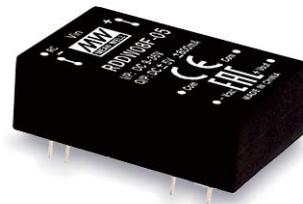
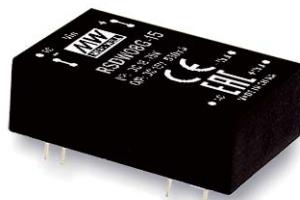




8W DIP Package Reliable Railway DC-DC Converter

**RSDW08 & RDDW08 series**

## ■ Features

- Compliance with EN50155 railway standard
- DIP 24 package with standard pinout
- 4:1 wide input range
- Wide operating temperature range -40 ~ +85°C
- No minimum load required
- Full encapsulated
- Protections: Short circuit (Continuous) / Overload / Over voltage / Input under voltage
- 1.5KVDC I/O isolation
- Remote ON/OFF control
- 3 years warranty

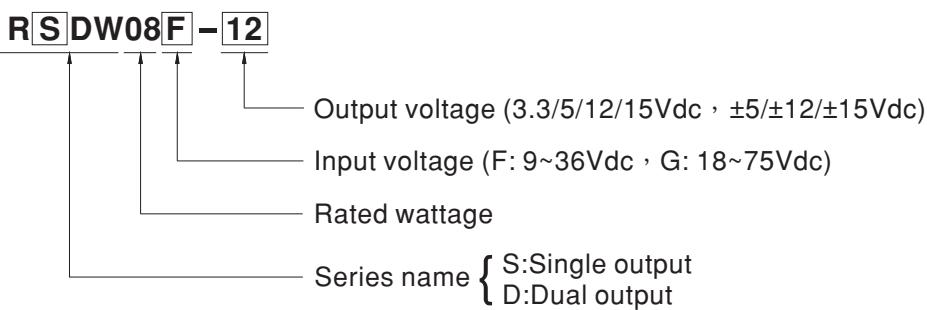
## ■ Applications

- Bus, tram, metro or railway system
- Telecom/datacom system
- Wireless network
- Industrial control facility
- Instrument
- Analyzer
- Highly vibrating, heavily dusty, extremely low or high temperature harsh environment

## ■ Description

RSDW08 and RDDW08 series are 8W module type DC-DC reliable railway converter with DIP24 package. It features international standard pins, a high efficiency up to 86%, wide working temperature range -40~+85°C, 1.5KVDC I/P-O/P isolation voltage, compliance with EN50155 railway standard, continuous-mode short circuit protection, etc. The models account for different input voltage 9~36V and 18~75V 4:1 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 railway, trams, buses and also can be used in the harsh environment with high vibration, high dust, extremely low or high temperature, etc.

## ■ Model Encoding





8W DIP Package Reliable Railway DC-DC Converter

**RSDW08 & RDDW08 series****MODEL SELECTION TABLE**

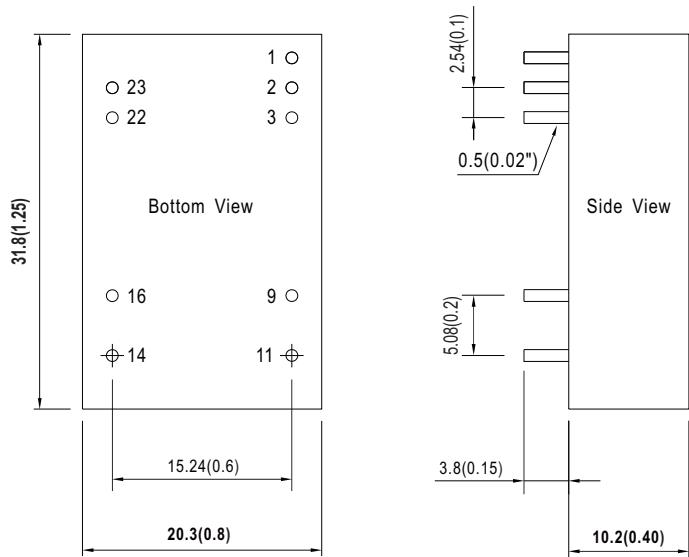
ORDER NO.	INPUT				OUTPUT		EFFICIENCY (Typ.)	CAPACITOR LOAD (MAX.)		
	INPUT VOLTAGE (RANGE)	INPUT CURRENT		OUTPUT VOLTAGE	OUTPUT CURRENT					
		NO LOAD	FULL LOAD							
RSDW08F-03	Normal 24V (9 ~ 36V)	10mA	344mA	3.3V	2000mA	80%	2000μF			
RSDW08F-05		10mA	406mA	5V	1600mA	82%	1600μF			
RSDW08F-12		10mA	392mA	12V	666mA	85%	666μF			
RSDW08F-15		10mA	390mA	15V	530mA	85%	530μF			
RDDW08F-05		10mA	406mA	±5V	±0 ~ 800mA	82%	*800μF			
RDDW08F-12		10mA	392mA	±12V	±0 ~ 333mA	85%	*333μF			
RDDW08F-15		15mA	390mA	±15V	±0 ~ 265mA	85%	*265μF			
RSDW08G-03	Normal 48V (18 ~ 75V)	5mA	172mA	3.3V	2000mA	80%	2000μF			
RSDW08G-05		5mA	201mA	5V	1600mA	83%	1600μF			
RSDW08G-12		5mA	194mA	12V	666mA	86%	666μF			
RSDW08G-15		5mA	193mA	15V	530mA	86%	530μF			
RDDW08G-05		5mA	201mA	±5V	±0 ~ 800mA	83%	*800μF			
RDDW08G-12		10mA	194mA	±12V	±0 ~ 333mA	86%	*333μF			
RDDW08G-15		6mA	193mA	±15V	±0 ~ 265mA	86%	*265μF			

\* For each output

SPECIFICATION						
INPUT	VOLTAGE RANGE	F: 9~36Vdc , G: 18~75Vdc				
	SURGE VOLTAGE (100ms max.)	24Vin models : 50Vdc, 48Vin models : 100Vdc				
	FILTER	Pi type				
	PROTECTION (Typ.)	Fuse recommended. 24Vin models: 3A delay time Type, 48Vin models: 1.5A delay time Type				
	INTERNAL POWER DISSIPATION	500mW				
OUTPUT	VOLTAGE ACCURACY	±1.5%				
	RATED POWER	8W				
	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%				
PROTECTION	SWITCHING FREQUENCY (min.)	100KHz				
	SHORT CIRCUIT	Protection type : Continuous, automatic recovery				
	OVERLOAD	120 ~ 180% rated output power				
		Protection type : Recovers automatically after fault condition is removed				
	OVER VOLTAGE	Protection type : Clamp by diode				
FUNCTION	UNDER VOLTAGE LOCKOUT	Start-up voltage	24Vin: 8.8Vdc, 48Vin: 17Vdc			
		Shutdown voltage	24Vin: 8Vdc, 48Vin: 16Vdc			
	REMOTE CONTROL	Power ON: R.C. ~ -Vin >3.5~36Vdc or open circuit ; Power OFF: R.C. ~ -Vin <1.2Vdc or short				
ENVIRONMENT	COOLING	Free-air convection				
	WORKING TEMP.	-40 ~ +85°C (Refer to "Derating Curve")				
	CASE TEMPERATURE	+100°C max.				
	WORKING HUMIDITY	20% ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-55 ~ +125°C, 10 ~ 95% RH non-condensing				
	TEMP. COEFFICIENT	0.03% / °C (0 ~ 71°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; Mounting: compliance to EN61373(Category 1- Class B)				
	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.)	1000pF				
	EMC EMISSION	Parameter	Standard			
		Conducted	BS EN/EN55032			
	EMC IMMUNITY	Radiated	N/A			
		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			
OTHERS	Conducted	BS EN/EN61000-4-6	Level 2, 3V(e.m.f.)			
	RAILWAY STANDARD	EN50155 including EN61373 for shock & vibration, EN50121-3-2 for EMC				
	MTBF	Single: 1500Khrs, Dual: 1300Khrs MIL-HDBK-217F(25°C)				
	DIMENSION (L*W*H)	31.8*20.3*10.2mm (1.25*0.8*0.4 inch)				
	CASE MATERIAL	Black coated copper with non-conductive base				
NOTE	PACKING	18.4g				
	1.All parameters are specified at normal input(F:24Vdc, G: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 10% 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 <a href="http://www.meanwell.com">http://www.meanwell.com</a> )						
※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>						

### ■ Mechanical Specification

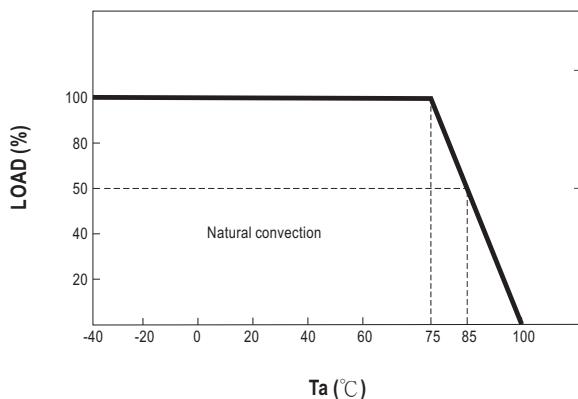
- All dimensions in mm(inch)
- Tolerance:  $x.x \pm 0.5\text{mm}(x.xx \pm 0.02")$   
 $x.xx \pm 0.25\text{mm}(x.xxx \pm 0.010")$
- Pin size is:  $0.5 \pm 0.05\text{mm}$  ( $0.02" \pm 0.002"$ )



### ■ Plug Assignment

Pin-Out		
Pin No.	RSDW08 (Single output)	RDDW08 (Dual output)
1	Remote ON/OFF	Remote ON/OFF
2,3	-Vin	-Vin
9	N.P.	Common
11	N.C.	-Vout
14	+Vout	+Vout
16	-Vout	Common
22,23	+Vin	+Vin

### ■ Derating Curve

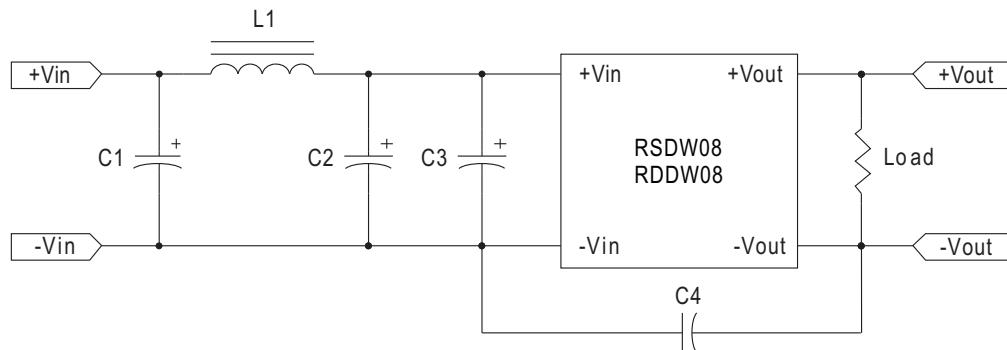




8W DIP Package Reliable Railway DC-DC Converter

**RSDW08 & RDDW08 series****■ EMC Suggestion Circuit**

※ Required external components to meet BS EN/EN55032 class A/B emission are as below:



Model No.	BS EN/EN55032 Class A					BS EN/EN55032 Class B				
	C1	C2	C3	C4	L1	C1	C2	C3	C4	L1
RSDW08F-03	10μF/50V	10μF/50V	10μF/50V	NC	SHORT	10μF/50V	NC	10μF/50V	NC	3.3μH
RSDW08F-05	10μF/50V	10μF/50V	10μF/50V	NC	SHORT	10μF/50V	NC	10μF/50V	NC	3.3μH
RSDW08F-12	10μF/50V	10μF/50V	10μF/50V	NC	SHORT	10μF/50V	NC	10μF/50V	NC	3.3μH
RSDW08F-15	10μF/50V	10μF/50V	10μF/50V	NC	SHORT	10μF/50V	NC	10μF/50V	NC	3.3μH
RDDW08F-05	10μF/50V	10μF/50V	10μF/50V	NC	SHORT	10μF/50V	NC	10μF/50V	NC	3.3μH
RDDW08F-12	10μF/50V	10μF/50V	10μF/50V	NC	SHORT	10μF/50V	NC	10μF/50V	NC	3.3μH
RDDW08F-15	10μF/50V	10μF/50V	10μF/50V	NC	SHORT	10μF/50V	NC	10μF/50V	NC	3.3μH
RSDW08G-03	NC	4.7μF/100V	4.7μF/100V	NC	SHORT	4.7μF/100V	NC	4.7μF/100V	NC	2.7μH
RSDW08G-05	NC	4.7μF/100V	4.7μF/100V	NC	SHORT	4.7μF/100V	NC	4.7μF/100V	NC	2.7μH
RSDW08G-12	NC	4.7μF/100V	4.7μF/100V	NC	SHORT	4.7μF/100V	NC	4.7μF/100V	NC	2.7μH
RSDW08G-15	NC	4.7μF/100V	4.7μF/100V	NC	SHORT	4.7μF/100V	NC	4.7μF/100V	NC	2.7μH
RDDW08G-05	NC	4.7μF/100V	4.7μF/100V	NC	SHORT	4.7μF/100V	NC	4.7μF/100V	NC	2.7μH
RDDW08G-12	NC	4.7μF/100V	4.7μF/100V	NC	SHORT	4.7μF/100V	NC	4.7μF/100V	NC	2.7μH
RDDW08G-15	NC	4.7μF/100V	4.7μF/100V	NC	SHORT	4.7μF/100V	NC	4.7μF/100V	NC	2.7μH

Note: All of capacitors are ceramic capacitors and 1812 size.

**■ Installation Manual**Please refer to : <http://www.meanwell.com/manual.html>