

**PC 200 SERIES 1KV–2W REGULATED**  
DC-DC Converter

**Features**

DUAL IN LINE PACKAGE  
UP TO 2W REGULATED OUTPUT  
POWER  
100% BURN IN  
HIGH EFFICIENCY  
FIVE-SIDED SHIELD TO REDUCE EMI  
LOW COST  
NO EXTERNAL COMPONENTS  
REQUIRED  
UL 94V-0 PACKAGE MATERIAL  
CUSTOM SOLUTIONS AVAILABLE



**Specification**

**Output Specifications**

Voltage Setpoint Accuracy	+/-3% max.
Temperature Coefficient	+/-0.05%/OC
Ripple & Noise(20MHz BW)	100mVp-p max.
Line Regulation <sup>1</sup>	+/-1% max.
Load Regulation <sup>2</sup>	+/-1% max.
Minimum Load	10% of Full Load
Short Circuit Protection	Current Limit Prot.
Short Circuit Restart	Automatic
Transient Response <sup>3</sup>	200uS max.

**Input Specifications**

Input Voltage Range	+/-10% max.
Input Filter Protection	PI Network Fuse Recommended

**Environmental Spec.**

Operating Temperature	-25 OC to +71 OC
Storage Temperature	-55 OC to +125 OC
Humidity	95% max.
Cooling	Free-Air Convection

**General Specification**

Efficiency	58% min.
Isolation Voltage <sup>4</sup>	1500 VDC min.
Isolation Resistance	109 ohms min.
Isolation Capacitance	80pF max.
Switching Frequency	50KHz min.
MTBF <sup>5</sup>	>850,000 Hours
Weight	12.0g-14.4g
Case Material	Non-Conductive Plastic Or Five-Sided Shield Case
Case Size	31.8mm*20.3mm *10.2mm
Conducted Emissions	EN55022 Class A
Radiated Emissions	EN55022 Class A

<sup>1</sup> High Line to Low Line

<sup>2</sup> Load Regulation is for output load current change from 10% to 100%.

<sup>3</sup> 25% Step Load Change

<sup>4</sup> For 10 seconds

<sup>5</sup> MIL-HDBK-217F @25 OC , Ground Benign

## Selection Guide 2W Output

MODEL NUMBER <sup>6</sup>	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT <sup>7</sup> CURRENT(mA)		EFF (%) <sup>8</sup>	ISOLATION (VDC)
				FULL LOAD	NO LOAD		
PC205-05S300(M)	4.5-5.5	5	400	727	64	55	1500
PC205-09S170(M)	4.5-5.5	9	222	635	50	63	1500
PC205-12S160(M)	4.5-5.5	12	167	615	50	65	1500
PC205-05S100(M)	4.5-5.5	15	133	625	50	64	1500
PC205-05D200(M)	4.5-5.5	+/-5	+/-200	696	70	57	1500
PC205-12D60(M)	4.5-5.5	+/-12	+/-84	680	63	59	1500
PC205-15D50(M)	4.5-5.5	+/-15	+/-67	641	80	62	1500
PC212-05S300(M)	10.8-13.2	5	400	273	20	61	1500
PC212-09S170(M)	10.8-13.2	9	222	265	20	63	1500
PC212-12S160(M)	10.8-13.2	12	167	252	20	66	1500
PC212-15S100(M)	10.8-13.2	15	133	257	20	65	1500
PC212-05D200(M)	10.8-13.2	+/-5	+/-200	273	20	61	1500
PC212-12D60(M)	10.8-13.2	+/-12	+/-84	270	40	62	1500
PC212-15D50(M)	10.8-13.2	+/-15	+/-67	257	38	65	1500
PC224-05S300(M)	21.6-26.4	5	400	132	13	61	1500
PC224-09S170(M)	21.6-26.4	9	222	126	20	66	1500
PC224-12D160(M)	21.6-26.4	12	167	121	13	69	1500
PC224-15S100(M)	21.6-26.4	15	133	132	13	63	1500
PC224-05D200(M)	21.6-26.4	+/-5	+/-200	132	13	61	1500
PC224-12D60(M)	21.6-26.4	+/-12	+/-84	129	16	65	1500
PC224-15D50(M)	21.6-26.4	+/-15	+/-67	132	16	63	1500
PC228-05S400(M)	25.2-30.8	5	400	114	13	63	1500
PC248-05S300(M)	43.2-52.8	5	400	66	8	63	1500
PC248-09S170(M)	43.2-52.8	9	222	63	8	66	1500
PC248-12S160(M)	43.2-52.8	12	167	60	8	69	1500
PC248-15S100(M)	43.2-52.8	15	133	60	8	69	1500
PC248-05S200(M)	43.2-52.8	+/-5	+/-200	66	8	63	1500
PC248-12D60(M)	43.2-52.8	+/-12	+/-84	60	8	69	1500
PC248-15D50(M)	43.2-52.8	+/-15	+/-67	66	8	63	1500

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

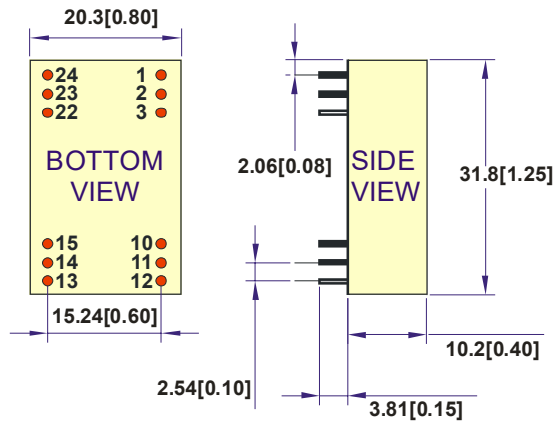
<sup>6</sup> PC\*\*\*-\*\*\*\*: Non-Conductive Plastic PC\*\*\*-\*\*\*\*M : Five -sided shield case

<sup>7</sup> NOMINAL INPUT VOLTAGE.

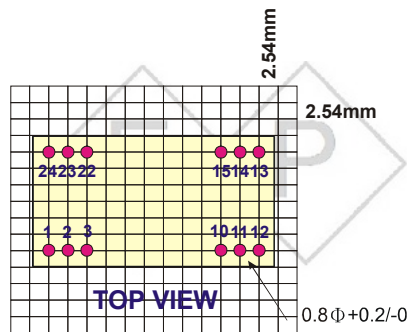
<sup>8</sup> NOMINAL INPUT VOLTAGE, FULL LOAD

## Mechanical Dimensions & Recommended Footprint Details

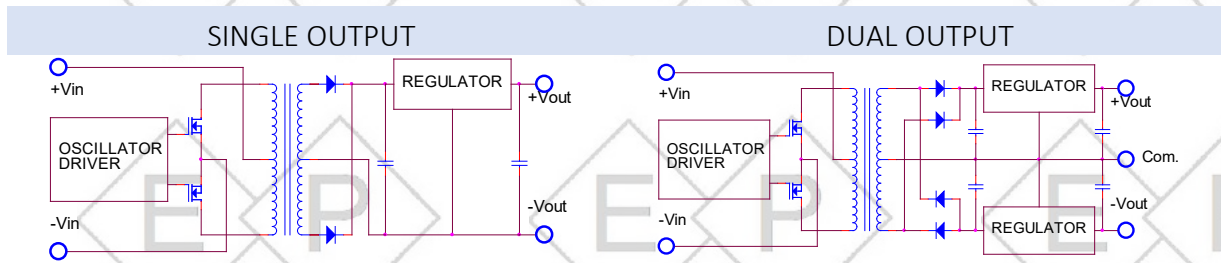
PIN	SINGLE	DUAL
1 & 24	+Vin	+Vin
2 & 23	NC	-Vout
3 & 22	NC	Common
10 & 15	-Vout	Common
11 & 14	+Vout	+Vout
12 & 13	-Vin	-Vin



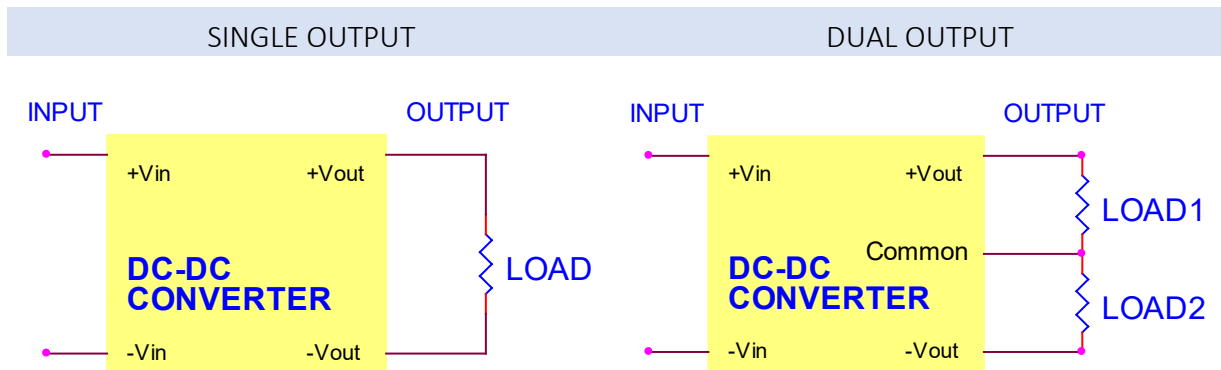
All dimensions are in mm[inches]



## Simplified Schematic



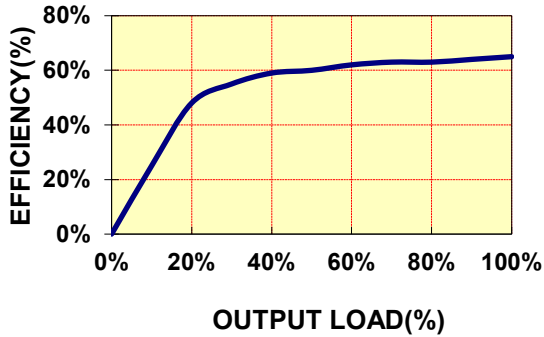
## Typical Applications



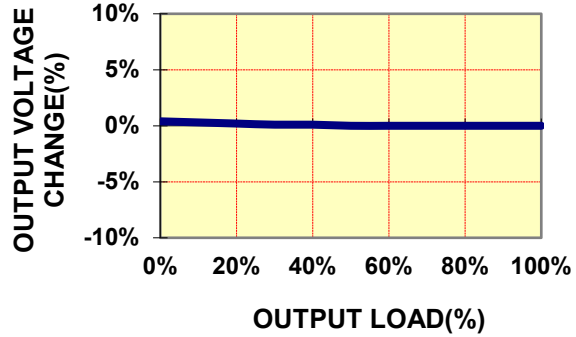
## Typical Performance Curves

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

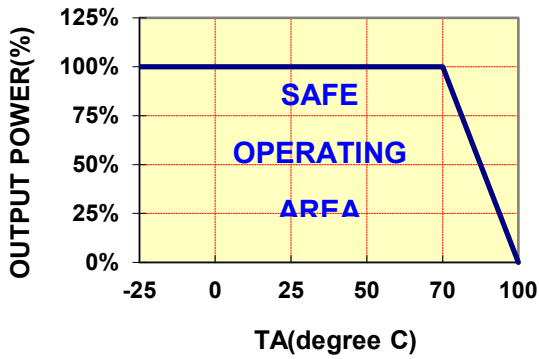
OUTPUT LOAD VS EFFICIENCY



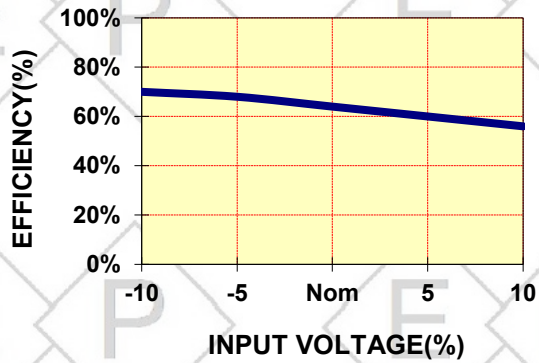
OUTPUT LOAD VS OUTPUT VOLTAGE



TEMPERATURE DERATING

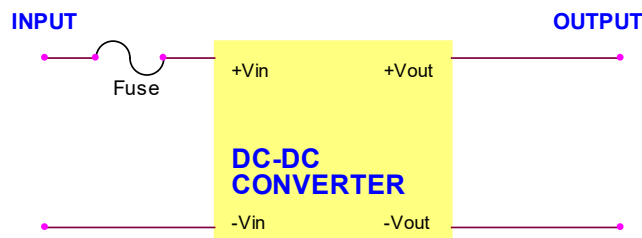


INPUT VOLTAGE VS EFFICIENCY



## Input Fuse Selection Guide

4.5-5.5V	10.8-13.2V	21.6-30.8V	43.2-52.8V
INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)	INPUT VOLTAGE(VDC)
1200mA Slow-Blow Type	400mA Slow-Blow Type	250mA Slow-Blow Type	100mA Slow-Blow Type



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

## PC200 Series Application Notes:

### EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the PC200 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.

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.

Spezifikationen können sich ohne Vorankündigung ändern.

Für etwaige fehlerhafte Angaben oder unvollständige Bezeichnungen kann keine Haftung übernommen werden.

