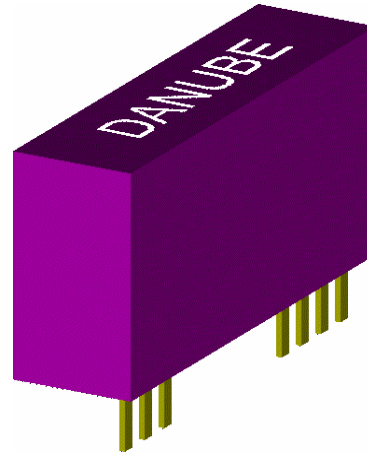


# DC-DC Converter UNIT

1W Series ( 1W WIDE INPUT RANGE DC-DC CONVERTER )

## FEATURES

- 1000VDC ISOLATION
- HIGH EFFICIENCY
- INTERNAL FILTERING
- LOW COST
- NO EXTERNAL COMPONENTS REQUIRED
- UP TO 2W REGULATED OUTPUT POWER
- SINGLE IN LINE PACKAGE
- 100% BURNED IN
- LOW NOISE
- MTBF > 1,000,000 HOURS



### ● OUTPUT SPECIFICATIONS

Voltage Setpoint Accuracy	+/-2% max
Temperature Coefficient	+/-0.03%/°C
Ripple & Noise (20MHz BW)	100mVp-p max
Line Regulation <sup>1</sup>	+/-0.2% max
Load Regulation <sup>2</sup>	+/-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

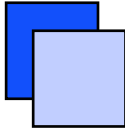
### ● GENERAL SPECIFICATIONS

Efficiency	70% min
Isolation Voltage <sup>3</sup>	1000 VDC min
Isolation Resistance	10 <sup>9</sup> ohms min
Switching Frequency	75 KHz min
Isolation Capacitance	80pF max
MTBF	1,000,000 Hours
Weight	6.6g Typ
Case Material	Non-Conductive Plastic
Case Size	31.8mm*8.6mm*14.5mm

<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> For 60 seconds



# DC-DC Converter UNIT

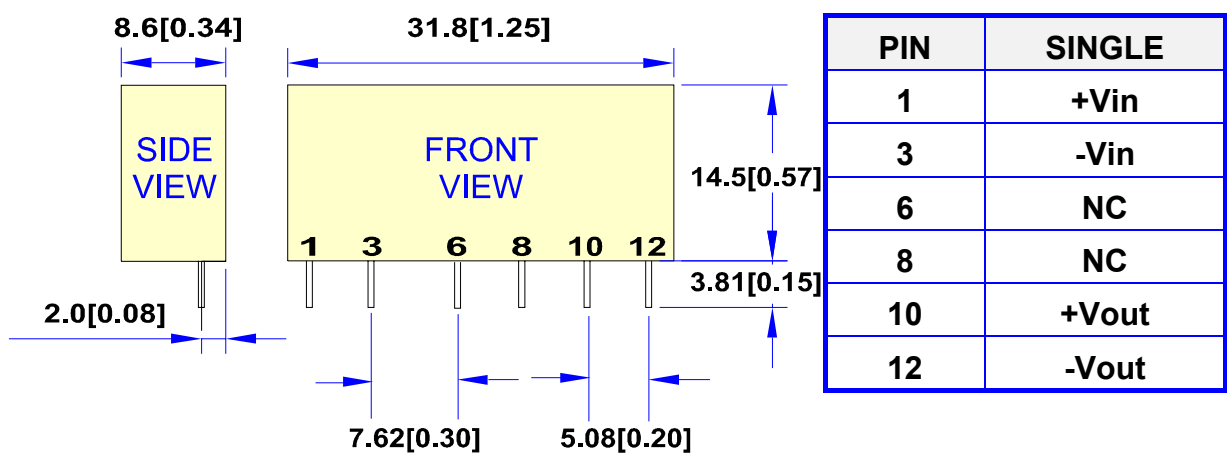
1W Series ( 1W WIDE INPUT RANGE DC-DC CONVERTER )

## ● SELECTION GUIDE 2W OUTPUT

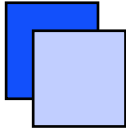
MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT CURRENT(mA)		EFF (%)	ISOLATION (VDC)
				FULL LOAD	NO LOAD		
				1WS-1205	9-18		
1WS-1209	9-18	9	222	225	20	74	1000
1WS-1212	9-18	12	168	213	20	78	1000
1WS-1215	9-18	15	133	213	20	78	1000
1WS-2405	18-36	5	400	112	12	74	1000
1WS-2409	18-36	9	222	111	13	75	1000
1WS-2412	18-36	12	168	107	11	78	1000
1WS-2415	18-36	15	133	107	11	78	1000

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

## ● MECHANICAL DIMENSIONS



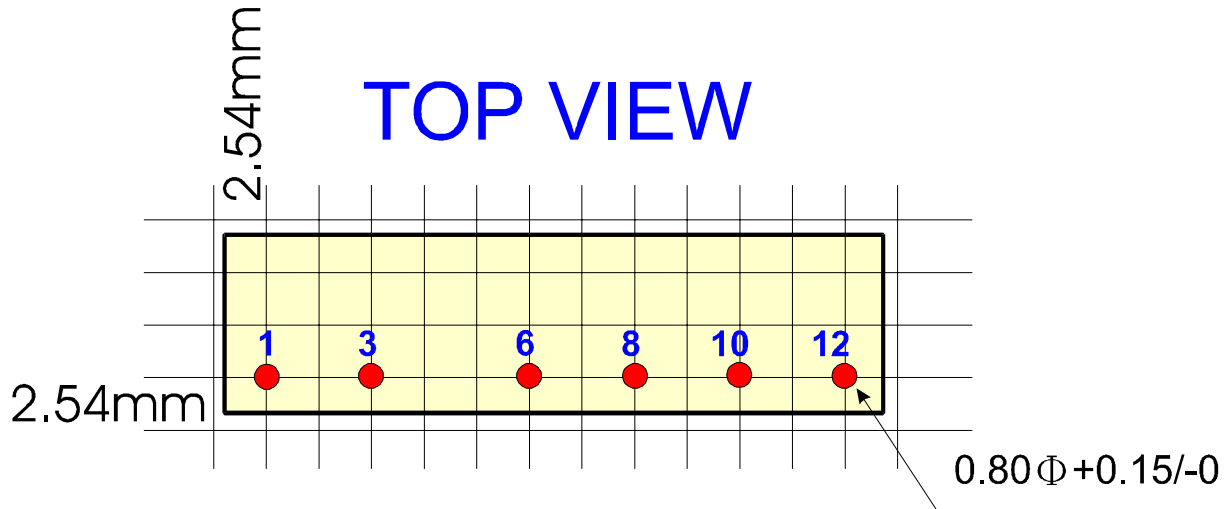
**All dimensions are in millimeters[inches]**



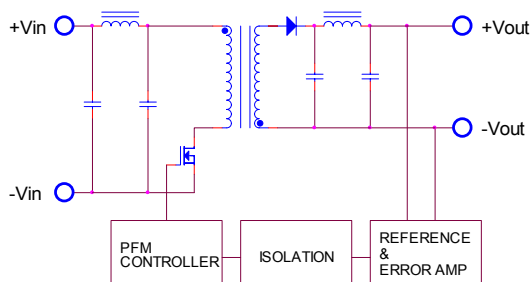
# DC-DC Converter UNIT

1W Series ( 1W WIDE INPUT RANGE DC-DC CONVERTER )

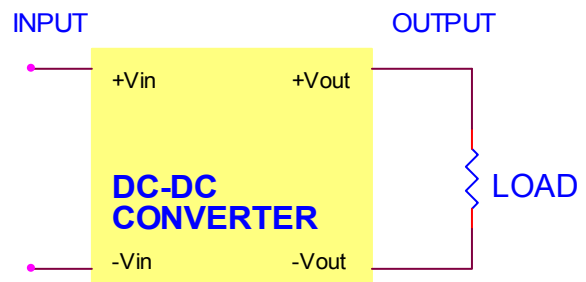
## ● RECOMMENDED FOOTPRINT DETAILS



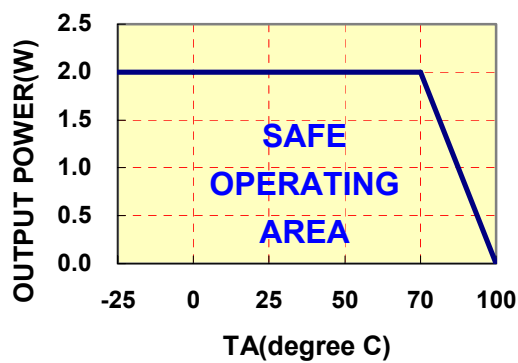
## ● SIMPLIFIED SCHEMATIC

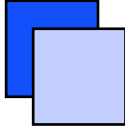


## ● TYPICAL APPLICATIONS



## ● TEMPERATURE DERATING





# DC-DC Converter UNIT

---

1W Series ( 1W WIDE INPUT RANGE DC-DC CONVERTER )

---

## 1W SERIES APPLICATION NOTES:

### EXTERNAL CAPACITANCE REQUIREMENTS:

*No external capacitance is required for operation of the 1W 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**

74360 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](mailto:Info@Power-Systems.de)

Home Page: [www.Power-Systems.de](http://www.Power-Systems.de)

---

---