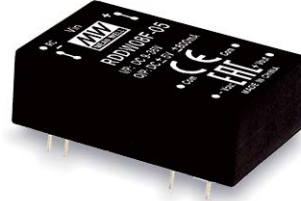
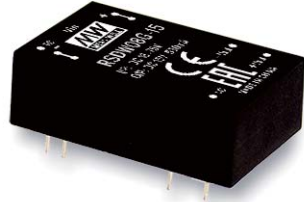




8W DIP Package Reliable Railway DC-DC Converter **RSDW08 & RDDW08** series



■ 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

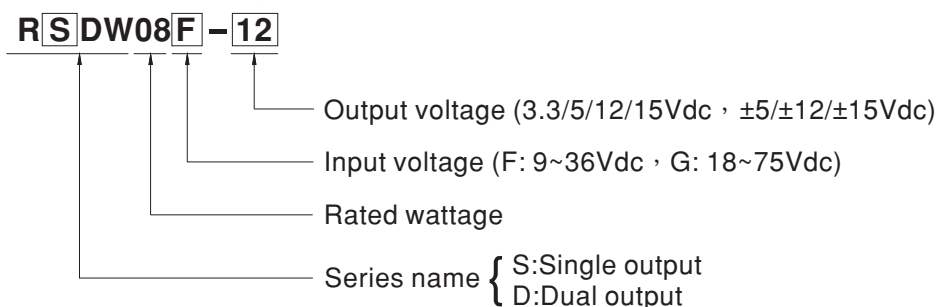
■ GTIN CODE

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

■ 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% | 2000 μ F |
| RSDW08F-05 | | 10mA | 406mA | 5V | 1600mA | 82% | 1600 μ F |
| RSDW08F-12 | | 10mA | 392mA | 12V | 666mA | 85% | 666 μ F |
| RSDW08F-15 | | 10mA | 390mA | 15V | 530mA | 85% | 530 μ F |
| RDDW08F-05 | | 10mA | 406mA | \pm 5V | \pm 0 ~ 800mA | 82% | *800 μ F |
| RDDW08F-12 | | 10mA | 392mA | \pm 12V | \pm 0 ~ 333mA | 85% | *333 μ F |
| RDDW08F-15 | | 15mA | 390mA | \pm 15V | \pm 0 ~ 265mA | 85% | *265 μ F |
| RSDW08G-03 | | Normal 48V (18 ~ 75V) | 5mA | 172mA | 3.3V | 2000mA | 80% |
| RSDW08G-05 | 5mA | | 201mA | 5V | 1600mA | 83% | 1600 μ F |
| RSDW08G-12 | 5mA | | 194mA | 12V | 666mA | 86% | 666 μ F |
| RSDW08G-15 | 5mA | | 193mA | 15V | 530mA | 86% | 530 μ F |
| RDDW08G-05 | 5mA | | 201mA | \pm 5V | \pm 0 ~ 800mA | 83% | *800 μ F |
| RDDW08G-12 | 10mA | | 194mA | \pm 12V | \pm 0 ~ 333mA | 86% | *333 μ F |
| RDDW08G-15 | 6mA | | 193mA | \pm 15V | \pm 0 ~ 265mA | 86% | *265 μ F |

* For each output



8W DIP Package Reliable Railway DC-DC Converter **RSDW08 & RDDW08** series

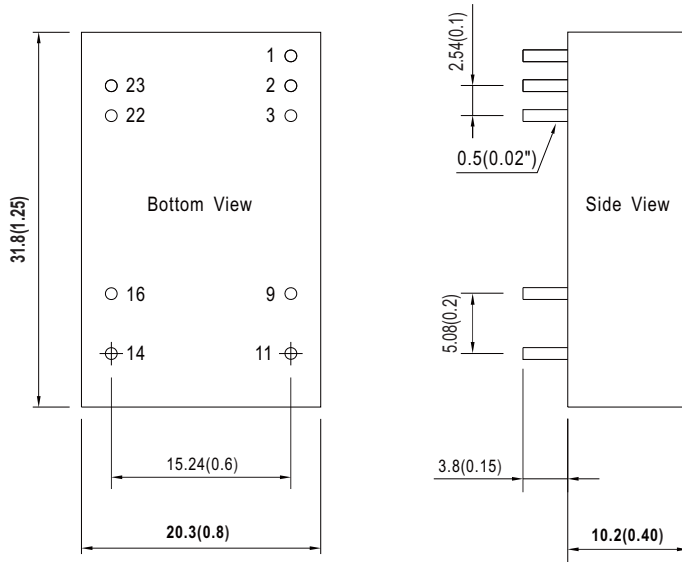
| SPECIFICATION | | | | |
|-----------------------|---|---|-----------------------------|------------------------------------|
| INPUT | VOLTAGE RANGE | F: 9~36Vdc, G: 18~75Vdc | | |
| | SURGE VOLTAGE (100ms max.) | 24Vin models : 50Vdc, 48Vin models : 100Vdc | | |
| | FILTER | Pi type | | |
| | PROTECTION (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% | | |
| | SWITCHING FREQUENCY (min.) | 100KHz | | |
| PROTECTION | 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 | | |
| | UNDER VOLTAGE LOCKOUT | Start-up voltage | 24Vin: 8.8Vdc, 48Vin: 17Vdc | |
| Shutdown voltage | | 24Vin: 8Vdc, 48Vin: 16Vdc | | |
| FUNCTION | 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. | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes; Mounting: compliance to EN61373(Category 1- Class B) | | |
| SAFETY & EMC (Note.5) | 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 | Test Level / Note |
| | | Conducted | BS EN/EN55032 | Class A/B with external components |
| | | Radiated | BS EN/EN55032 | N/A |
| | 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/Burest | 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.) | |
| RAILWAY STANDARD | EN50155 including EN61373 for shock & vibration, EN50121-3-2 for EMC | | | |
| OTHERS | 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 | | |
| | PACKING | 18.4g ; 10pcs/per tube, 500pcs/50 tube/per carton | | |
| NOTE | <p>1.All parameters are specified at normal input(F:24Vdc, G:48Vdc), rated load, 25°C 70% RH ambient.</p> <p>2.Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1µf & 47µf capacitor.</p> <p>3.Line regulation is measured from low line to high line at rated load.</p> <p>4.Load regulation is measured from 10% to 100% rated load.</p> <p>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)</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> | | | |



8W DIP Package Reliable Railway DC-DC Converter RSDW08 & RDDW08 series

Mechanical Specification

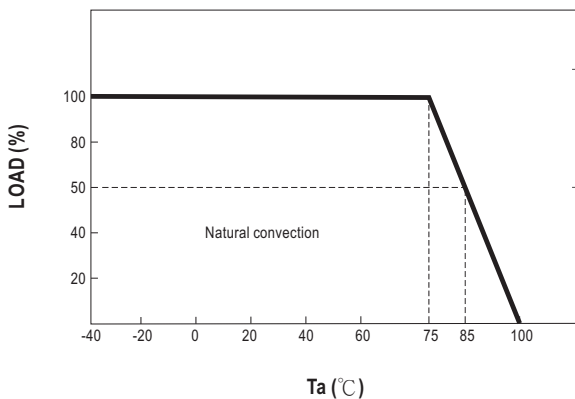
- All dimensions in mm (inch)
- Tolerance: $x.xx \pm 0.5\text{mm}$ ($x.xx \pm 0.02''$)
 $x.xx \pm 0.25\text{mm}$ ($x.xxx \pm 0.010''$)
- Pin size is: $0.5 \pm 0.05\text{mm}$ ($0.02'' \pm 0.002''$)



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

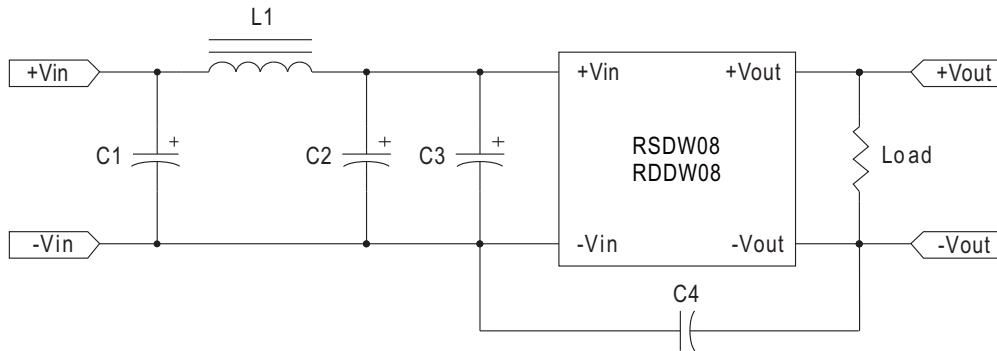




8W DIP Package Reliable Railway DC-DC Converter **RSDW08 & RDDW08** series

■ EMC Suggestion Circuit

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



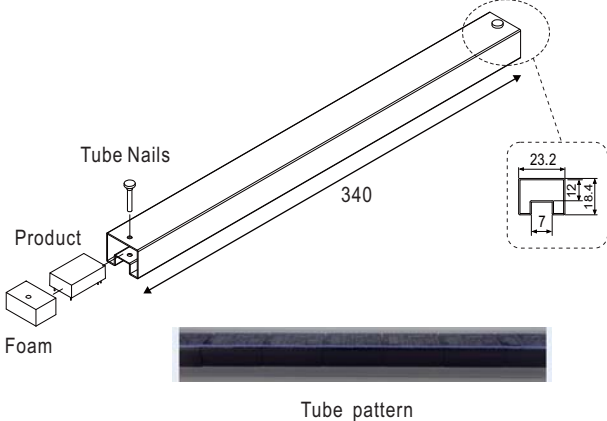
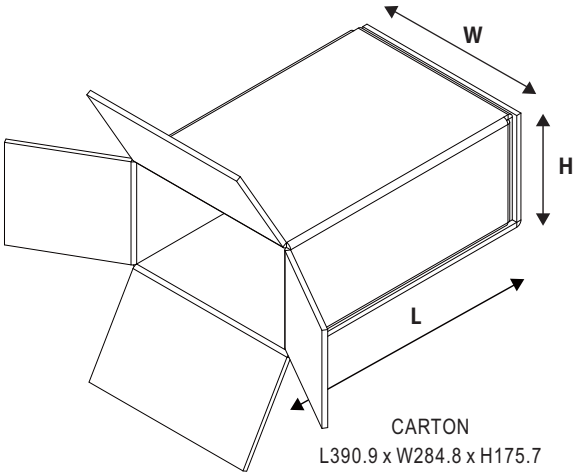
| Model No. | BS EN/EN55032 Class A | | | | | BS EN/EN55032 Class B | | | | |
|------------|-----------------------|------------------|------------------|----|-------|-----------------------|----|------------------|----|-------------|
| | C1 | C2 | C3 | C4 | L1 | C1 | C2 | C3 | C4 | L1 |
| RSDW08F-03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

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



8W DIP Package Reliable Railway DC-DC Converter **RSDW08 & RDDW08** series

■ Packing

| Standard Tube Packing | MPQ Per Tube (PCS) | One Tube G.W. | Max. Q'TY/ Carton(PCS) | One Carton G.W. |
|--|--------------------|---------------|------------------------|-----------------|
| <p>Unit : mm</p>   <p>CARTON L390.9 x W284.8 x H175.7</p> | 10 | 208g | 500 | 12.4Kg |

■ Installation Manual

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