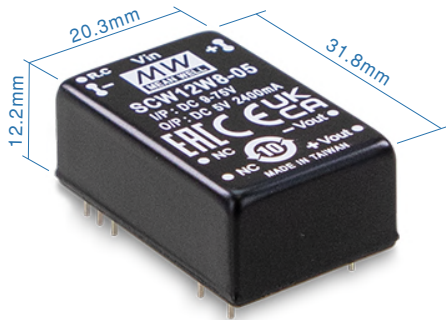




12W DIP Package 8:1 Ultra-Wide Input DC-DC Regulated Converter

SCW12W8 & DCW12W8 series



Features

- DIP24 package with industry standard pinout
- 8:1(9~75Vdc) ultra-wide input range
- Operating temperature range -40 ~ +85°C
- No minimum load required
- Comply to BS EN/EN55032 radiated Class A without additional components
- High efficiency up to 87%
- Protections: Short circuit (Continuous) / Overload / Over voltage / UVLO
- Remote ON/OFF control
- 3KVdc I/O isolation
- 3 years warranty

Applications

- Telecom/datacom system
- Wireless network
- Industrial control facility
- Instrument
- Analyzer
- Detector
- Data switch

GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

Description

SCW12W8 and DCW12W8 series are 12W isolated and regulated module type DC-DC converter with DIP24 package. It features international standard pins, a high efficiency up to 87%, wide working temperature range -40~+85°C, 3KVdc I/P-O/P isolation voltage, Compliance to BS EN/EN55032 radiated Class A without additional components, continuous-mode short circuit protection, 8:1(9~75V) ultra-wide input range, and various output voltage, 3.3V/5V/9V/12V/15V for single output and $\pm 5V/\pm 12V/\pm 15V$ for dual outputs, which are suitable for all kinds of systems, Such as industrial control, telecommunication field, distributed power architecture, and so on.

Model Encoding

S CW12 W8 -12

Output voltage (3.3/5/9/12/15Vdc, $\pm 5/\pm 12/\pm 15Vdc$)

Wide input voltage (9~75Vdc)

Rated wattage

Series name { S:Single output
D: Dual output



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MODEL SELECTION TABLE

ORDER NO.	INPUT			OUTPUT		EFFICIENCY (TYP.)	CAPACITOR LOAD (MAX.)
	INPUT VOLTAGE (RANGE)	INPUT CURRENT		OUTPUT VOLTAGE	OUTPUT CURRENT		
		NO LOAD	FULL LOAD				
SCW12W8-03	Nominal 12V, 24V,36V,48V,72V (9 ~ 75V)	10mA	497mA	3.3V	3000mA	82%	1000μF
SCW12W8-05		10mA	581mA	5V	2400mA	85%	680μF
SCW12W8-09		10mA	581mA	9V	1333mA	85%	680μF
SCW12W8-12		10mA	575mA	12V	1000mA	87%	470μF
SCW12W8-15		10mA	575mA	15V	800mA	87%	220μF
DCW12W8-05		10mA	595mA	±5V	±1200mA	84%	*470μF
DCW12W8-12		10mA	568mA	±12V	±500mA	87%	*220μF
DCW12W8-15		10mA	575mA	±15V	±400mA	86%	*220μF

* For each output

SPECIFICATION

INPUT			
VOLTAGE RANGE		9~75Vdc	
SURGE VOLTAGE (100ms max.)		100Vdc	
FILTER		Pi type	
PROTECTION (Typ.)		Fuse recommended. 4A Slow-Blow Type	
OUTPUT			
VOLTAGE ACCURACY		±2%	
RATED POWER		12W	
RIPPLE & NOISE Note.2		100mVp-p	
LINE REGULATION Note.3		±0.5%	
LOAD REGULATION Note.4		±1% for 3.3Vo, ±0.5% for others	
CROSS DEGUATION		±5% @ 25%~100% Load only for dual output	
SWITCHING FREQUENCY (Typ.)		300KHz	
PROTECTION			
SHORT CIRCUIT		Protection type : Continuous, automatic recovery	
OVERLOAD		110 ~ 230% rated output power	
		Protection type : Hiccup mode, recovers automatically after fault condition is removed	
OVER VOLTAGE		Protection type : Clamp by TVS diode	
UNDER VOLTAGE LOCKOUT (Typ.)		Start-up voltage	8.8Vdc
		Shutdown voltage	8Vdc
FUNCTION			
REMOTE CONTRON		Power ON: R.C. ~ -Vin >2.5~30Vdc or open circuit ; Power OFF: R.C. ~ -Vin <1Vdc or short	
ENVIRONMENT			
COOLING		Free-air convection	
WORKING TEMP.		-40 ~ +85℃ (Refer to "Derating Curve")	
CASE TEMPERATURE		+110℃ max.	
WORKING HUMIDITY		5% ~ 95% RH non-condensing	
STORAGE TEMP., HUMIDITY		-55 ~ +125℃, 10 ~ 95% RH non-condensing	
TEMP. COEFFICIENT		0.05% / °C (0 ~ 85℃)	
SOLDERING TEMPERATURE		1.5mm from case of 3 ~ 5sec./265℃ max.	
VIBRATION		10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes	
SAFETY & EMC (Note.5)			
SAFETY STANDARDS		EAC TP TC 020/2011 approved	
WITHSTAND VOLTAGE		I/P-O/P:3KVdc	
ISOLATION RESISTANCE		I/P-O/P:1000M Ohms / 500VDC / 25℃/ 70% RH	
ISOLATION CAPACITANCE (Typ.)		1000pF	
EMC EMISSION	Parameter	Standard	Test Level / Note
	Conducted	BS EN/EN55032	N/A
	Radiated	BS EN/EN55032	Class A without additional components Class B with additional components
EMC IMMUNITY	Parameter	Standard	Test Level / Note
	ESD	BS EN/EN61000-4-2	Level 2, ±8KV air, ±4KV contact
	Radiated Susceptibility	BS EN/EN61000-4-3	Level 2, 3V/m
	EFT/Bursts	BS EN/EN61000-4-4	Level 1, 0.5KV
	Surge	BS EN/EN61000-4-5	Level 2, 0.5KV Line-Line
	Conducted	BS EN/EN61000-4-6	Level 2, 3V(e.m.f.)
	Magnetic field immunity	BS EN/EN61000-4-8	Level 1, 1A/m
OTHERS			
MTBF (Typ.)		>300Khrs MIL-HDBK-217F(25℃)	
DIMENSION (L*W*H)		31.8*20.3*12.2mm (1.25*0.8*0.48 inch)	
CASE MATERIAL		Five-side shielded case	
PACKING		17.5g ; 15pcs/per tube, 750pcs/50 tube/per carton	
NOTE			

1.All parameters are specified at normal input(24Vdc), rated load, 25°C 70% RH ambient.

2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1μf & 47μf capacitor.

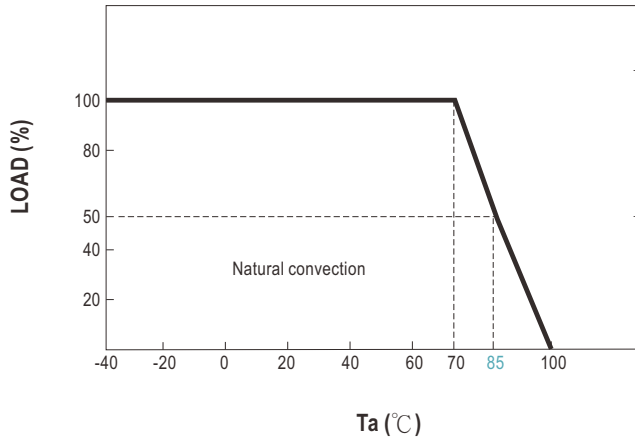
3.Line regulation is measured from low line to high line at rated load.

4.Load regulation is measured from 0% to 100% rated load.

5.The final equipment must be re-confirm that it still meet EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."(as available on <http://www.meanwell.com>)

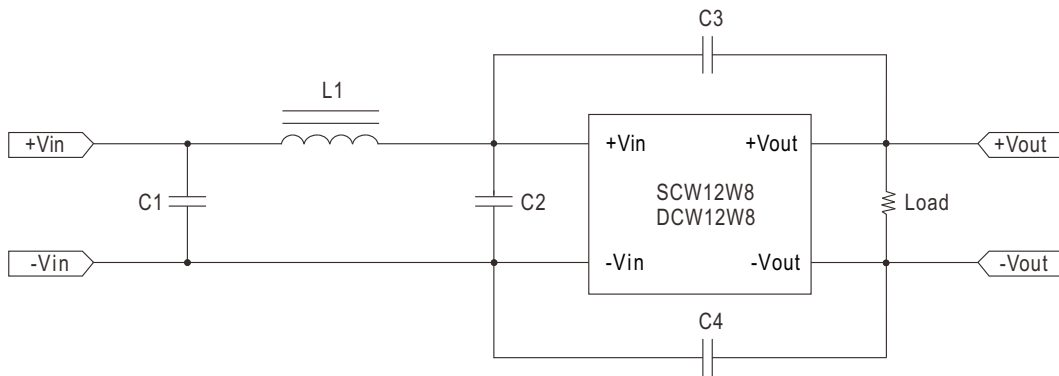
※ Product Liability Disclaimer : For detailed information, please refer to <https://www.meanwell.com/serviceDisclaimer.aspx>

Derating Curve



EMC Suggestion Circuit

※ Required external components to meet BS EN/EN55032 radiated Class B are as below:

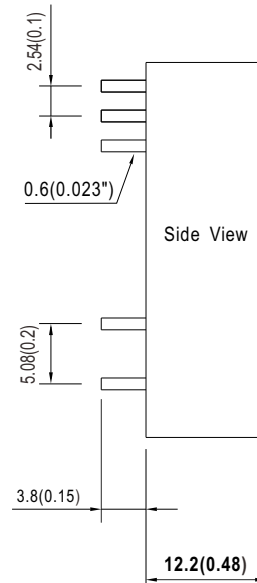
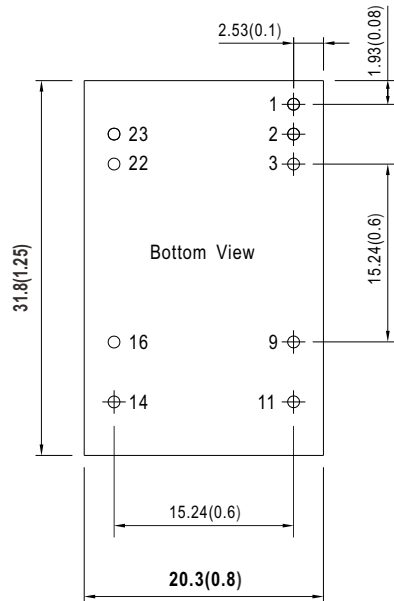


Model No.	BS EN/EN55032 radiated Class B				
	C1	C2	C3	C4	L1
SCW12W8 DCW12W8	2.2μF/100V	2.2μF/100V	152/5KV	152/5KV	10μH

Note : All of capacitors are ceramic capacitors.

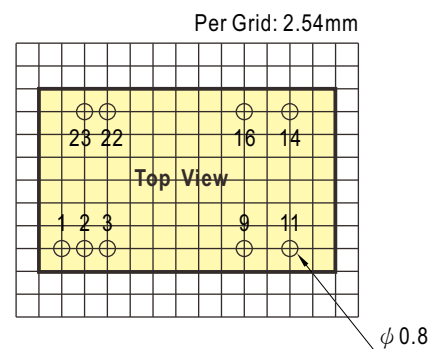
Mechanical Specification

- All dimensions in mm(inch)
- Tolerance: $x.x \pm 0.5\text{mm}$ ($x.xx \pm 0.02"$)
 $x.xx \pm 0.5\text{mm}$ ($x.xxx \pm 0.02"$)
- Pin size is: $0.6 \pm 0.1\text{mm}$ ($0.023" \pm 0.0039"$)

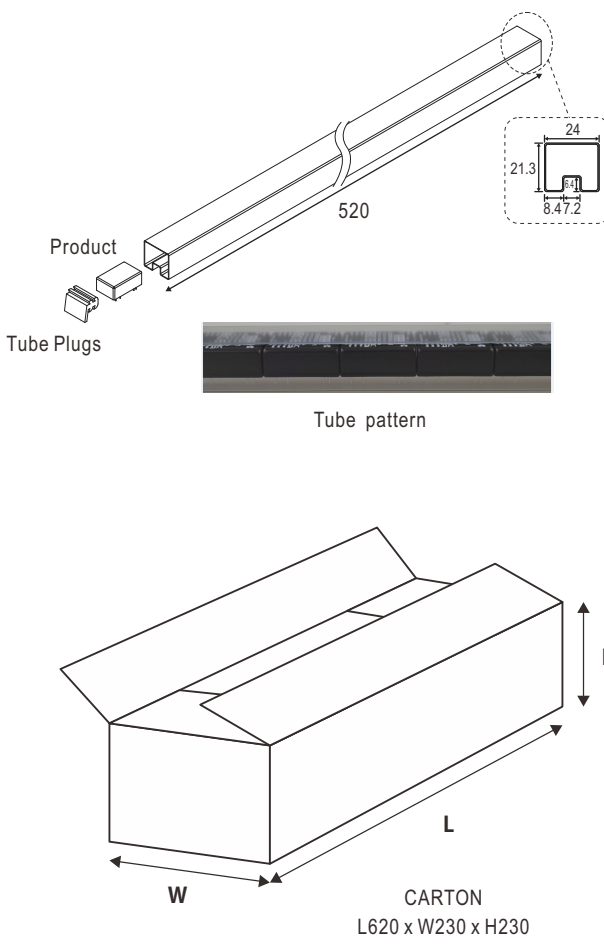


Pin Assignment

Pin-Out		
Pin No.	SCW12W8 (Single output)	DCW12W8 (Dual output)
1	Remote ON/OFF	Remote ON/OFF
2,3	-Vin	-Vin
9	N.C.	Common
11	N.C.	-Vout
14	+Vout	+Vout
16	-Vout	Common
22,23	+Vin	+Vin



Packing

Standard Tube Packing	MPQ Per Tube (PCS)	One Tube G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
<p>Unit : mm</p>  <p>Product</p> <p>Tube Plugs</p> <p>Tube pattern</p> <p>CARTON L620 x W230 x H230</p>	15	313g	750	17Kg

Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>