



RSW260 RAILWAY SINEWAVE INVERTER

SERIES RSW260

The RSW260 consists of sinewave 120Vac or 230Vac output voltage DC-AC converters. The frequency can be set to 50Hz or 60 Hz, and input and output are galvanically isolated.

The RSW260 inverters consist of two cascaded converters, one DC/DC generating an intermediate output voltage from the input voltage. That intermediate voltage is inverted to supply the output voltage and frequency by means of a second DC/AC converter.

The topology for the first converter is a fixed frequency push-pull type that provides the isolation between input and output. The second converter consists of a bridge inverter also at fixed frequency and fully PWM controlled by means of microcontroller that is equipped with an LC output filter that removes the switching frequency components and delivers a sine-wave output.

The RSW260 inverter is equipped with an input polarity protection by means of fuse. It also features maximum average power protection as well as maximum output peak current protection. This protects the semiconductors even when an output shortcircuit occurs.



Pure
Sinewave



High
frequency
technology



Light weight,
compact size



Full electronic
protection



Extended
temperature
range



Remote inhibit
(Standby)



Output fail
alarm
(Form B)



Convection
Cooling
(no Fan)

APPLICATIONS

- Railway Applications
- Industrial Controls
- Telecom Power Plants
- Marine & other rugged environments
- Electric Utilities and Substations
- Base Station Power

FEATURES

- Sine wave output voltage
- Selectable output frequency: 50/60Hz
- High input-output isolation 3000Vrms
- Remote inhibit
- Designed for rolling applications according to EN50155 and RIA12
- Fire and smoke EN45545-2 approved
- Protection against overloads and short-circuits
- Protection against input undervoltage
- Output fail alarm by isolated relay contacts (Form B)

SPECIFICATIONS

Model	Input voltage		Output V	Active Power	Apparent Power	Output peak current (10ms)	Efficiency	No load input current
	nominal	range						
RSW260-12-230	12Vdc	9.5 ... 15V*	230Vac	180W	260VA	4Apk	86%	0,50A
RSW260-24-230	24Vdc	16.8 ... 30V	230Vac	200W	260VA	4Apk	87%	0,26A
RSW260-36-230	36Vdc	25.2 ... 45V	230Vac	220W	260VA	4Apk	88%	0,21A
RSW260-48-230	48Vdc	33.6 ... 60V	230Vac	220W	260VA	4Apk	89%	0,15A
RSW260-72-230	72Vdc	50.4 ... 90V	230Vac	220W	260VA	4Apk	89%	0,11A
RSW260-110-230	110Vdc	77 ... 138V	230Vac	220W	260VA	4Apk	90%	0,08A
RSW260-12-120	12Vdc	9.5 ... 15V*	120Vac	180W	260VA	8Apk	85%	0,50A
RSW260-24-120	24Vdc	16.8 ... 30V	120Vac	200W	260VA	8Apk	87%	0,26A
RSW260-36-120	36Vdc	25.2 ... 45V	120Vac	220W	260VA	8Apk	88%	0,21A
RSW260-48-120	48Vdc	33.6 ... 60V	120Vac	220W	260VA	8Apk	88%	0,15A
RSW260-72-120	72Vdc	50.4 ... 90V	120Vac	220W	260VA	8Apk	88%	0,11A
RSW260-110-120	110Vdc	77 ... 138V	120Vac	220W	260VA	8Apk	89%	0,08A

Input	
Input voltage range	See table
Maximum input ripple	5% Vin nom (Vrms, 100Hz)
Output	
Output voltage	120 / 230Vac sinusoidal
Adjust range	± 5% of Vo nom
Load regulation	4%
Line regulation	0.4% @ ΔVin -20...+25%, 10% @ ΔVin -30...+25% (1% @ ΔVin -10...+25%, 10% @ ΔVin -20...+25%) ^(*)
Output frequency	50 / 60Hz ± 0.25Hz
Output wave distortion THD	< 2% (16 samples average)
Output voltage HF ripple	< 20Vpp for 230Vac models < 10Vpp for 120Vac models
Environmental	
Storage temperature	-25 ... 80°C
Operating temperature full load	-25 ... 55°C (EN50155 T1)
Operating temperature 50% load	-25 ... 70°C (EN50155 T3)
Cooling	Natural convection
MTBF (MIL-HDBK-217-E;G _v ,25°C)	250.000 h
EMC	
Immunity according to	EN61000-6-2 / EN50121-3-2
Emissions according to	EN61000-6-3 / EN50121-3-2

(*) Note: Startup voltage ≤10.2V. Under-voltage shutdown ≤ 9.1V

Safety	
Safety according to	EN60950
Dielectric strength: Input / output	3000 Vrms / 50Hz / 1min
Dielectric strength: Output / ground	1500 Vrms / 50Hz / 1min
Dielectric strength: Input / ground	500 Vrms / 50Hz / 1min
Fire and smoke	EN45545-2
Mechanical	
Weight	900 g
Dimensions	100 x 220 x 40mm
Connections	Clip terminal WAGO 740-116
Protections	
Against input over-currents	Internal fuse
Against output overloads < I _{ompk}	Linear
Against output overloads > I _{ompk}	Triggered
Against over-temperature	Shutdown with automatic recovery
Control	
Remote inhibit input	OFF: applying 4...24 Vdc, Impedance >3kΩ
Output failure alarm	Solid state relay open when alarm (max: 60V, 0.3A)

