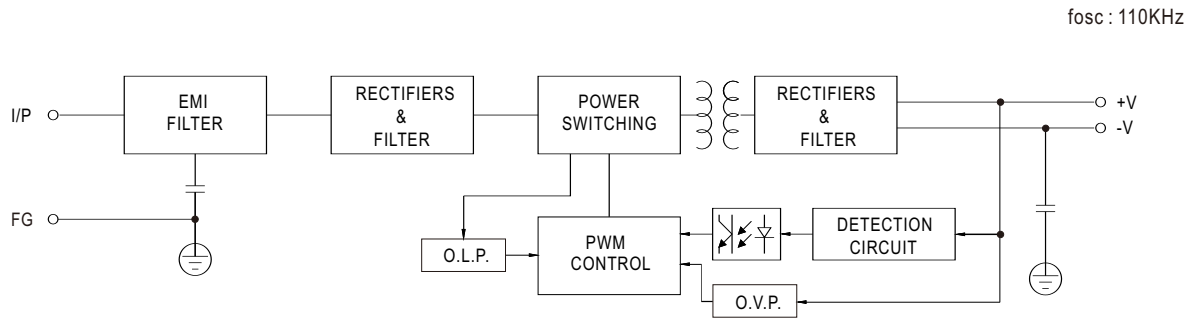




SPECIFICATION

| MODEL | | RSD-30H-3.3 | RSD-30H-5 | RSD-30H-12 | RSD-30H-24 |
|-----------------------|--|---|-----------------|--------------|---|
| OUTPUT | DC VOLTAGE | 3.3V | 5V | 12V | 24V |
| | RATED CURRENT | 6A | 6A | 2.5A | 1.25A |
| | CURRENT RANGE | 0 ~ 6A | 0 ~ 6A | 0 ~ 2.5A | 0 ~ 1.25A |
| | RATED POWER | 19.8W | 30W | 30W | 30W |
| | RIPPLE & NOISE (max.) Note.2 | 70mVp-p | 70mVp-p | 60mVp-p | 50mVp-p |
| | VOLTAGE TOLERANCE Note.3 | ±2.0% | ±2.0% | ±2.0% | ±2.0% |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.3% | ±0.2% |
| | LOAD REGULATION | ±0.5% | ±0.5% | ±0.3% | ±0.2% |
| | SETUP, RISE TIME | 120ms, 85ms at full load | | | |
| HOLD UP TIME (Typ.) | H-type comply with S2 level(10ms) @ full load | | | | |
| INPUT | VOLTAGE RANGE CONTINUOUS | 40 ~ 160VDC | | | |
| | EFFICIENCY (Typ.) | 87% | 89% | 89% | 89% |
| | DC CURRENT (Typ.) | 0.23A/110V | 0.35A/110V | | |
| | INRUSH CURRENT (Typ.) | 20A/110VDC | | | |
| PROTECTION | OVERLOAD | 105 ~ 135% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed | | | |
| | OVER VOLTAGE | 3.8 ~ 4.5V | 5.75 ~ 7V | 13.8 ~ 16.2V | 27.6 ~ 32.4V |
| ENVIRONMENT | WORKING TEMP. | -40 ~ +55°C (no derating) ; +70°C @ 60% load by free air convection ; +70°C (no derating with external base plate) | | | |
| | WORKING HUMIDITY | 5 ~ 95% RH non-condensing | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH non-condensing | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 50°C) | | | |
| | VIBRATION | 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes ; Mounting : compliance to IEC61373 | | | |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS | IEC60950-1 (LVD) | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:4KVDC I/P-FG:2.5KVDC O/P-FG:2.5KVDC | | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH | | | |
| | EMC EMISSION | Parameter | Standard | | Test Level / Note |
| | | Conducted | EN55032 | | Class A |
| | | Radiated | EN55032 | | Class B |
| | | Harmonic Current | EN6100-3-2 | | Class A |
| | | Voltage Flicker | EN6100-3-3 | | ----- |
| | EMC IMMUNITY | Parameter | Standard | | Test Level / Note |
| | | ESD | EN61000-4-2 | | Level 3, ±8KV air ; Level 3, ±6KV contact |
| | | Radiated Field | EN61000-4-3 | | Level X |
| | | EFT / Burst | EN61000-4-4 | | Level 3, 2KV at power Level 4, 2KV at signal |
| | | Surge | EN61000-4-5 | | Level 3,1KV Line-Line, Level 3, 2KV Line-Earth |
| Conducted | | EN61000-4-6 | | Level 3 | |
| RAILWAY STANDARD | Compliance to EN45545-2 for fire protection ; EN50155 / IEC60571 including IEC61373 for shock & vibration, EN50121-3-2 for EMC | | | | |
| OTHERS | MTBF | 396.9K hrs min. MIL-HDBK-217F (25°C) | | | |
| | DIMENSION | 113*60*25mm (L*W*H) | | | |
| | PACKING | 0.25Kg; 56pcs/15Kg/0.83CUFT | | | |
| NOTE | <p>1. All parameters NOT specially mentioned are measured at 110VDC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com)</p> <p>5. Strongly recommended that external output capacitance should not exceed 5000uF.</p> | | | | |

Block Diagram



Input Fuse

There is one fuse connected in series to the positive input line, which is used to protect against abnormal surge. Fuse specifications of each model are shown as below.

| Type | Fuse Type | Reference and Rating |
|------|-----------|-------------------------|
| G | Time-Lag | CONQUE MST, 6.3A, 250V |
| L | Time-Lag | CONQUE MST, 3.15A, 250V |
| H | Time-Lag | CONQUE MST, 2A, 250V |

Input Reverse Polarity Protection

There is a MOSFET connected in series to the negative input line. If the input polarity is connected reversely, the MOSFET opens and there will be no output to protect the unit.

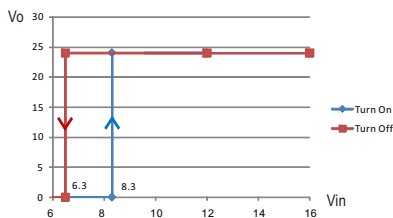
Input Range and Transient Ability

The series has a wide range input capability. With $\pm 40\%$ of rated input voltage, it can withstand that for 1 second.

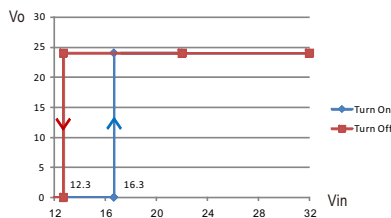
Input Under-Voltage Protection

If input voltage drops below V_{imin} , the internal control IC shuts down and there is no output voltage. It recovers automatically when input voltage reaches above V_{imin} , please refer to the cruve below.

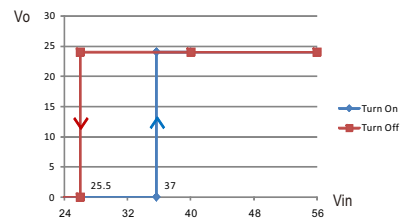
RSD-30G-24



RSD-30L-24



RSD-30H-24



Inrush Current

Inrush current is suppressed by a resistor during the initial start-up, and then the resistor is bypassed by a MOSFET to reduce power consumption after accomplishing the start-up.