

RWY15-30 SERIES

Rail DC/ DC Converters Single Output: 15 ~ 30 Watts



Features

- Designed to rail standards EN50155 & EN50121
- Fully potted with thermally conductive MIL-Spec silicon rubber compound.
- Rugged design for on-board train applications
- Wide input voltage range
- Convection / Conduction cooled: No fans
- Fully isolated input – output 3000VDC
- Over voltage protection
- Overload and short circuit protection
- MTBF > 150,000hrs
- Specials input / output combinations on request.

Description

The **RWY** series dc/dc converters are designed for use on Rail Rolling Stock and for many extremely harsh environments.

They are fully potted with a thermally conductive MIL-Spec silicon compound, meeting a high level of shock and vibration.

The table below illustrate the most common output voltages, but can also be manufactured to special input & output specifications with total flexibility to match customer requirements.

Model	Output	Power W
RWY15	12V and 24V are standard Other outputs upon request	15 ~ 30W
RWY25		
RWY30		

- Final part numbers will be factory allocated to reflect customer input & output requirements.

LED / Indicator	Optional on some models
Alarm output	Optional on some models
Connector	5 pole barrier-type terminal block with 3/8" spacing. (optional cover)
Dimensions	57 x 56 x 147mm (P30) W x H x L (includes terminal block & mounting flanges)
Weight	0.7kg

General Specifications

Input Voltage	24VDC (14.4 ~ 34) 15 watts max. 36VDC (22 ~ 51) 25 watts max 48VDC (20 ~ 67) 30 watts max 72VDC (43 ~ 101) 30 watts max 96VDC (58 ~ 135) 30 watts max 110VDC (66 ~ 154) 30 watts max <ul style="list-style-type: none"> • Other voltages on request
Input Protection	Reverse polarity protection. Inrush current limiting Lower voltage than specified will not damage unit
Isolation	Input - Output 3000vdc Input – Chassis 1500vdc Output – Chassis 1500vdc
Efficiency	Model dependent , typically 80-90%
Output voltage	See tables
Output Power	15 ~ 30 watts
Voltage Adjust.	Fixed output
Immunity	EN50155 & EN50121-3-2 EN61000-4-2 ESD EN61000-4-3 RF Immunity EN61000-4-4 Fast Transients EN50155 Surge & Voltage variations EN61000-4-6 Conducted Immunity
EMI	EN5022 Class B Conducted & Radiated
Switching Freq.	130kHz ±5kHz
Regulation	±1% Line / Load combined
Dynamic Response	Max ±5% deviation for 10% - 50% load step wuth 1msec recovery
Ripple & Noise	Typically 1% pk-pk or 0.2% RMS of output voltage (20MHZ BW)
Overload Protection	Rectanular current limiting, with hiccup type short-circuit protection
Overvoltage Protection	Tranzorb across output
Operating Temp.	-40°C to +70°C cold plate temperature
Cooling	Conduction cooling via base plate to customer chassis or heatsink
Environmental Protection	Full encapsulation with thermally conductive silicon potting with UL94V-0 rated
Shock & Vibration	IEC61373 Cat 1 A & B and Cat 2 as minimum
Humidity	5-95% non-condensing, higher ration option
MTBF	>150,000 hrs

RWY15-30 SERIES

Rail DC/DC Converters Single Output: 15 ~ 30 Watts

