RIPEENERGY
The Power Conversion Company

RSW750 RAILWAY SINEWAVE INVERTER

SERIES RSW750

The RSW750 consists of sinewave 120Vac or 230Vac output voltage DC/AC converters. The frequency can be set to 50Hz or 60Hz, and input and output are galvanically isolated.

The RSW750 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 input is protected against reverse polarity by means of fuse and against under-voltage by unit shutdown.

The output has protection of maximum average power and maximum peak current. The unit shutdowns when the operation curve limit is exceeded for more than one second. Every 2 seconds after shutdown, the unit tries to restart up to 3 times. If the overload persists, the unit remains shutdown until an input reconnection.

It also features a disable function for input undervoltage, which protects the batteries from harmful discharges.

Pure Sinewave

High frequency technology

Light weight, compact size

Full electronic protection

Extended temperature range

Remote inhibit (Standby)

Output fail alarm (Form B)

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
- Remote control via RS232
- 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 nominal	Input voltage range	Output voltage	Active power	Apparent power	Iopk 10ms	Efficiency	No load input current
RSW750-12-230	12Vdc	9.5 ... 15V	230Vac	450W	750VA	10A	85%	0,80A
RSW750-24-230	24Vdc	16.8 ... 30V	230Vac	750W	750VA	10A	86%	0,46A
RSW750-36-230	36Vdc	25.2 ... 45V	230Vac	750W	750VA	10A	87%	0,36A
RSW750-48-230	48Vdc	33.6 ... 60V	230Vac	750W	750VA	10A	88%	0,27A
RSW750-72-230	72Vdc	50.4 ... 90V	230Vac	750W	750VA	10A	88%	0,17A
RSW750-110-230	110Vdc	77 ... 138V	230Vac	750W	750VA	10A	89%	0,12A
RSW750-12-120	12Vdc	9.5 ... 15V	120Vac	450W	750VA	16A	84%	0,80A
RSW750-24-120	24Vdc	16.8 ... 30V	120Vac	750W	750VA	16A	86%	0,46A
RSW750-36-120	36Vdc	25.2 ... 45V	120Vac	750W	750VA	16A	87%	0,36A
RSW750-48-120	48Vdc	33.6 ... 60V	120Vac	750W	750VA	16A	87%	0,27A
RSW750-72-120	72Vdc	50.4 ... 90V	120Vac	750W	750VA	16A	87%	0,17A
RSW750-110-120	110Vdc	77 ... 138V	120Vac	750W	750VA	16A	88%	0,12A

Input	
Input voltage range	See table
Maximum input ripple	5% Vin nom (Vrms, 100Hz)
Output	
Output voltage	120 / 230Vac sinusoidal
Load regulation	4%
Line regulation	0.4% @ ΔVin -20...+25%, 10% @ ΔVin -30...+25% (1% @ ΔVin -10...+25%, 10% @ ΔVin -20...+25%)[1]
Output frequency	50 / 60Hz ± 0.25Hz
Output wave distortion THD	< 2% (16 samples average)
Output voltage HF ripple	< 20Vpp
Environmental	
Storage temperature	-40 ... 85°C
Operating temperature full load	-25 ... 55°C (-40 ... 55°C) [3]
Operating temperature 50% load	-25 ... 70°C (-40 ... 70°C) [3]
Cooling	Variable speed internal fan
MTBF (MIL-HDBK-217-E;G_b,25°C)	160.000 h
EMC	
Immunity according to	EN61000-6-2 / EN50121-3-2
Emissions according to	EN61000-6-3 / EN50121-3-2

Note [3]: The unit can start up and work at an ambient temperature of -40°C with the following restriction: Do not actuate over the connectors below -25°C.

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	1500 Vrms / 50Hz / 1min
Fire and smoke	EN45545 approved
Mechanical	
Weight	1950 g
Dimensions	130 x 270 x 50mm
Connections	Input: M5 Screws Output: terminal block cable max. 2.5mm², solid wire max. 4mm²
Protections	
Against input over-currents	Internal fuse for 36, 48, 72, and 110V input models
Against output overloads < 10A	Linear
Against output overloads > 10A	Triggered
Against over-temperature	Shutdown with automatic recovery
Control	
Remote inhibit input	OFF: applying 4...24 Vdc, Impedance >3k3Ω
Output failure alarm	Isolated contact relay open when alarm (< 0.1A at 150Vcc)

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