RIPEENERGY
The Power Conversion Company

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 inputvoltage. 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)

Convetion 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
- 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 Vdc	Input voltage range Vdc	Max. Input current A	Output voltage Vac	Output current A	Active Output power W	Apparent Output power VA	Output peak current (10ms)	Efficiency %	No load input current A
RSW260-12-230	12(1)	9.5 - 15*	22.1	230	0.78	180	260	4	86	0,50
RSW260-24-230	24	16.8 - 30	13.7	230	0.87	200	260	4	87	0,26
RSW260-36-230	36	25.2 - 45	10.0	230	0.96	220	260	4	88	0,21
RSW260-48-230	48	33.6 - 60	7.36	230	0.96	220	260	4	89	0,15
RSW260-72-230	72	50.4 - 90	4.91	230	0.96	220	260	4	89	0,11
RSW260-110-230	110	77 - 138	3.17	230	0.96	220	260	4	90	0,08
RSW260-12-120	12(1)	9.5 - 15*	22.3	120	1.50	180	260	8	85	0,50
RSW260-24-120	24	16.8 - 30	13.7	120	1.67	200	260	8	87	0,26
RSW260-36-120	36	25.2 - 45	10	120	1.83	220	260	8	88	0,21
RSW260-48-120	48	33.6 - 60	7.45	120	1.83	220	260	8	88	0,15
RSW260-72-120	72	50.4 - 90	4.97	120	1.83	220	260	8	88	0,11
RSW260-110-120	110	77 - 138	3.22	120	1.83	220	260	8	89	0,08

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% (1) 10% @ ΔVin -20...+25%)(1)
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	-40 ... 80°C
Operating temperature full load	-40 ... 55°C
Operating temperature 62.5% load	-40 ... 70°C
Cooling	Natural convection
MTBF (MIL-HDBK-217-E;G_b,25°C)	250.000 h
EMC	
Immunity according to	EN61000-6-2 / EN50121-3-2
Emissions according to	EN61000-6-3 / EN50121-3-2

Safety	
Safety according to	EN60950-1, EN62368-1 Class I OV category II, Pollution degree 2
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 < Iompk	Linear
Against output overloads > Iompk	Triggered
Against over-temperature	Shutdown with automatic recovery
Control	
Remote inhibit input	OFF: applying 4...24Vdc
Output failure alarm	Solid state relay open when alarm (max: 60V, 0.3A)

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

(1) for 12V input models

RIPENERGY
The Power Conversion Company

RIPEnergy AG
Wägitalstrasse 24
CH-8854 Siebnen
Switzerland

Phone +41 43 818 53 85
www.ripenergy.ch