

# RWY200 SERIES

Rail DC/ DC Converters Single Output: 200 Watts



## General Specifications

|                                 |  |
|---------------------------------|--|
| <b>Input Voltage</b>            | <b>24VDC</b> ( 14.4 ~ 34 ) <b>36VDC</b> ( 22 ~ 51 )<br><b>48VDC</b> ( 28 ~ 67) <b>72VDC</b> ( 43 ~ 101)<br><b>96VDC</b> ( 58 ~ 135) <b>110VDC</b> ( 66 ~ 154)<br>• Other voltages on request |
| <b>Input Protection</b>         | Reverse polarity protection.<br>Inrush current limiting<br>Lower voltage than specified will not damage unit   |
| <b>Isolation</b>                | Input - Output 3000vdc<br>Input – Chassis 1500vdc<br>Output – Chassis 1500vdc  |
| <b>Efficiency</b>               | Model dependent , typically 80-90%   |
| <b>Output voltage</b>           | See tables   |
| <b>Output Power</b>             | 200 watts  |
| <b>Voltage Adjust.</b>          | Fixed output   |
| <b>Immunity</b>                 | EN50155 & EN50121-3-2<br>EN61000-4-2 ESD<br>EN61000-4-3 RF Immunity<br>EN61000-4-4 Fast Transients<br>EN50155 Surge & Voltage variations<br>EN61000-4-6 Conducted Immunity                   |
| <b>EMI</b>                      | EN5022 Class B Conducted & Radiated  |
| <b>Switching Freq.</b>          | 80kHz ±5kHz  |
| <b>Regulation</b>               | ±1% Line / Load combined   |
| <b>Dynamic Response</b>         | Max ±5% deviation for 10% - 50% load step with 1msec recovery  |
| <b>Ripple &amp; Noise</b>       | Typically 1% pk-pk or 0.2% RMS of output voltage ( 20MHZ BW )  |
| <b>Overload Protection</b>      | Rectangular current limiting, with hiccup type short-circuit protection  |
| <b>Overvoltage Protection</b>   | Second regulator loop, independent of main regulator loop  |
| <b>Operating Temp.</b>          | -40°C to +70°C cold plate temperature  |
| <b>Cooling</b>                  | Conduction cooling via base plate to customer chassis or heatsink  |
| <b>Environmental Protection</b> | Full encapsulation with thermally conductive silicon potting with UL94V-0 rated  |
| <b>Shock &amp; Vibration</b>    | IEC61373 Cat 1 A & B and Cat 2   |
| <b>Humidity</b>                 | 5-95% non-condensing, higher ration option   |
| <b>MTBF</b>                     | >150,000 hrs   |

## 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 **RWY200** 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.

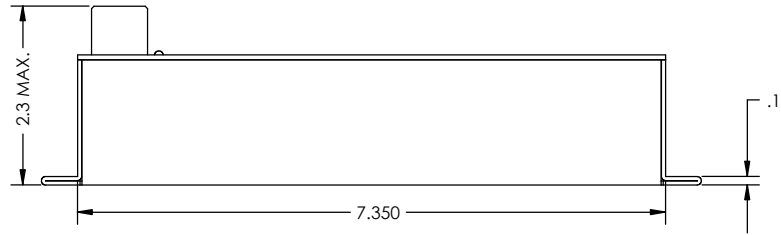
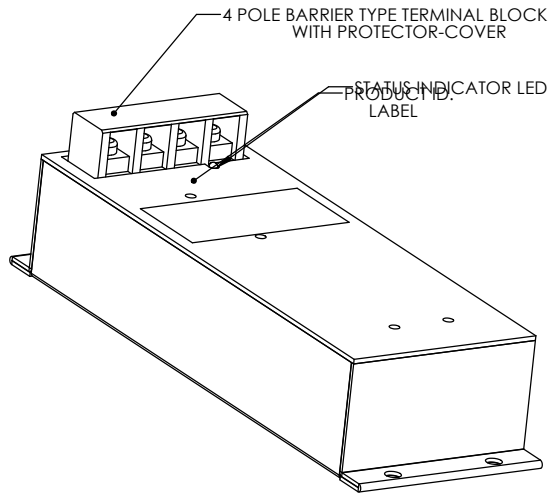
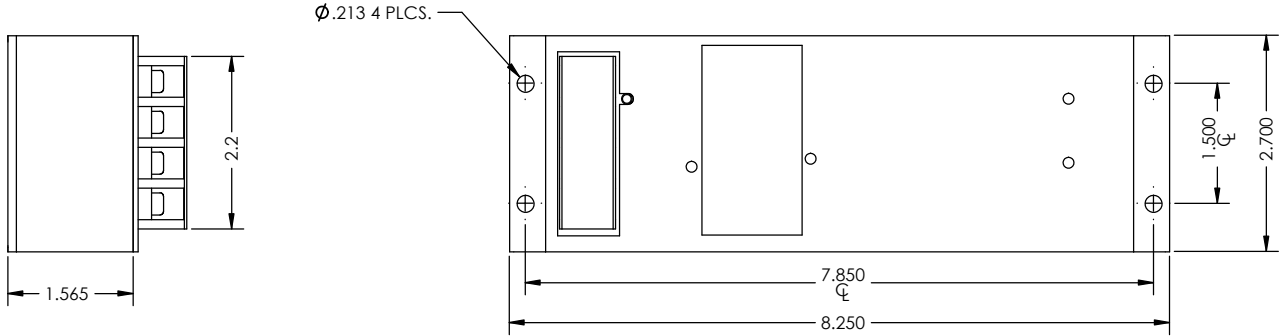
| Model  | Output                     |     | Power W |
|--------|----------------------------|-----|---------|
|        | V                          | A   |         |
| RWY200 | 5V                         | 20A | 100W    |
|        | 12V                        | 16A | 200W    |
|        | 24V                        | 8A  |         |
|        | Other outputs upon request |     |         |

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

|                        |  |
|------------------------|--|
| <b>LED / Indicator</b> | Optional on some models  |
| <b>Alarm output</b>    | Optional on some models  |
| <b>Connector</b>       | 5 pole barrier-type terminal block with 3/8" spacing. ( optional cover )           |
| <b>Dimensions</b>      | 69 x 58 x 210mm (P200 )<br>W x H x L ( includes terminal block & mounting flanges) |
| <b>Weight</b>          | 1.0kg  |

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DIMENSIONS ARE IN INCHES  
TOLERANCES ON  
DECIMALS: XXX ± 0.008"  
              XX ± 0.012"  
              X ± 0.025"  
ANGLES: ± 2°  
FRACTIONS: ± 1/64"  
UNLESS OTHERWISE STATED  
EDGES & HOLES DEBURRED  
SURFACES FREE OF SCRATCHES

CASE MATERIAL: ALUMINUM  
FINISH: CLEAR IRIDATED  
THE UNIT IS FULLY POTTED WITH SILICONE COMPOSITE POTTING COMPOUND

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|          |                     |
|----------|---------------------|
| Title:   |                     |
| Part of: | OUTLINE DRAWING     |
|          | <b>P200 Package</b> |
|          | FEB.10.05           |

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