



20W DIP Package DC-DC Regulated Converter

SCW20 series



EAC CE UK CA



## ■ Features

- DIP24 package with industry standard pinout
- 2:1 wide input range
- Operating temperature range -40 ~ +80°C
- No minimum load required
- Comply to BS EN/EN55032 radiated Class A without additional components
- High efficiency up to 89%
- Protections: Short circuit (Continuous) / Overload
- 1.5KVDC I/O isolation
- Remote ON/OFF control
- 3 years warranty

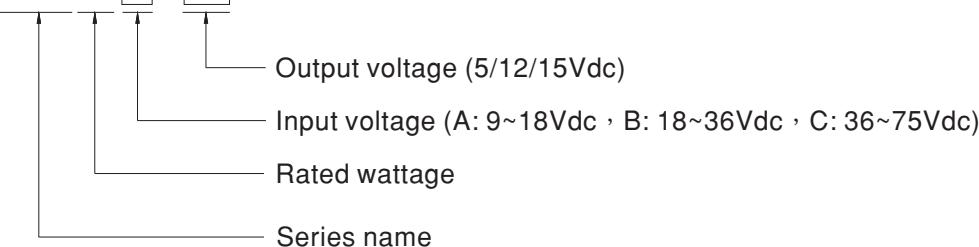
## ■ Applications

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

## ■ Description

SCW20 series is 20W isolated and regulated module type DC-DC converter with DIP24 package. It features international standard pins, a high efficiency up to 89%, wide working temperature range -40~+80°C, 1.5KVDC I/P-O/P isolation voltage, Compliance to BS EN/EN55032 radiated Class A without additional components, continuous-mode short circuit protection, etc. The additional components, models account for different input voltage 9~18V, 18~36V and 36~75V 2:1 wide input range, and various output voltage, 5V/12V/15V for single output, which are suitable for all kinds of systems, Such as industrial control, telecommunication field, distributed power architecture, and so on.

## ■ Model Encoding

SCW20 **A** - **12**



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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						
SCW20A-05	Normal 12V (9 ~ 18V)	110mA	1938mA	5V	4000mA	86%	1000µF		
SCW20A-12		30mA	1938mA	12V	1666mA	86%	220µF		
SCW20A-15		25mA	1915mA	15V	1333mA	87%	220µF		
SCW20B-05	Normal 24V (18 ~ 36V)	60mA	969mA	5V	4000mA	86%	1000µF		
SCW20B-12		25mA	957mA	12V	1666mA	87%	220µF		
SCW20B-15		25mA	957mA	15V	1333mA	88%	220µF		
SCW20C-05	Normal 48V (36 ~ 75V)	45mA	484mA	5V	4000mA	86%	1000µF		
SCW20C-12		15mA	479mA	12V	1666mA	87%	220µF		
SCW20C-15		15mA	479mA	15V	1333mA	89%	220µF		



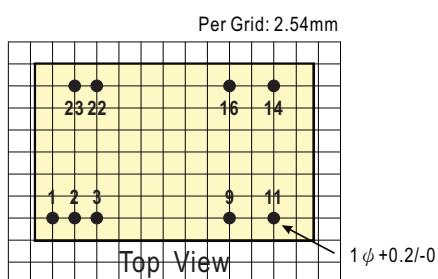
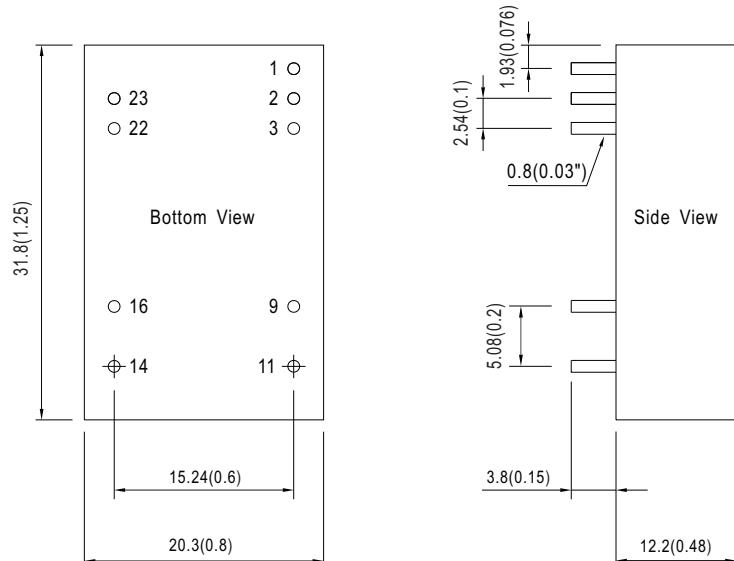
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SPECIFICATION								
INPUT	VOLTAGE RANGE	A: 9~18Vdc , B: 18~36Vdc , C: 36~75Vdc						
	FILTER	Pi type						
	PROTECTION	Fuse recommended. 12Vin models: 4A Slow-Blow Type, 24Vin models: 2A Slow-Blow Type, 48Vin models: 1A Slow-Blow Type						
	INTERNAL POWER DISSIPATION	500mW						
OUTPUT	VOLTAGE ACCURACY	±2%						
	RATED POWER	20W						
	RIPPLE & NOISE Note.2	80mVp-p						
	LINE REGULATION Note.3	±0.5%						
	LOAD REGULATION Note.4	±0.5%						
	SWITCHING FREQUENCY (Min.)	400KHz						
PROTECTION	SHORT CIRCUIT	Protection type : Continuous, automatic recovery						
	OVERLOAD	120 ~ 190% rated output power						
		Protection type : Recovers automatically after fault condition is removed						
FUNCTION	REMOTE CONTROL	Power ON: R.C. ~ -Vin > 2.5VDC or open ; Power OFF: R.C. ~ -Vin < 0.8VDC or short						
ENVIRONMENT	COOLING	Free-air convection						
	WORKING TEMP.	-40 ~ +80°C (Refer to "Derating Curve")						
	CASE TEMPERATURE	+110°C max.						
	WORKING HUMIDITY	20% ~ 90% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40 ~ +105°C, 10 ~ 95% RH non-condensing						
	TEMP. COEFFICIENT	0.03% / °C (0 ~ 85°C)						
	SOLDERING TEMPERATURE	1.5mm from case of 1 ~ 3sec./260°C max.						
SAFETY & EMC (Note.5)	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes						
	SAFETY STANDARDS	EAC TP TC 020/2011 (EAC TP TC 004 for 48Vin type only) approved						
	WITHSTAND VOLTAGE	I/P-O/P:1.5KVDC						
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH						
	ISOLATION CAPACITANCE (Typ.)	1200pF						
	EMC EMISSION	Parameter	Standard					
		Conducted	BS EN/EN55032(CISPR32)					
	EMC IMMUNITY	Radiated	BS EN/EN55032(CISPR32)					
		Parameter	Standard					
		ESD	BS EN/EN61000-4-2					
		Radiated Susceptibility	BS EN/EN61000-4-3					
		EFT/Burst	BS EN/EN61000-4-4					
		Surge	BS EN/EN61000-4-5					
		Conducted	BS EN/EN61000-4-6					
OTHERS	Magnetic Field	BS EN/EN61000-4-8	Level 2, 3A/m					
	MTBF	224Khrs MIL-HDBK-217F(25°C)						
	DIMENSION (L*W*H)	31.8*20.3*12.2mm (1.25*0.8*0.48 inch)						
	CASE MATERIAL	Five-sided shield metal case						
NOTE	PACKING	18.5g						
	1.All parameters are specified at normal input(A:12Vdc, B:24Vdc, C:48Vdc), 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 20% to 100% rated load.							
5.The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a> )								
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### ■ Mechanical Specification

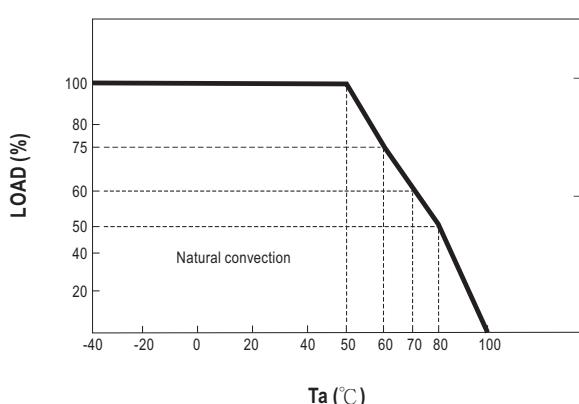
- All dimensions in mm(inch)
- Tolerance:  $x.x \pm 0.5\text{mm}$  ( $x.xx \pm 0.02''$ )
- $x.xx \pm 0.25\text{mm}$  ( $x.xxx \pm 0.010''$ )
- Pin size is:  $0.8 \pm 0.05\text{mm}$  ( $0.03'' \pm 0.002''$ )



### ■ Pin Assignment

Pin No.	Output
1	Remote ON/OFF
2,3	-Vin
9	N.C.
11	N.C.
14	+Vout
16	-Vout
22,23	+Vin

### ■ Derating Curve





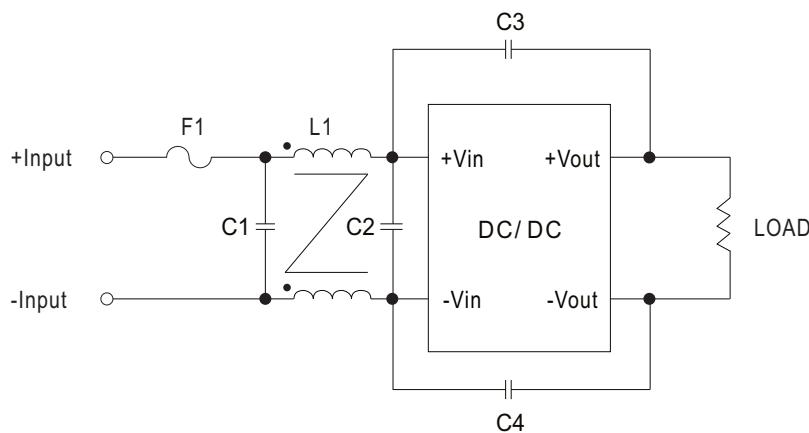
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**■ Recommended Filter for BS EN/EN55032 Class B Compliance**

The components used in the above figure, together with the manufacturer's part numbers for these components, are as follows:

	C1	C2	C3	C4	L1
SCW20 12Vin	3.3μF/50V 1812 MLCC	N/A	1000pF/2KV MLCC	1000pF/2KV MLCC	325μH Common Choke
SCW20 24Vin	4.7μF/50V 1812 MLCC	N/A	1000pF/2KV MLCC	1000pF/2KV MLCC	325μH Common Choke
SCW20 48Vin	2.2μF/100V 1812 MLCC	2.2μF/100V 1812 MLCC	1000pF/2KV MLCC	1000pF/2KV MLCC	325μH Common Choke

**■ Installation Manual**

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