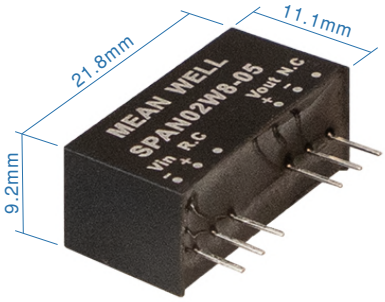
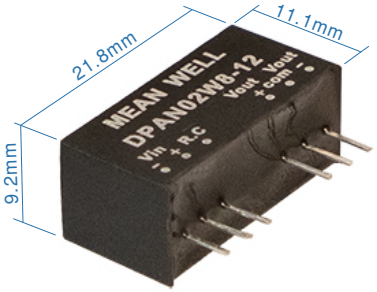




TPTC020

Features

- SIP8 package with industry standard pinout
- 8:1(9~75Vdc) ultra-wide input range
- Operating temperature range -40 ~ +95℃
- No minimum load required
- Comply to BS EN/EN55032 radiated Class A without additional components
- High efficiency up to 83%
- 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

GTIN CODE

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

Description

SPAN02W8 and DPAN02W8 series are 2W isolated and regulated module type DC-DC converter with SIP8 package. It features international standard pins, a high efficiency up to 83%, wide working temperature range -40~+95℃ , 3KVdc I/P-O/P isolation voltage, compliance to BS EN/EN55032 radiated class A without additional components, overload and continuous-mode short circuit protection, etc. The models account for 9~75Vdc 8:1 ultra-wide input range, and various output voltage, 3.3V/5V/12V/15V for single output and ±5V/±12V/±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 PAN02 W8 – 12

- 12 — Output voltage (3.3/5/12/15Vdc，±5/±12/±15Vdc)
- W8 — 8:1(9~75Vdc) Wide input voltage
- 02 — Rated wattage
- S PAN — Series name { S:Single output / D:Dual output

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				
SPAN02W8-03	Nominal 12V, 24V,36V,48V,72V (9 ~ 75V)	6mA	45mA	3.3V	0 ~ 500mA	77%	500μF
SPAN02W8-05		4mA	52mA	5V	0 ~ 400mA	80%	400μF
SPAN02W8-12		8mA	50mA	12V	0 ~ 167mA	83%	167μF
SPAN02W8-15		12mA	50mA	15V	0 ~ 134mA	83%	134μF
DPAN02W8-05		8mA	52mA	±5V	±0 ~ 200mA	80%	*200μF
DPAN02W8-12		12mA	51mA	±12V	±0 ~ 83mA	82%	*83μF
DPAN02W8-15		12mA	51mA	±15V	±0 ~ 67mA	82%	*67μF

* For each output

SPECIFICATION

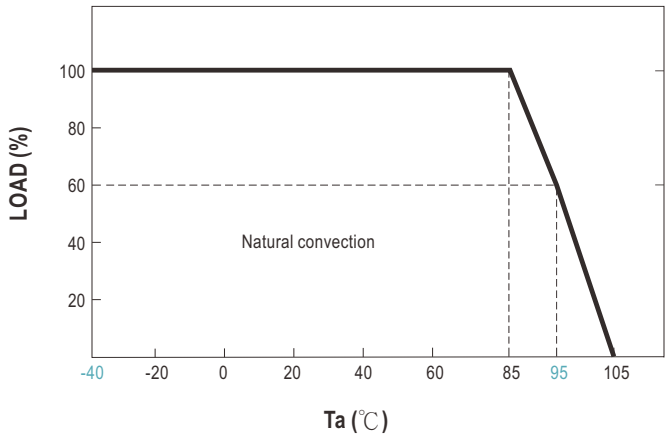
INPUT			
VOLTAGE RANGE	9~75Vdc		
SURGE VOLTAGE (100ms max.)	100Vdc		
FILTER	Capacitor		
PROTECTION	Fuse recommended. 1000mA Slow-Blow Type.		
OUTPUT			
VOLTAGE ACCURACY	±1.5%		
RATED POWER	2W		
RIPPLE & NOISE Note.2	75mVp-p		
LINE REGULATION Note.3	±0.5%		
LOAD REGULATION Note.4	Single output models: ±0.5%, Dual output models: ±1%		
CROSS REGULATION	±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 LOCKOUT (Typ.)	Start-up voltage	8.8Vdc	
	Shutdown voltage	8Vdc	
FUNCTION			
REMOTE CONTROL	Power ON: R.C. ~ -Vin <1.2Vdc or open circuit; Power OFF: R.C. ~ -Vin >5.5 ~ 15Vdc		
ENVIRONMENT			
COOLING	Free-air convection		
WORKING TEMP.	-40 ~ +95℃ (Refer to "Derating Curve")		
CASE TEMPERATURE	+110℃ max.		
WORKING HUMIDITY	20% ~ 90% RH non-condensing		
STORAGE TEMP., HUMIDITY	-55 ~ +125℃, 10 ~ 95% RH non-condensing		
TEMP. COEFFICIENT	0.03% / ℃ (0 ~ 95℃)		
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 2, 0.5KV Line-Line
	Conducted	BS EN/EN61000-4-6	Level 2, 3V(e.m.f.)
	Magnetic Field	BS EN/EN61000-4-8	Level 1, 1A/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)

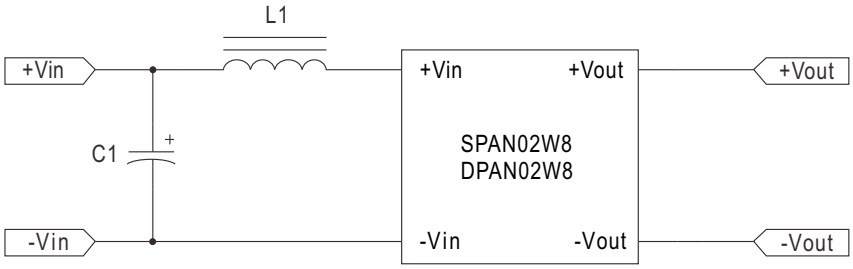
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

■ Derating Curve



■ EMC Suggestion Circuit

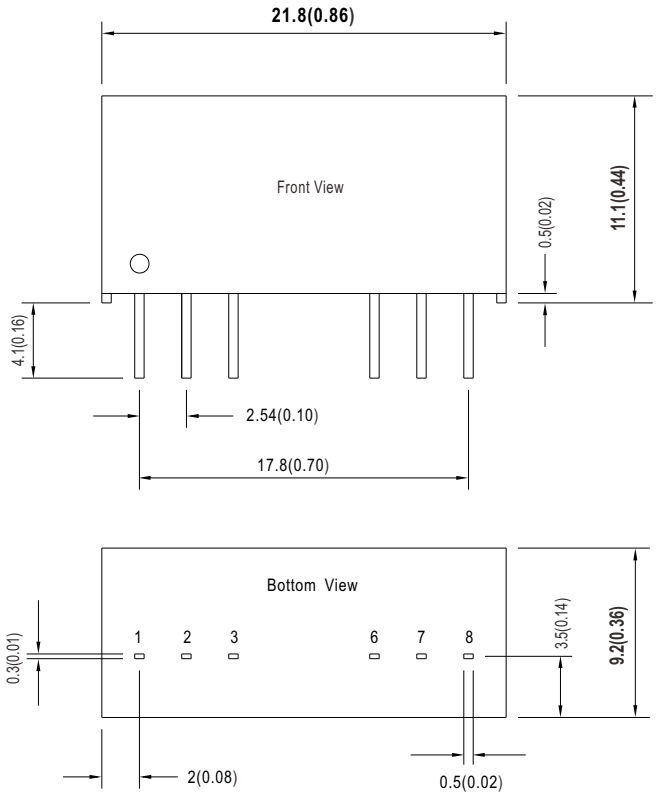
※ EMC Test standard: BS EN/EN55032 conducted Class A /B and BS EN/EN55032 radiated Class B test conditions recommendations: Input Voltage: Nominal, Output Load: Full Load



Model No.	BS EN/EN55032 conducted Class A		BS EN/EN55032 conducted Class B	
SPAN02W8 DPAN02W8	C1	L1	C1	L1
	2.2uF/100V X7R 10% R TDK 1210	10μH	2.2uF/100V X7R 10% R TDK 1210	22μH
	BS EN/EN55032 radiated Class A		BS EN/EN55032 radiated Class B	
	C1	L1	C1	L1
	NC	NC	2.2uF/100V X7R 10% R TDK 1210	22μH

■ Mechanical Specification

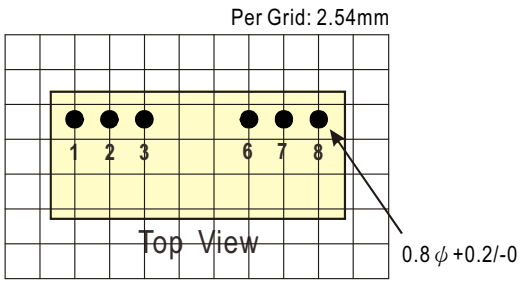
- All dimensions in mm(inch)
- Tolerance:x.x±0.5mm(x.xx±0.02")
- Pin pitch tolerance:±0.05mm (±0.002")



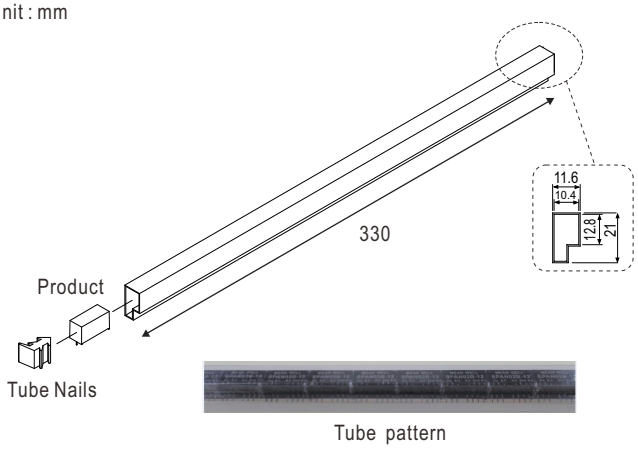
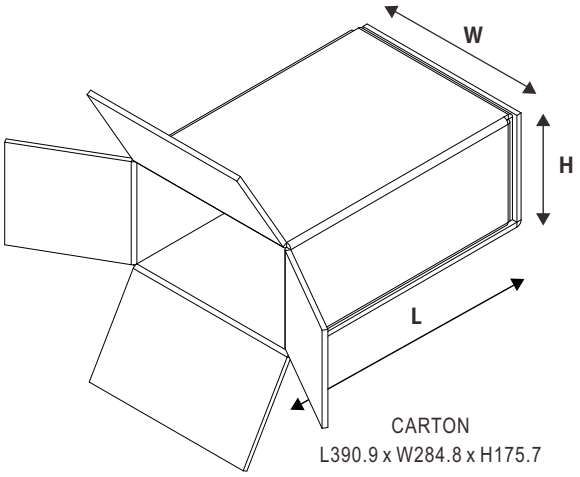
■ Pin Assignment

Pin-Out		
Pin No.	SPAN02W8 (Single output)	DPAN02W8 (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



■ Packing

Standard Tube Packing	MPQ Per Tube (PCS)	One Tube G.W.	Max. Q'TY/ Carton(PCS)	One Carton G.W.
Unit : mm  Tube pattern  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