

PRODUCT DATASHEET - RSI0100

| Item | Characteristic | RSI0100-3L-0087-5 | Units |
|----------|--|--|--------|
| 1 | MANUFACTURER | | |
| 1.01 | MANUFACTURER / CERTIFICATE HOLDER | Grundfos Holding A/S | |
| 1.02 | BRAND NAME | GRUNDFOS | |
| 1.03 | TRADING NAME | Grundfos Pumps Pty Ltd | |
| 1.04 | SERIES | RSI0100 | |
| 1.05 | MODEL NUMNER | RSI0100-3L-0087-5 | |
| 1.06 | COUNTRY OF ORIGIN | Finland | |
| 1.06 | FRAME SIZE | MR7 | |
| 1.07 | FIRMWARE NUMBER | FW0238V007 | |
| 1.08 | CERTIFYING BODY | SGS Systems | |
| 1.09 | CERTIFICATE NUMBER | 230227 (RSI0100) | |
| 1.10 | EXPIRY DATE | 12/04/2028 | |
| 1.11 | APPLICABLE STANDARDS | IEC 62109-1/ IEC 62109-2 | |
| 2 | GENERATOR CONNECTION | | |
| 2.01 | NUMBER OF PHASES | 3 | Phases |
| 2.02 | INPUT VOLTAGE (VAC) | 380-500 VAC | VAC |
| 2.03 | INPUT VOLTAGE TOLERANCE (%) | -10% to +10% | % |
| 2.04 | INPUT FREQUENCY (Hz) | 50 Hz | Hz |
| 2.05 | TOPOLOGY | Transformerless | |
| 2.06 | MAXIMUM EFFICIENCY (%) | >97% | % |
| 2.07 | INPUT FREQUENCY TOLERANCE (Hz) | 47.5 to 66 Hz | Hz |
| 2.08 | CONNECTION TO GENERATOR | Once per minute or less | |
| 2.09 | SHORT-CIRCUIT CURRENT (A) | Short circuit current: the maximum short circuit current must be < 100 kA. | kA |
| 3 | DC CONNECTIONS | | |
| 3.01 | PV DC CONNECTORS MANUFACTURER | N/A | |
| 3.02 | PV DC CONNECTORS MODEL | N/A | |
| 3.03 | PV DC VOLTAGE MINIMUM (VDC) | 436 | VDC |
| 3.04 | PV DC VOLTAGE MAXIMUM (VDC) | 800 | VDC |
| 3.05 | PV DC VOLTAGE TOLERANCE (VDC) | 0 | VDC |
| 3.06 | PV INPUT POWER MAXIMUM (kW) | 90 | kW |
| 3.07 | START UP DC VOLTAGE (VDC) | 351 | VDC |
| 3.08 | SOLAR FEATURES | | |
| 3.09 | NUMBER OF MPPT | 1 | |
| 3.10 | MPPT MINIMUM VOLTAGE (VDC) | 436 | VDC |
| 3.11 | MPPT MAXIMUM VOLTAGE (VDC) | 800 | VDC |
| 3.12 | MPPT 1 MAXIMUM INPUT CURRENT (A) | 100 | A |
| 3.13 | MPPT 1 MAXIMUM SHORT CIRCUIT CURRENT (kA) | <100kA, however the maximum I_{sc} PV and inverter back-feed current depend on the DC fuses selected | kA |
| 3.14 | RECOMMENDED DC FUSES SIZE | 2 X 160A/1000Vdc | |
| 3.15 | DEMAND RESPONSE MODES | N/A | |
| 3.16 | POWER QUALITY RESPONSE MODE | N/A | |
| 3.17 | EXTERNAL EQUIPMENT REQUIRED FOR COMPLIANCE | N/A | |
| 3.18 | MULTIPLE INVERTER COMBINATIONS: | N/A | |
| 4 | MOTOR CONNECTIONS | | |
| 4.01 | OUTPUT VOLTAGE (V) | 380-500V | V |
| 4.02 | RATED OUTPUT CURRENT (A) (AT 40°C AMBIENT TEMPERATURE) | IL: 87 IH: 72 | A |
| 4.03 | OVERLOAD OUTPUT CURRENT (A) (AT 40°C AMBIENT TEMPERATURE) | IL: 95.7 (1 min/10 min) IH: 108 (1 min/10 min) | A |
| 4.04 | STARTING OUTPUT CURRENT (A) (AT 40°C AMBIENT TEMPERATURE) | 144 for 2 s every 20 s. | A |
| 4.05 | OUTPUT FREQUENCY (Hz) | 0 to 320 Hz (standard) | Hz |
| 4.06 | FREQUENCY RESOLUTION (Hz) | 0.01 Hz | Hz |
| 4.07 | CABLE TYPE | Screened motor cable | |

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| 4.08 | OUTPUT APPARENT POWER (KVA) | 43.5 | kVA |
| 5 | CONTROL CHARACTERISTICS | | |
| 5.01 | FIELD BUS | Standard: Serial communication (RS485/Modbus); EtherNet/IP, PROFINET IO, Modbus TCP, BACnet IP Optional: CANOpen; PROFIBUS DP, DeviceNet, LonWorks, AS-interface | |
| 5.02 | CONTROL PERFORMANCE | Open loop vector control (5-150% of base speed): speed control 0.5%, dynamic 0.3%/sec, torque linearity <2%, torque rise time ~5 ms | % |
| 5.03 | RAMP TIMES (s) | 0.01 to 3000 s | sec |
| 6 | AMBIENT CONDITIONS | | |
| 6.01 | AMBIENT TEMPERATURE MIN (°C) | -10°C | °C |
| 6.02 | AMBIENT TEMPERATURE MAX (°C) | 40°C to 50°C with derating | °C |
| 6.03 | STORAGE TEMP (°C) | -40°C to +70°C | °C |
| 6.04 | RELATIVE HUMIDITY (%) | 0-95% RH, non-condensing, non-corrosive | % |
| 6.05 | POLLUTION DEGREE | PD2 | |
| 6.06 | MAXIMUM ALTITUDE (M) | 1000m - 3000m with derating | m |
| 6.07 | STATIONARY VIBRATION: SINUSOIDAL | 5-150 Hz Displacement amplitude 1 mm (peak) at 5-15.8 Hz [EN 61800-5-1 & EN 60068-2-6] | |
| 6.08 | SHOCK / BUMP | Storage and shipping: maximum 15 G, 11 ms (in package) | |
| 6.09 | IP RATING | IP54 | |
| 7 | NOISE LEVEL | | |
| 7.01 | Average noise level (min-max) in dB (A) | 43-73 dBA Dependant on the cooling fan speed | dB(A) |
| 8 | WEIGHT, CLEARANCES AND DIMENSIONS | | |
| 8.01 | DIMENSIONS: HEIGHT (MM) | 660 | mm |
| 8.02 | DIMENSIONS: WIDTH (MM) | 237 | mm |
| 8.03 | DIMENSIONS: DEPTH (MM) | 259 | mm |
| 8.04 | WEIGHT (KG) | 37.5 | kg |
| 8.05 | CLEARANCE ABOVE (MM) | 250 | mm |
| 8.06 | CLEARANCE SIDES (MM) | 20 | mm |
| 8.07 | CLEARANCE BELOW (MM) | 100 | mm |

| | | | |
|--|--|------------|----|
| | OverVoltage Category of each Port | Category 3 | |
| | Inverter Efficiency (%) | 97.30% | % |
| | Max Recommended PV Array Power (kW) | 90 | kW |
| | Rated Output Power (for motor connection) - Low Overload - Industrial, -Flow, 400V supply Power 40°C LO (kW) | 45 | kW |
| | Rated Output Power (for motor connection) - High Overload - Industrial, 400V supply Power 50°C HO (kW) | 37 | kW |
| | Output Voltage range (for motor connection) | 380-500V | V |