

## 8DPW Series

8W - Single/Dual Output - Wide Input - Isolated & Regulated DC-DC Converter

## DC-DC Converter

## 8 Watt

- ⊕ Wide 2:1 input voltage range
- ⊕ Input/Output Isolation Voltage: 1.6KVDC
- ⊕ Operating Temperature Range: -40°C to +100°C
- ⊕ Short circuit protection (SCP)
- ⊕ Remote On/Off
- ⊕ High efficiency
- ⊕ 8W DIL package
- ⊕ Meet EN55022, Class A (Radiation)
- ⊕ Shielded Metal Case with Insulated Baseplate
- ⊕ RoHS Compliant
- ⊕ Customer Design Available



The 8DPW Series are isolated 8W DC/DC converters. Designed with high efficiency, they allow the operating temperature range of these units to be -40°C to +100°C with industry-standard footprint. Further features include wide 2:1 input voltage range, remote on/off control, short-circuit protection and over voltage protection.

These converters are well suitable for battery operated equipment, measurement equipment, telecom, wireless network and industry control systems. Everywhere where isolated, tightly regulated voltages and compact size are required.

### Common specifications

Short circuit protection:	Continuous, automatic recovery
Cooling:	Free air convection
Operation temperature range:	-40°C~+100°C
Storage temperature range:	-55°C~+125°C
Maximum case temperature:	95°C
Switching frequency:	400kHz TYP
Storage humidity range:	95% MAX
Radiated emissions:	EN55022/Class A
Conducted emissions:	EN55022/Class A
Case material:	Nickel coated copper with no-conductive base
Potting material:	Epoxy (UL94V-0)
MTBF (MIL-HDBK-217F @25°C):	1,500,000 hours
Weight:	16.2g

### Input specifications

Item	Test condition	Min	Typ	Max	Units
Input filter	Pi Type				
Protection	Fuse recommended				
Input surge voltage (100ms max.)	<ul style="list-style-type: none"> <li>• Nominal input (12V)</li> <li>• Nominal input (24V)</li> <li>• Nominal input (48V)</li> </ul>		25		VDC
Input reflected ripple current	Nominal Vin and full load		50		mAp-p
Start-up time	Nominal Vin and constant resistive load		500		ms
Remote ON/OFF	<ul style="list-style-type: none"> <li>• Converter: ON</li> <li>• Converter: OFF</li> </ul>		Open or 3.5V<Vr<12V		Short or 0V<Vr<1.2V
Sourcing current of remote control pin	Nominal Vin		<0.2		mA
Idle input current (at Remote OFF state)	Nominal Vin		<2.5		mA

### Output specifications

Item	Test condition	Min	Typ	Max	Units
Minimum load	10% of full load				
Voltage tolerance	Full load and nominal Vin			±2	%
Line regulation				±0.5	%
Load regulation	<ul style="list-style-type: none"> <li>• Single</li> <li>• Dual</li> </ul>			±0.5	%
Cross regulation	Dual (25% to 100% load)			±5	%
Ripple and noise	20MHz Bandwidth <ul style="list-style-type: none"> <li>• Output 3-15V</li> <li>• Output &gt;15V</li> </ul>			100	mVp-p
Transient response settling time	25% load step change		350		µs

### Isolation specifications

Item	Test condition	Min	Typ	Max	Units
Isolation voltage	Input to output	1600			VDC
Isolation resistance	Test at 500VDC	1000			MΩ

### Model selection:

WCTV\_xxyyN##

W= Watt; C= Case; T= Type; V= Voltage Variation (omitted ± 10%);  
xx= Vin; yy= Vout; N= Numbers of Output; ##= Isolation (kVDC)

### Example:

8DPW\_2415S1.6

8= 8Watt; D= DIP; P= series; W= wide input (2:1) 18-36Vin; 15Vout;  
S= single output; 1.6= 1600VDC

### Note:

1. Only typical model listed. Non-standard models will be different from the above, please contact us for more details.
2. All specifications are typical at nominal input, full load and 25°C unless otherwise stated.
3. In this datasheet, all the test methods of indications are based on corporate standards.

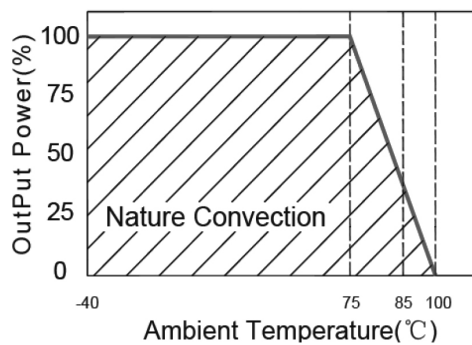
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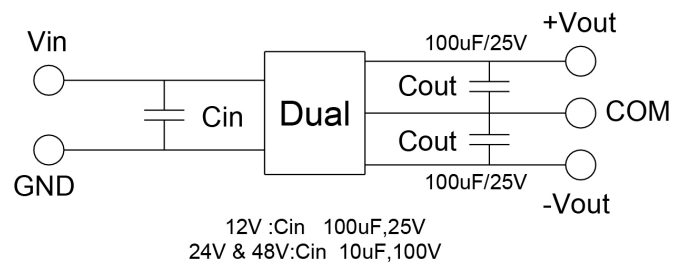
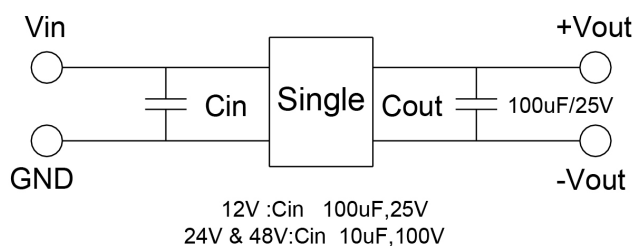
Part Number	Input Voltage [VDC] Range	Input Current [mA, Typ.]		Output Voltage [VDC]	Output Current [mA] Full load	Efficiency [% , Typ.]
		No load	Full load			
8DPW_0512S1.6	4.5-9	120	1927	12	666	83
8DPW_0515S1.6	4.5-9	120	1927	15	533	83
8DPW_1203S1.6	9-18	50	784	3.3	2424	85
8DPW_1205S1.6	9-18	50	784	5	1600	86
8DPW_1212S1.6	9-18	50	784	12	666	87
8DPW_1215S1.6	9-18	50	784	15	533	87
8DPW_2403S1.6	18-36	30	392	3.3	2424	85
8DPW_2405S1.6	18-36	30	392	5	1600	86
8DPW_2412S1.6	18-36	30	392	12	666	87
8DPW_2415S1.6	18-36	30	392	15	533	87
8DPW_4803S1.6	36-75	20	196	3.3	2424	85
8DPW_4805S1.6	36-75	20	196	5	1600	86
8DPW_4812S1.6	36-75	20	196	12	666	87
8DPW_4815S1.6	36-75	20	196	15	533	87
8DPW_0512D1.6	4.5-9	120	1927	±12	±333	83
8DPW_0515D1.6	4.5-9	120	1927	±15	±266	83
8DPW_1205D1.6	9-18	50	784	±5	±800	85
8DPW_1212D1.6	9-18	50	784	±12	±333	87
8DPW_1215D1.6	9-18	50	784	±15	±266	87
8DPW_2405D1.6	18-36	30	392	±5	±800	85
8DPW_2412D1.6	18-36	30	392	±12	±333	87
8DPW_2415D1.6	18-36	30	392	±15	±266	87
8DPW_4805D1.6	36-75	20	196	±5	±800	85
8DPW_4812D1.6	36-75	20	196	±12	±333	87

## Typical characteristics

Temperature derating graph



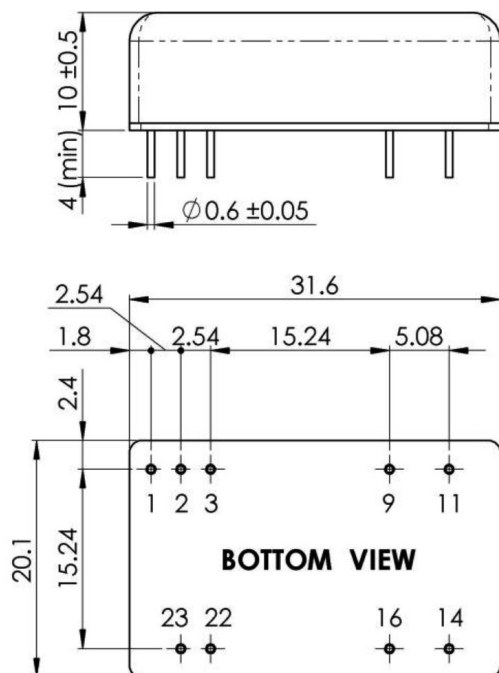
## Recommended test circuit



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### Mechanical dimensions



**Note:**  
Unit: mm[inch]  
Tolerances:  $\pm 0.5$ mm [ $\pm 0.02$ inch]

PIN connection							
PIN	1	2, 3	9	11	14	16	22, 23
Single	Remote on/off	-Vin	NC	NC	+Vout	-Vout	+Vin
Dual	Remote on/off	-Vin	Common	-Vout	+Vout	Common	+Vin