATURES

- 15W DIL PACKAGE
- INDUSTRY STANDARD PACKAGE
- 9-18V,18-36V,36-72V WIDE INPUT RANGE
- NO EXTERNAL COMPONENTS REQUIRED
- REGULATED OUTPUT
- 100% BURNED IN
- HIGH EFFICIENCY
- UL 94V-0 PACKAGE MATERIAL
- CUSTOM SOLUTIONS AVAILABLE
- RoHS COMPLIANT
- 2 YEARS WARRANTY



OUTPUT SPECIFICATIONS

Voltage Setpoint Accuracy	+/-2% max
Temperature Coefficient	+/-0.05%/°C
Ripple & Noise(20MHz BW) ¹	100mVp-p max
Line Regulation ²	+/-0.5% max
Load Regulation ³	+/-0.5% max
Minimum Load	10% of Full Load
Short Circuit Protection	Continuous
Short Circuit Restart	Automatic
Over Load Protection	180% Typ
Transient Response ⁵	200uS max

INPUT SPECIFICATIONS

Input Voltage Range	2:1 Input Range
Input Filter	Pi Network
Protection	Fuse Recommended

GENERAL SPECIFICATIONS

Efficiency	76% min
Isolation Voltage ⁴	1000VDC min
Isolation Resistance	10 ⁹ ohms min
Isolation Capacitance	550pF max
Switching Frequency	150 KHz min
MTBF ⁶	>700,000 Hours
Weight	31.2g Typ
Case Material	Six-Side Shielded Case
Case Size	50.8mm*25.4mm*11.2mm
Potting Material	Epoxy(UL94-V0)
Conducted Emissions	EN55022 Class A
Radiated Emissions	EN55022 Class A

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25°C to +71°C
Storage Temperature	-55°C to +125°C
Humidity	95% max
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 25% Step Load Change.

⁶ MIL-HDBK-217F @25 °C, Ground Benign.

● **SELECTION GUIDE**
2:1 10W-15W OUTPUT

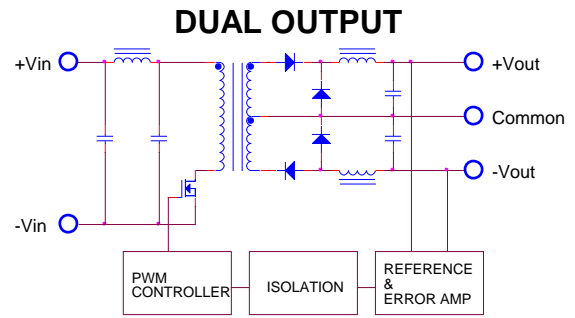
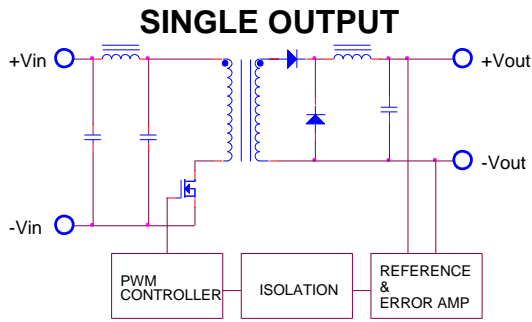
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT ⁷		EFF (%) ⁸	ISOLATION (VDC)
				CURRENT(mA)			
				FULL LOAD	NO LOAD		
FCWS-1203.3	9-18	3.3	3000	1086	20	76	1000
FCWS-1205	9-18	5	3000	1610	20	78	1000
FCWS-1212	9-18	12	1250	1525	20	82	1000
FCWS-1215	9-18	15	1000	1525	20	82	1000
FCWD-1205	9-18	+/-5	+/-1500	1565	30	80	1000
FCWD-1212	9-18	+/-12	+/-625	1510	30	83	1000
FCWD-1215	9-18	+/-15	+/-500	1510	30	83	1000
FCWS-2403.3	18-36	3.3	3000	543	20	76	1000
FCWS-2405	18-36	5	3000	800	20	78	1000
FCWS-2412	18-36	12	1250	780	30	80	1000
FCWS-2415	18-36	15	1000	780	30	80	1000
FCWD-2405	18-36	+/-5	+/-1500	780	30	80	1000
FCWD-2412	18-36	+/-12	+/-625	780	30	80	1000
FCWD-2415	18-36	+/-15	+/-500	780	30	80	1000
FCWS-4803.3	36-72	3.3	3000	272	15	76	1000
FCWS-4805	36-72	5	3000	390	10	80	1000
FCWS-4812	36-72	12	1250	380	10	82	1000
FCWS-4815	36-72	15	1000	380	10	82	1000
FCWD-4805	36-72	+/-5	+/-1500	380	15	82	1000
FCWD-4812	36-72	+/-12	+/-625	380	15	82	1000
FCWD-4815	36-72	+/-15	+/-500	380	15	82	1000

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

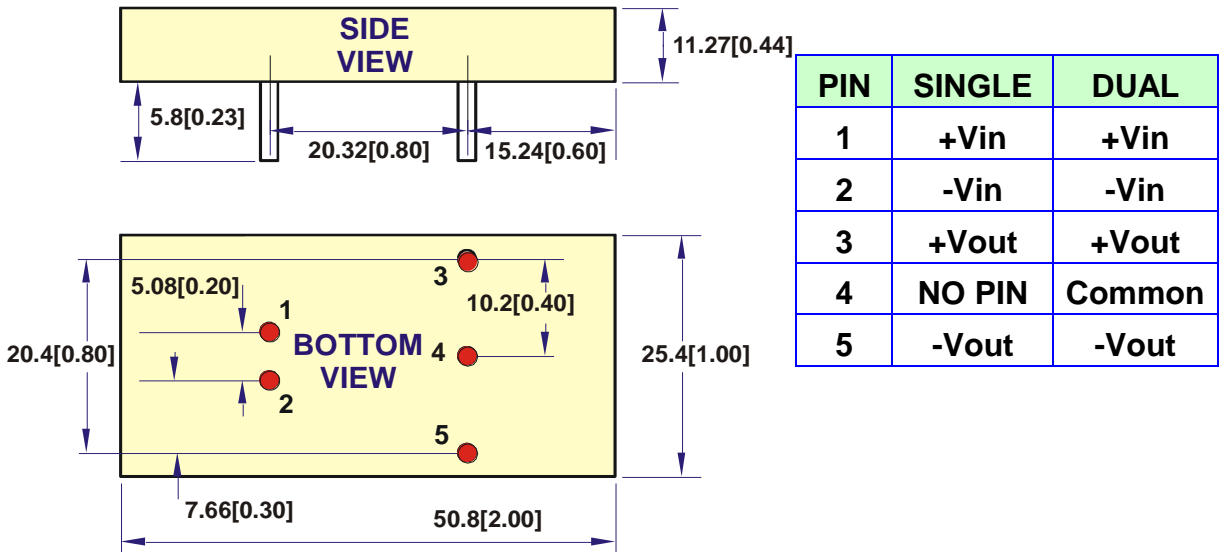
⁷ NOMINAL INPUT VOLTAGE.

⁸ NOMINAL INPUT VOLTAGE, FULL LOAD.

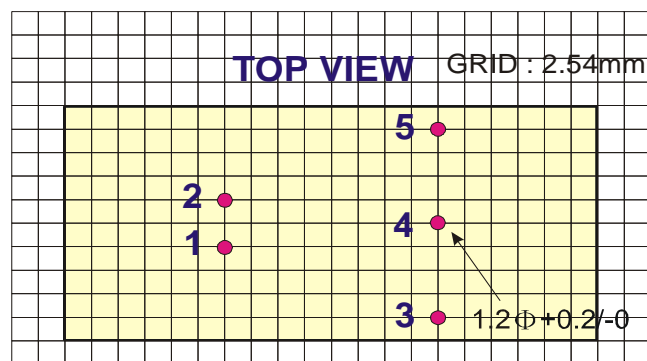
● SIMPLIFIED SCHEMATIC



● MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

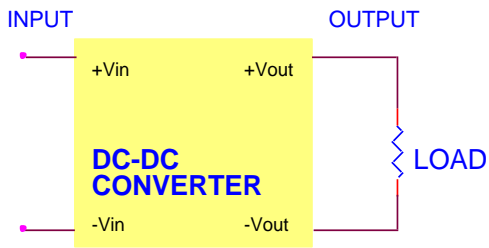


TOLERANCE : mm +/- 0.25 / (inch) +/- 0.01
All dimensions are in millimeters[inches]

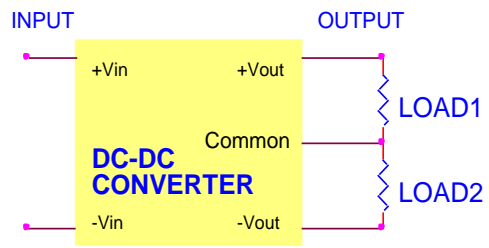


● TYPICAL APPLICATIONS

SINGLE OUTPUT



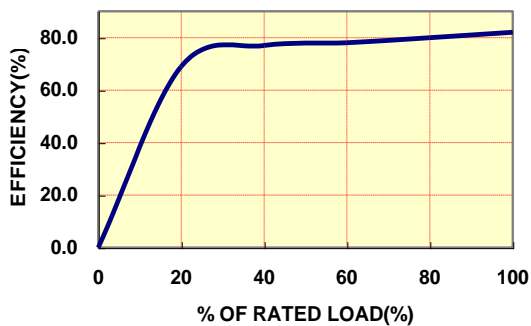
DUAL OUTPUT



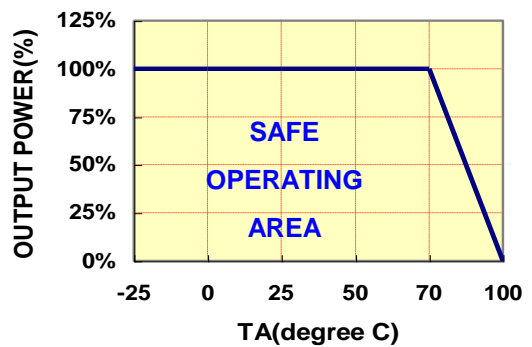
● TYPICAL PERFORMANCE CURVES

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 INPUT VOLTAGE(VDC)	18-36V INPUT VOLTAGE(VDC)	36-72V INPUT VOLTAGE(VDC)
3000mA Slow-Blow Type	1400mA Slow-Blow Type	700mA Slow-Blow Type

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

FCW SERIES APPLICATION NOTES:

EXTERNAL CAPACITANCE REQUIREMENTS:

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

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 220KHz 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 1000uF.

We Can Offer EMC-Filter According To EN55011/22 Class B.

Negative Outputs:

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