

SDW30 SERIES

Single, dual and triple output



[2 YEAR WARRANTY]

- **4:1 wide input voltage range**
- **16 models available including 3.3V outputs**
- **Input reflected ripple according to CEPT**
- **Indefinite short circuit protection**
- **EN55022 conducted emissions level B**
- **Designed to meet EN60950 and IEC950**

The SDW30 series of DC/DC converters supply up to 30 Watts of output power in a 3 x 2.56 x 0.81 inch package. The series features a 4:1 wide input voltage range which ensures operation on semi-regulated distributed power voltages. Available in standard single, dual and triple outputs, the series also offers 3.3V single output models for low voltage logic applications. The SDW30 series complies with EN60950 for safety and also complies with EN55022 level B conducted emissions. All models feature continuous short circuit protection. The series boasts a high efficiency of typically 85% with tight load and line regulation. The optimized thermal design and the copper case allow operation in ambient temperatures of up to +70°C without derating. The features of the SDW series make these converters ideally suited for on board logic and distributed power systems.

SPECIFICATION

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

OUTPUT SPECIFICATIONS		
Line regulation	LL to HL, single outputs LL to HL, dual outputs	±0.1% ±1.0%
Load regulation	Single outputs Dual outputs (symmetric) Triple (outputs 2 and 3)	±0.1% ±0.1% ±4.0%
Cross regulation (See Note 1)	Duals Triples	2.0% 5.0%
Voltage accuracy		±2.0%
Minimum load	3.3V, 5V Single 12V, 15V Duals each output Triples, output 1	120mA max. 70mA max. 10% FL 10% FL
Overshoot	At start-up	3.0% max.
Ripple and noise	20MHz bandwidth	1.0% pk-pk, max. 30mV rms
Temperature coefficient		±0.02%/°C
Short circuit protection	Hiccup mode	Indefinite
INPUT SPECIFICATIONS		
Input voltage range	24VDC nominal, FL 48VDC nominal, FL	10 to 36VDC 20 to 72VDC
Input current		See table
Input reflected ripple	Singles: 48VDC, FL 24VDC, FL 48VDC, FL	12mA 300mA 150mA
Undervoltage lockout	Duals and triples: 24V nominal 48V nominal	9.5VDC 19VDC
Start-up time		750ms, max.
Remote ON/OFF ON OFF	Duals and triples only	TTL compatible TTL high or open TTL low

EMC CHARACTERISTICS		
Conducted emissions	EN55022, FCC part 15	Level B
Radiated emissions	EN55022, FCC part 15	Level B
GENERAL SPECIFICATIONS		
Efficiency		85% typ.
Isolation voltage	Input/output	1500VDC
Isolation capacitance	Input/output	1nF
Switching frequency	Fixed	100kHz typ.
Approvals and standards	Designed to meet	EN60950 IEC950
Case material		Black coated, metal case
Material flammability		UL94V-0
Weight		250g (8.83oz)
MTBF	MIL-HDBK-217F	300,000 hours
ENVIRONMENTAL SPECIFICATIONS		
Thermal performance	Operating ambient (See derating curve) Non-operating Case Derating Cooling	-10°C to +70°C -25°C to +95°C +95°C max. See derating curve Free air convection cooled
Relative humidity	Non-condensing	30% to 95%
Altitude	Operating Non operating	10,000 feet max. 40,000 feet max.
Vibration	5Hz to 500Hz	2.5G rms (approx.)

30 Watt Wide input DC/DC converters

INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT	TYPICAL EFFICIENCY	REGULATION (Typ.)		MODEL NUMBER
					LINE	LOAD	
10-36VDC	3.3V	5000mA	941mA	73%	±0.1%	±0.1%	SDW30-243V3
10-36VDC	5.0V	5000mA	1302mA	80%	±0.1%	±0.1%	SDW30-24S05
10-36VDC	12V	2500mA	1500mA	83%	±0.1%	±0.1%	SDW30-24S12
10-36VDC	15V	2000mA	1500mA	83%	±0.1%	±0.1%	SDW30-24S15
10-36VDC	±12V	±1250mA	1500mA	83%	±0.1%	±0.1%	SDW30-24D12
10-36VDC	±15V	±1000mA	1500mA	83%	±0.1%	±0.1%	SDW30-24D15
10-36VDC	5V/±12V	3000mA/±600mA	1490mA	82%	±1.0%	±4.0%	SDW30-24T05-12
10-36VDC	5V/±12V	3000mA/±500mA	1490mA	82%	±1.0%	±4.0%	SDW30-24T05-15
20-72VDC	3.3V	5000mA	470mA	73%	±0.1%	±0.1%	SDW30-48S3V3
20-72VDC	5.0V	5000mA	651mA	80%	±0.1%	±0.1%	SDW30-48S05
20-72VDC	12V	2500mA	750mA	83%	±0.1%	±0.1%	SDW30-48S12
20-72VDC	15V	2000mA	735mA	85%	±0.1%	±0.1%	SDW30-48S15
20-72VDC	±12V	±1250mA	750mA	83%	±0.1%	±0.1%	SDW30-48D12
20-72VDC	±15V	±1000mA	750mA	83%	±0.1%	±0.1%	SDW30-48D15
20-72VDC	5V/±12V	3000mA/±600mA	745mA	83%	±1.0%	±4.0%	SDW30-48T05-12
20-72VDC	5V/±15V	3000mA/±500mA	745mA	83%	±1.0%	±4.0%	SDW30-48T05-15

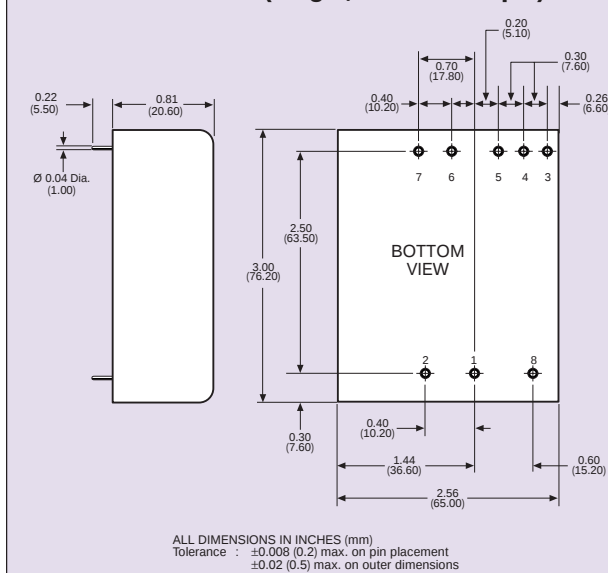
Notes

- Cross regulation:
DUALS: output 1, full load, 2.0%; output 2, minimum load, 2.0%.
TRIPLES: output 1, full load, 2.0%; output 2 vs. output 3, 0.5%;
TRIPLES: outputs 2 and 3 vs. output 1, 7.0%.
- TTL logic: on-state TTL high or open; off-state TTL low.

PIN CONNECTIONS

PIN NO.	SINGLE	DUAL	TRIPLE
1	+ Input	+ Input	+ Input
2	- Input	- Input	- Input
3	No Pin	No Connection	+ Output (V2)
4	No Connection	Common	Common
5	No Pin	- Output (V2)	- Output (V3)
6	+ Output	+ Output (V1)	+ Output (V1)
7	- Output	Common	Common
8	No Connection	Control	Control

Pinout A (Single, Dual and Triple)



DERATING CURVE

Output Power (Watts)

