



MEAN WELL SCW12A-05 12W Regulated Single Output Converter Owner's Manual

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MEAN WELL SCW12A-05 12W Regulated Single Output Converter



Product Information

The SCW12 series is a 12W DC-DC Regulated Single Output Converter. It features a 2:1 wide input range, 1500VDC I/O isolation, built-in remote ON/OFF control, built-in EMI filter, and multiple protections including short circuit and overload. The converter is cooled by free air convection and housed in a five-sided shield metal case. It has undergone a 100% full load burn-in test to ensure high reliability. Modified models are available with output options of 2.5V or 3.3V. The product comes with a 2-year warranty.

Specifications

Order No.	DC Voltage	Current Range	Rated Power	Ripple & Noise (max.)	Voltage Accuracy	Switching Frequency	External Capacitance Load (max.)	Voltage Range	Efficiency (Typ.)	Input DCC Current (Full Load / No Load)	Filter	Protection	Working Temp.	Working Humidity	Storage Temp., Humidity	Temp. Coefficient	Vibration	Safety Standards	Withstand Voltage	Isolation Resistance	Safety Isolation Capacitance	EMC Emission	EMC Immunity	Remote Control	MTBF	Dimension	Weight

S C W 1 2 A -0 5	
5 V	
4 8 0 ~ 2 4 0 0 m A	
1 2 W	
5 0 m V p-p	
-	
4 0 0 K H z m i n .	
1 0 0 0 0 u F	
A : 9 ~ 1 8 V D C B : 1 8 ~ 3 6 V D C C : 3 6 ~ 7 2 V D C	
8 2 %	
A : 1 2 4 5 m A / A : 7 0 m A B : 6 2 5 m A / B : 3 5 m A C : 3 2 0 m A / C : 2 5 m A	
P i n e t w o r k	
F u s e r e c o m m e n d e d	
-4 0 ~ + 7 1 (R e f e r t o D e r a t i n g C u r v e)	
2 0 % ~ 9 0 % R H n o n - c o n d e n s i n g	
-4 0 ~ + 1 0 5, 1 0 ~ 9 5 % R H	
-	
1 0 ~ 5 0 0 H z, 2 G	
E A C T P T C 0 2 0 / 2 0 1 1 a p p r o v e d	
I / P - O / P : 1 0 0 M O h m s / 5 0 0 V D C / 2 5 / 7 0 % R H	
I / P - O / P : 1.5 K V D C	
2 2 0 0 p F m a x.	
C o m p l i a n c e t o B S E N / E N 5 5 0 3 2 C l a s s A , F C C p a r t 1 5 C l a s s A , E A C T P T C 0 2 0	
C o m p l i a n c e t o B S E N / E N 6 1 0 0 0 - 4 - 2, 3, 4, 5, 6, 8 l i g h t i n d u s t r y l e v e l , c r i t e r i a A , E A C T P T C 0 2 0	
P o w e r O N : R . C ~ - V i n > 4 V D C o r o p e n ; P o w e r O F F : R . C ~ - V i n < 1 V D C o r s h o r t	
6 0 0 K h r s m i n . M I L - H D B K - 2 1 7 F (2 5)	
3 1.8* 2 0.3* 1 2.2 m m o r 1.2 5* 0.8 0* 0.4 8 i n c h (L * W * H)	
1 8.5 g	

SCW12B-05	12V	200~1000mA	12W	60mVp-p	-	400KHzmin.	220uF	A: 9~18VDC B: 18~36VDC C: 36~72VDC	83%	A: 1245mA / A: 70mA B: 625mA / B: 35mA C: 320mA / C: 25mA	Pine network	Fuser recommended	-40~+71 (Refer to Derating Curve)	20%~90%RH non-condensing	-40~+105, 10~95%RH	-	10~500Hz, 2G	EACTPTC020 / 2011 approved	I/P-O/P: 100Mohms / 500VDC / 25/70%RH	I/P-O/P: 1.5KVDC	2200pFmax.	Compliance to BSEN / EN 55032 Class A, FCC Part 15 Class A, EACTPTC020	Compliance to BSEN / EN 61000-4-2, 3, 4, 5, 6, 8 light industry level, criteria A, EACTPTC020	Power ON: R.C. ~ - Vin > 4VDC or open; Power OFF: R.C. ~ - Vin < 1VDC or short	600Khrs min. MIL-HDBK-217F (25)	31.8*20.3*12.2mm or 1.25*0.8*0.48inch (L*W*H)	18.5g
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SCW12C-05	15 V	160 ~ 800 mA	12 W	60 mV p-p	-	400 KHz min.	220 uF	A : 9 ~ 18 VDC B : 18 ~ 36 VDC C : 36 ~ 72 VDC	84 %	A : 1245 mA / A : 70 mA B : 625 mA / B : 35 mA C : 320 mA / C : 25 mA	Pine network	Fuser recommended	-40 ~ +71 (Refer to Derating Curve)	20% ~ 90% RH non-condensing	-40 ~ +105, 10 ~ 95% RH	-	100 ~ 500 Hz, 2 G	EAC TPTC 020 / 2011 approved	I/P-O/P : 100 MOhms / 500 VDC / 25/70% RH	I/P-O/P : 1.5 K VDC	2200 pF max.	Compliance to BSEN / EN 55032 Class A, FCC Part 15 Class A, EAC TPTC 020	Compliance to BSEN / EN 61000-4-2, 3, 4, 5, 6, 8 light industry level, criteria A, EAC TPTC 020	Power ON : R.C. ~ Vin > 4 VDC or open ; Power OFF : R.C. ~ Vin < 1 VDC or short	600 Khrs min. MIL - HDBK - 217F (25)	31.8*20.3*12.2 mm or 1.25*0.8*0.48 inch (L*W*H)	18.5 g
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- Make sure the input voltage falls within the specified voltage range for the desired model (A, B, or C).
- Connect the input power source to the designated input terminals.
- Connect the load to the output terminals, ensuring proper polarity.
- Ensure that the external capacitance load does not exceed the specified maximum value.
- If remote control is required, use a switch or relay to control the ON/OFF state of the converter by connecting it to the remote control terminals as per the provided instructions.
- Ensure proper cooling by allowing free air convection around the converter.

Features

- 2:1 wide input range
- 1500VDC I/O isolation
- Built-in remote ON/OFF control
- Built-in EMI filter
- Protections: Short circuit / Overload
- Cooling by free air convection
- Five-sided shield metal case
- 100% full load burn-in test
- Low cost / High reliability
- Modified models available: output 2.5V/3.3V
- 2 years warranty

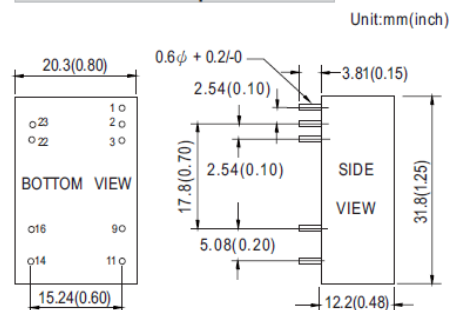
SPECIFICATION

ORDER NO.		SCW1 2A-05	SCW1 2B-05	SCW1 2C-05	SCW1 2A-12	SCW1 2B-12	SCW1 2C-12	SCW1 2A-15	SCW1 2B-15	SCW1 2C-15
OUTPUT	DC VOLTAGE	5V			12V			15V		
	CURRENT RANGE	480 ~ 2400mA			200 ~ 1000mA			160 ~ 800mA		
	RATED POWER	12W								
	RIPPLE & NOISE (max.) Note.2	50mVp-p			60mVp-p			60mVp-p		
	LINE REGULATION Note.3	±0.5%								
	LOAD REGULATION Note.4	±0.5%								
	VOLTAGE ACCURACY	±2.0%								
	SWITCHING FREQUENCY	400KHz min.								

	EXTERNAL CAP ACITANCE LOAD (max.)	1000uF				220uF			220uF		
INPUT	VOLTAGE RANGE	A: 9 ~ 18VDC B: 18 ~ 36VDC C: 36 ~ 72VDC									
	EFFICIENCY (Typ.)	82%	83%	84%	82%	83%	83%	82%	85%	83%	
	DC CURRENT	Full load	A: 1245mA B: 625mA C: 320mA								
		No load	A: 70mA B: 35mA C: 25mA								
	FILTER	Pi network									
	PROTECTION	Fuse recommended									
PROTECTION (Note . 5)	OVERLOAD	110 ~ 180% rated output power									
		Protection type : Hiccup mode, recovers automatically after fault condition is removed									
	SHORT CIRCUIT	All output equipped with short circuit									
		Protection type : Hiccup mode, recovers automatically after fault condition is removed									
ENVIRONMENT	WORKING TEMP.	-40 ~ +71°C (Refer to “Derating Curve”)									
	WORKING HUMIDITY	20% ~ 90% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-40 ~ +105°C, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.05% / °C (0 ~ 50°C)									
	VIBRATION	10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes									
SAFETY	SAFETY STANDARDS	EAC TP TC 020/2011 approved									
	WITHSTAND VOLTAGE	I/P-O/P:1.5KVDC									
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms / 500VDC / 25°C/ 70% RH									
	ISOLATION CAPACITANCE	2200pF max.									
	EMC EMISSION	Compliance to BS EN/EN55032 Class A, FCC part 15 Class A, EAC TP TC 020									
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8 light industry level, criteria A, EAC TP TC 020									

OTHERS	REMOTE CONTROL	Power ON: R.C. ~ -Vin > 4VDC or open ; Power OFF: R.C. ~ -Vin < 1VDC or short
	MTBF	600Khrs min. MIL-HDBK-217F(25°C)
	DIMENSION	31.8*20.3*12.2mm or 1.25"*0.80"*0.48" inch (L*W*H)
	WEIGHT	18.5g

Mechanical Specification

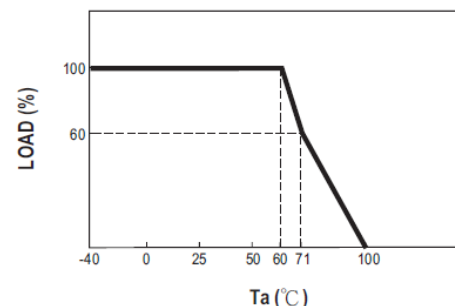


Pin Size is Tolerance 0.5±0.05mm, Tolerance .X or .XX= ±0.5mm

Pin Configuration

Pin No.	Output
1	R.C.
2 & 3	-Vin
9	N.C.
11	N.C.
14	+Vout
16	-Vout
22 & 23	+Vin

Derating Curve



NOTE

- All parameters are specified at normal input, rated load, 25°C 70% RH ambient.
- Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor.
- Line regulation is measured from low line to high line at rated load.
- Load regulation is measured from 20% to 100% rated load.
- Please prevent the converter from operating in overload or short circuit condition for more than 30 seconds.

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

Documents / Resources

	MEAN WELL SCW12A-05 12W Regulated Single Output Converter [pdf] Owner's Manual SCW12A-05 12W Regulated Single Output Converter, SCW12A-05, 12W Regulated Single Output Converter, Regulated Single Output Converter, Single Output Converter, Output Converter, Converter
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