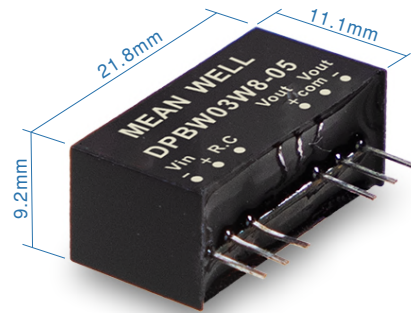
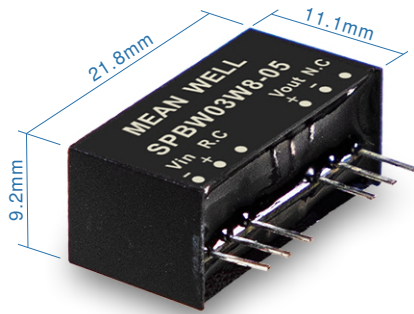




3W SIP Package 8:1 Ultra-Wide Input DC-DC Regulated Converter **SPBW03W8 & DPBW03W8** series



TPTC004



■ Features

- SIP8 package with industry standard pinout
- **8:1 (9~75Vdc)** ultra-wide input range
- Operating temperature range **-40 ~ +90°C**
- No minimum load required
- Comply to BS EN/EN55032 **radiated Class A with additional components**
- High efficiency up to 85%
- Protections: Short circuit (Continuous) / Overload / UVLO
- 3KVdc 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

SPBW03W8 and DPBW03W8 series are 3W isolated and regulated module type DC-DC converter with SIP8 package. It features international standard pins, a high efficiency up to 85%, wide working temperature range -40~+90°C, 3KVdc I/P-O/P isolation voltage, Compliance to BS EN/EN55032 radiated Class A with additional components, continuous-mode short circuit protection, etc. SPBW03W8 and DPBW03W8 have an ultra-wide input range of 8:1 (9~75V), and various output voltage, 3.3V/5V/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

SPBW03W8-12

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

8:1 (9~75Vdc) Wide input voltage

Rated wattage

Series name { S:Single output
D: Dual output



3W SIP Package 8:1 Ultra-Wide Input DC-DC Regulated Converter **SPBW03W8 & DPBW03W8 series**

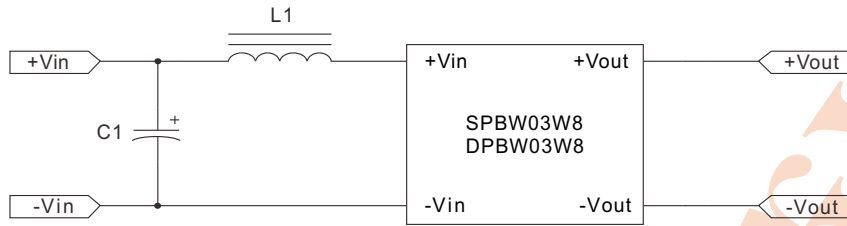
MODEL SELECTION TABLE							
ORDER NO.	INPUT			OUTPUT		EFFICIENCY	CAPACITOR LOAD (MAX.)
	INPUT VOLTAGE (RANGE)	INPUT CURRENT		OUTPUT VOLTAGE	OUTPUT CURRENT		
		NO LOAD	FULL LOAD				
SPBW03W8-03	Nominal 12V, 24V,36V,48V,72V (9 ~ 75V)	6mA	62mA	3.3V	0 ~ 700mA	78%	1800μF
SPBW03W8-05		4mA	77mA	5V	0 ~ 600mA	81%	1000μF
SPBW03W8-12		8mA	74mA	12V	0 ~ 250mA	85%	220μF
SPBW03W8-15		12mA	76mA	15V	0 ~ 200mA	83%	120μF
DPBW03W8-05		8mA	77mA	±5V	±0 ~ 300mA	81%	*470μF
DPBW03W8-12		12mA	76mA	±12V	±0 ~ 125mA	83%	*100μF
DPBW03W8-15		12mA	75mA	±15V	±0 ~ 100mA	84%	*47μF

* For each output

SPECIFICATION			
INPUT			
VOLTAGE RANGE		9~75Vdc	
SURGE VOLTAGE (100ms max.)		100Vdc	
FILTER		Internal capacitor	
PROTECTION		Fuse recommended. 1A Slow-Blow.	
INTERNAL POWER DISSIPATION		500mW	
OUTPUT			
VOLTAGE ACCURACY		± 1.5%	
RATED POWER		3W	
RIPPLE & NOISE Note.2		50mVp-p	
LINE REGULATION Note.3		± 0.5%	
LOAD REGULATION Note.4		Single output models: ± 0.5%, Dual output models: ± 1%	
CROSS DEGUIATION		± 5% @ 25%~100% Load only dual output	
SWITCHING FREQUENCY (Typ.)		450KHz	
PROTECTION			
SHORT CIRCUIT		Protection type : Continuous, automatic recovery	
OVERLOAD		110 ~ 230% rated output power	
		Protection type : Recovers automatically after fault condition is removed	
UNDER VOLTAGE		Start-up voltage	8.8Vdc
		Shutdown voltage	8Vdc (Typ.)
FUNCTION			
REMOTE CONTROL		Power ON: R.C. ~ -Vin open circuit ; Power OFF: R.C. ~ -Vin <1.2Vdc or short	
ENVIRONMENT			
COOLING		Free-air convection	
WORKING TEMP.		-40 ~ +90℃ (Refer to "Derating Curve")	
CASE TEMPERATURE		+110℃ max.	
WORKING HUMIDITY		20% ~ 90% RH non-condensing	
STORAGE TEMP., HUMIDITY		-40 ~ +125℃, 10 ~ 95% RH non-condensing	
TEMP. COEFFICIENT		0.03% / °C (0 ~ 90℃)	
SOLDERING TEMPERATURE		1.5mm from case of 1 ~ 3sec./260℃ 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(CISPR32)	Class A/B with additional components
	Radiated	BS EN/EN55032(CISPR32)	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 1, 0.5KV Line-Line
	Conducted	BS EN/EN61000-4-6	Level 2, 3V(e.m.f.)
	Magnetic Field	BS EN/EN61000-4-8	Level 2, 3A/m
OTHERS			
MTBF		1850Khrs MIL-HDBK-217F(25℃)	
DIMENSION (L*W*H)		21.8*9.2*11.1mm (0.86*0.36*0.44 inch)	
CASE MATERIAL		Non-Conductive black plastic (UL 94V-0 rated)	
PACKING		4.8g ; 14pcs/per tube, 2058pcs/147 tube/per carton	
NOTE			
1.All parameters are specified at normal input (48Vdc), rated load, 25℃ 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			

■ EMC Suggestion Circuit

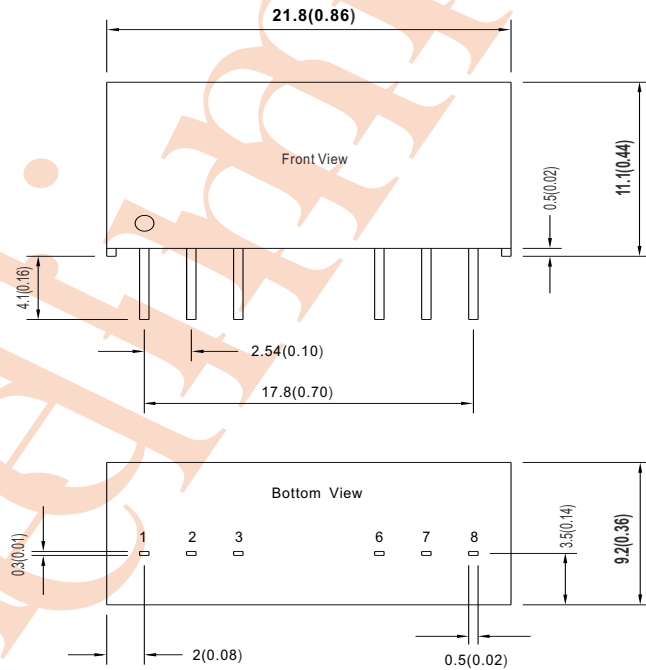
※ EMC Considerations EMI Test standard: BS EN/EN55032 Class A/B Conduct and BS EN/EN55032 Class B Radiation test conditions recommendations: Input Voltage: Nominal, Output Load: Full Load



Model No.	BS EN/EN55032 Class A(Conduction)		BS EN/EN55032 Class B(Conduction)	
SPBW03W8 DPBW03W8	C1	L1	C1	L1
	2.2uF/100V X7R 10% R TDK 1210	15μH	2.2uF/100V X7R 10% R TDK 1210	68μH
	BS EN/EN55032 Class A(Radiation)		BS EN/EN55032 Class B(Radiation)	
	C1	L1	C1	L1
	NC	NC	2.2uF/100V X7R 10% R TDK 1210	68μH

■ Mechanical Specification

- All dimensions in mm(inch)
- Tolerance: x.x±0.5mm(x.xx±0.02")
- Pin pitch tolerance: ±0.05mm (±0.002")

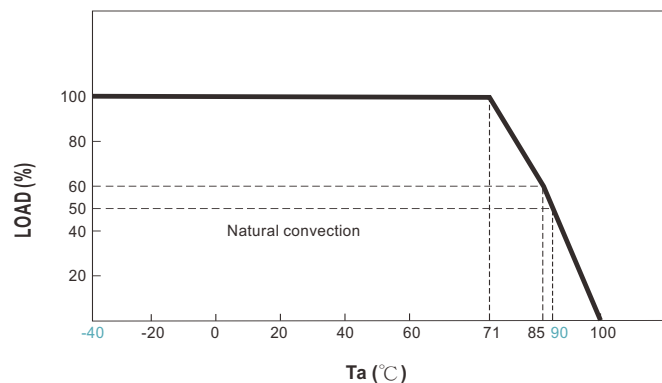


■ Plug Assignment

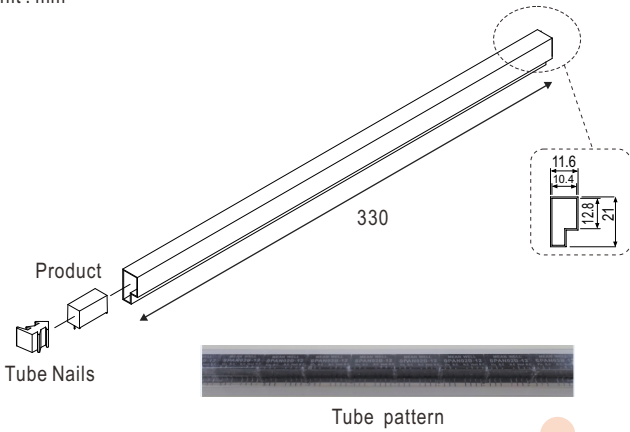
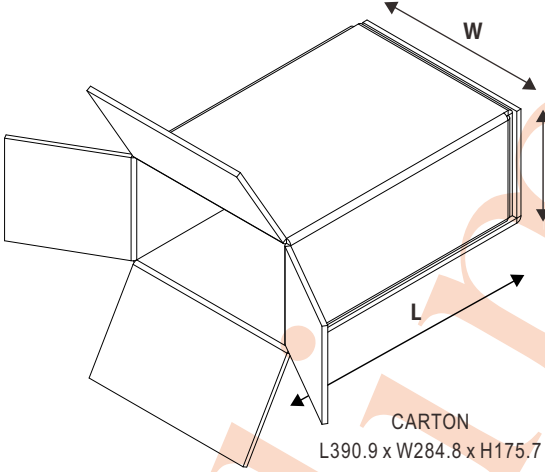
Pin-Out		
Pin No.	SPBW03W8 (Single output)	DPBW03W8 (Dual output)
1	-Vin	-Vin
2	+Vin	+Vin
3	R.C.	R.C.
6	+Vout	+Vout
7	-Vout	Common
8	N.C.	-Vout

* N.C. : No connected

■ Derating Curve



■ Packing

Standard Tube Packing	MPQ Per Tube (PCS)	One Tube G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
Unit : mm  330 Product Tube Nails Tube pattern  W H L CARTON L390.9 x W284.8 x H175.7	14	78.7g	2058	13.57Kg

■ Installation Manual

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