

HEC-US^{PLUS} 420VAC

TECHNICAL CHARACTERISTICS

| | | 420VAC - MPpt Window 594V-900V | | | | | |
|--|---|---|----------|---------------------|----------|---------------------|----------|
| | | FRAME 2 | | FRAME 3 | | FRAME 4 | |
| NUMBER OF MODULES | | 5 | 6 | 7 | 8 | 9 | 10 |
| REFERENCE | | FS1051CU | FS1271CU | FS1480CU | FS1690CU | FS1901CU | FS2110CU |
| OUTPUT | AC Output Power(kVA/kW) @50°C | 1050 | 1270 | 1480 | 1690 | 1900 | 2110 |
| | AC Output Power(kVA/kW) @25°C | 1160 | 1400 | 1630 | 1860 | 2100 | 2330 |
| | Max. Power (kW@PF=0.9, @50°C) | 940 | 1140 | 1330 | 1520 | 1710 | 1900 |
| | Max. AC Output Current (A) @25°C | 1600 | 1920 | 2240 | 2560 | 2880 | 3200 |
| | Operating Grid Voltage(VAC) | 420Vac ±10% | | | | | |
| | Operating Grid Frequency | 60Hz | | | | | |
| | Current Harmonic Distortion (THDi) | < 3% per IEEE519 | | | | | |
| Power Factor (cosine phi) ^[1] | 0.00 leading ... 0.00 lagging adjustable/ Reactive Power injection at night | | | | | | |
| Power Curtailment (kVA) | 0..100%/0.1% Steps | | | | | | |
| INPUT | MPpt Voltage Window (VDC) ^[2] | 594V-900V | | | | | |
| | MPpt window @full power (VDC) ^[2] | 616V-820V @50°C / 680V-820V @25°C | | | | | |
| | Maximum DC Voltage | 1000V | | | | | |
| | Minimum Start Voltage | 700V - User configurable | | | | | |
| | Max. DC continuous current (A) | 1750 | 2100 | 2450 | 2800 | 3150 | 3500 |
| | Max. DC short circuit current (A) | 2275 | 2730 | 3185 | 3640 | 4095 | 4550 |
| EFFICIENCY & AUXILIARY SUPPLY | Max. Efficiency / CEC (η) | 98.6% / 98.0% | | | | | |
| | Euroeta (η) | 98.3% | | 98.4% | | | |
| | Max. Standby Consumption (Pnight) | < approx. 40W/per module | | | | | |
| | Control Power Supply | 120V / 208VAC-1kVA power supply available for external equipment | | | | | |
| | Max. Power Consumption | 2300W | 2760W | 3220W | 3680W | 4140W | 4600W |
| CABINET | Dimensions [WxDxH] [inches] | 153.5"x40.12"x94.5" | | 192.9"x40.12"x94.5" | | 232.3"x40.12"x94.5" | |
| | Dimensions [WxDxH] [mm] | 3900x1050x2400 | | 4900x1050x2400 | | 5900x1050x2400 | |
| | Weight (lbs) | 7804 | 8487 | 10119 | 10802 | 12434 | 13117 |
| | Weight (kg) | 3540 | 3850 | 4590 | 4900 | 5640 | 5950 |
| | Air Flow | Bottom intake. Exhaust top vent (Front or Rear option) | | | | | |
| ENVIRONMENT | Type of ventilation | Forced air cooling | | | | | |
| | Degree of protection | NEMA 3R | | | | | |
| | Permissible Ambient Temperature | -22°F to +122°F, -30°C ^[3] to +50°C / Active Power derating >50°C/122°F | | | | | |
| | Relative Humidity | 0% to 100% non condensing | | | | | |
| | Max. Altitude (above sea level) | 1000m; >1000m power derating 1% Sn (kVA) per 100m | | | | | |
| CONTROL INTERFACE | Noise level ^[4] | < 79 dBA | | | | | |
| | Interface | Alphanumeric Display (inside cabinet) / Optional Freesun App | | | | | |
| | Communication Protocol | RS232 / RS485 / USB / Ethernet, (Modbus RTU, Modbus TCP/IP) | | | | | |
| | Power Plant Controller | Optional | | | | | |
| | Keyed ON/OFF switch | Standard | | | | | |
| PROTECTIONS | Ground Fault Protection | Floating PV array: Isolation Monitoring per MPP NEC2014 Grounded PV Array: GFDI protection Optional PV Array transfer kit: GFDI and Isolation monitoring device | | | | | |
| | Humidity control | Active Heating | | | | | |
| | General AC Protection & Disconn. | Circuit Breaker | | | | | |
| | General DC Protection & Disconn. | External Disconnecting Unit Cabinet (FSDK) | | | | | |
| | Module AC Protection & Disconn. | AC contactor & fuses | | | | | |
| | Module DC Protection & Disconn. | DC contactor & DC fuses | | | | | |
| | Overvoltage Protection | AC and DC protection (type 2) | | | | | |
| CERTIFICATIONS | Safety | UL 1741; CSA 22.2 No.1071-01 | | | | | |
| | Utility interconnect | IEEE 1547 with Utility Interactive Control functions | | | | | |

NOTES [1] Consult P-Q charts available: $Q(kVar) = \sqrt{(S(kVA))^2 - P(kW)^2}$
 [2] Values at 1.00•Vac nom and cos Φ= 1. Consult Power Electronics for derating curves.
 [3] Heating kit option required below -20°C.
 [4] Sound pressure level at a distance of 1m from the rear part.