

8DPW4 Series

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

DC-DC Converter

8 Watt

- ⊕ Wide 4:1 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 8DPW4 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 4:1 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"> • Nominal input (12V) • Nominal input (24V) • Nominal input (48V) 		25 50 100		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"> • Converter: ON • Converter: OFF 		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"> • Single • Dual 			±0.5 ±1	%
Cross regulation	Dual (25% to 100% load)			±5	%
Ripple and noise	20MHz Bandwidth <ul style="list-style-type: none"> • Output 3-15V • Output >15V 			100 1% of Vout	mVp-p 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:

8DPW4_2415S1.6

8= 8Watt; **D=** DIP; **P=** series; **W4=** wide input (4:1) 9-36Vin; **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.

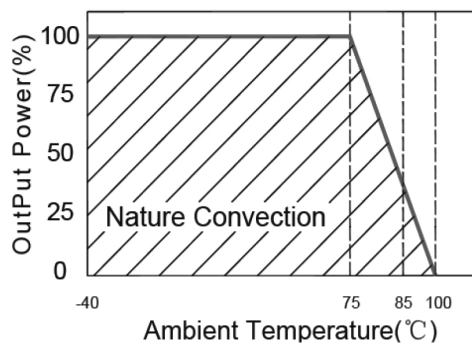
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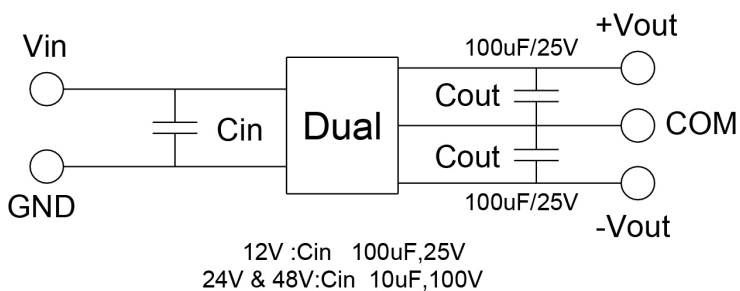
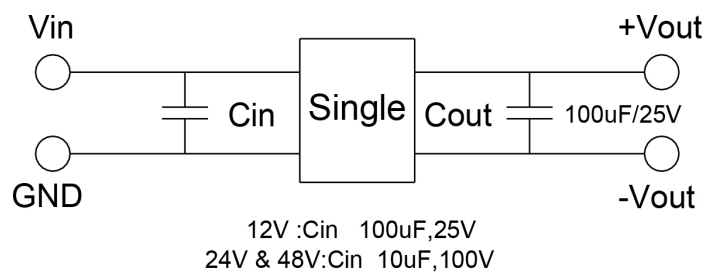
Part Number	Input Voltage [VDC] Range	Input Current [mA, Typ.]		Output Voltage [VDC]	Output Current [mA] Full load	Efficiency [% , Typ.]
		No. load	Full load			
8DPW4_2403S1.6	9-36	30	392	3.3	2424	85
8DPW4_2405S1.6	9-36	30	392	5	1600	86
8DPW4_2412S1.6	9-36	30	392	12	666	87
8DPW4_2415S1.6	9-36	30	392	15	533	87
8DPW4_4803S1.6	18-75	20	196	3.3	2424	85
8DPW4_4805S1.6	18-75	20	196	5	1600	86
8DPW4_4812S1.6	18-75	20	196	12	666	87
8DPW4_4815S1.6	18-75	20	196	15	533	87
8DPW4_2405D1.6	9-36	30	392	±5	±800	85
8DPW4_2412D1.6	9-36	30	392	±12	±333	87
8DPW4_2415D1.6	9-36	30	392	±15	±266	87
8DPW4_4805D1.6	18-75	20	196	±5	±800	85
8DPW4_4812D1.6	18-75	20	196	±12	±333	87

Typical characteristics

Temperature derating graph



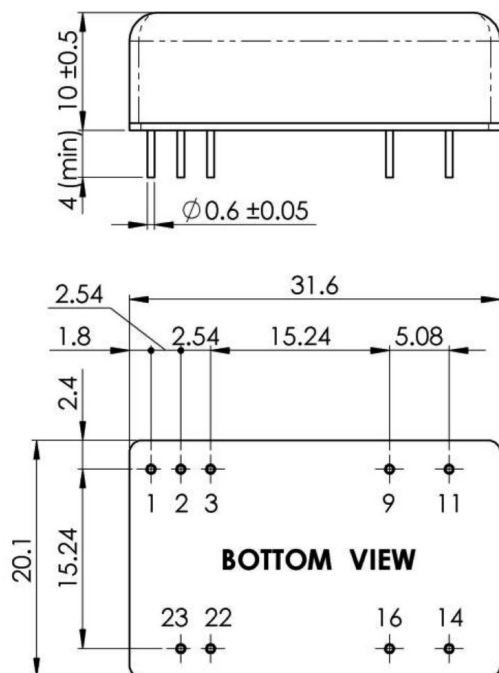
Recommended test circuit



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Mechanical dimensions



Note:
Unit: mm[inch]
Tolerances: ± 0.5 mm [± 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