

Specifications and Standards

Model SWG030 Series

| Parameter | | Model | | | |
|--------------------------------------|--|---|--------------------------------------|----------------|--------------|
| | | SWG030-05 | SWG030-12 | SWG030-24 | |
| Input Conditions | Rated Input Voltage | 100 to 240 VAC (140 to 340 VDC) | | | |
| | Allowable Input Voltage | 85 to 264 VAC (110 to 370 VDC) | | | |
| | Input Current (typ) | .7 A (100 VAC) / 0.4 A (200 VAC) | | | |
| | Rated Frequency | 50 / 60 Hz | | | |
| | Allowable Frequency Range | 47 to 440 Hz or DC | | | |
| | Efficiency (typ) | AC 100 V | 74% | 76% | 78% |
| | | AC 200 V | 77% | 78% | 81% |
| | Inrush Current (typ) ^{1,2} | 15 A (V _{IN} = 100 V) / 30 A (V _{IN} = 200 V) I _O = 100% at Cold Start | | | |
| Leakage Current (max) | 0.30 mA (V _{IN} = 100 V) / 0.65 mA (V _{IN} = 240 V) 60 Hz I _O = 100% per measuring method of IEC60950-1 and PSE | | | | |
| Output Conditions | Rated Output Voltage | 5 V | 12 V | 24 V | |
| | Rated Output Current | 6 A | 2.5 A | 1.3 A | |
| | Static Input Variation | 20 mV max | 48 mV max | 96 mV max | |
| | Static Load Variation | 40 mV max | 100 mV max | 150 mV max | |
| | Ripple ³ | 0° to 50° C | 80 mVp-pmax | 120 mVp-pmax | 120 mVp-pmax |
| | | -10° to 0° C | 140 mVp-pmax | 160 mVp-pmax | 160 mVp-pmax |
| | Ripple Noise ³ | 0° to 50° C | 120 mVp-pmax | 150 mVp-pmax | 150 mVp-pmax |
| | | -10° to 0° C | 160 mVp-pmax | 180 mVp-pmax | 180 mVp-pmax |
| | Ambient Temperature Variation | 0° to 50° C | 50 mV max | 120 mV max | 240 mV max |
| | | -10° to 0° C | 60 mV max | 150 mV max | 290 mV max |
| | Time Course Drift ⁴ | 20 mV max | 48 mV max | 96 mV max | |
| | Startup Time ¹ | 200ms typ (V _{IN} = 100 V I _O = 100%) 700ms if the interval before reapply AC is less than 1 min. | | | |
| | Output Holding Time ¹ | 20 ms typ (V _{IN} = 100 V I _O = 100%) | | | |
| Voltage Variation Range ⁹ | 4.50 to 5.50 V | 10.0 to 13.2 V | 19.2 to 27.0 V | | |
| Voltage Set Point | 5.00 to 5.15 V | 12.00 to 12.48 V | 24.00 to 24.96 V | | |
| Additional Functions | Overcurrent Protection | Detection above 105% of rated current (automatic recovery) | | | |
| | Overvoltage Protection ⁵ | 5.75 to 7.00 V | 15.0 to 18.0 V | 30.0 to 37.0 V | |
| | Operations Display | LED Display: Green | | | |
| Environmental Conditions | Operating Temperature Range | -10°C to 71°C (with derating) | | | |
| | Storage Temperature Range | -20°C to 75°C | | | |
| | Operating Humidity Range | 20% to 90% RH (no condensation) | | | |
| | Storage Humidity Range | 20% to 90% RH (no condensation) | | | |
| | Cooling Requirements | Natural air cooling | | | |
| | Vibration Resistance | Vibration Frequency | 10 to 55 Hz | | |
| | | Sweep Time | 3 minutes | | |
| | | Acceleration | 19.6 m/s ² (2 G) | | |
| | | Vibration Direction | x, y, z | | |
| | | Vibration Time | One hour in each of three directions | | |
| Shock Resistance | 196.1m/s ² (20G) 11 ms One each of three directions x, y, z | | | | |
| Installation Conditions | Derating may be required due to mounting orientation | | | | |

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| | | | SWG030-05 | SWG030-12 | SWG030-24 |
| Insulation ⁷ | Insulation Withstand Voltage | Input-Output | 3000 VAC one minute (leakage current 10 mA or less) | | |
| | | Input-FG | 2000 VAC one minute (leakage current 10 mA or less) | | |
| | | Output-FG | 500 VAC one minute (leakage current 25 mA or less) | | |
| | Insulation Resistance | Input-Output | 50 MΩ (measured with 500 VDC Megger) | | |
| | | Input-FG | | | |
| | | Output-FG | | | |
| Others | Input/Output Type | | Terminal Stand | | |
| | Dimensions | | 31 mm (W) X 78 mm (H) X 103 mm (D) (without terminal stand) | | |
| | Weight | | 270g maximum (without cover) | | |
| | Safety Standards | | UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178, PSE | | |
| | EMI Safety | | Designed to meet FCC Class B, VCCI Class B, CISPR22 Class B, EN55011 Class B, EN55022 Class B | | |
| | Harmonic Current | | Designed to meet IEC61000-3-2 (no power factor correction circuit) | | |
| | Electromagnetic Susceptibility | | Designed to meet EN61000-4-2 (for electrostatic discharge) | | |
| | | | Designed to meet EN61000-4-3 (for radiated, radio-frequency, electromagnetic field) | | |
| | | | Designed to meet EN61000-4-4 (for transient burst) | | |
| | | | Designed to meet EN61000-4-5 (for lightning surge) | | |
| | | | Designed to meet EN61000-4-6 (for conductive radio frequency electromagnetic field) | | |
| Designed to meet EN61000-4-8 (for power supply frequency electromagnetic field immunity) | | | | | |
| Environmental Response | | Designed to meet RoHS directive | | | |
| Options | Remote On/Off | | N/A | | |
| | Connector | | JST | | |
| | Cover ⁸ | | Yes | | |

1. Specified under rated input/output conditions at an ambient temperature of 25°C.
2. More current above noted values may flow at restart (ambient temperature of 25°C).
3. Ripple noise is measured with a 100 MHz oscilloscope using a 1:1 probe.
4. Time-course drift is measured between 30 minutes to 8 hours after applying input voltage at rated input/output at an ambient temperature 25°C.
5. Reset is performed by reapplying input voltage.
6. Output derating may be required.
7. Insulation conditions are specified at normal temperature and humidity.
8. Derating may be required for the power supply with cover.
9. In the case where output voltage is variable, set a voltage such that Output Voltage Variation, Rated Output Current, and Rated Output Power are not exceeded.