

HE solar charger for Telecom and Data center applications

With the MPPT* algorithm ensuring close to 100% panel utilization and an efficiency of 97%, the galvanic isolated solar charger sets new standards for renewable power in telecom.

The combination of innovative design, efficiency and reliability makes the Flatpack2 HE SOLAR stand out.



Flatpack2 380V Solar Charger

380/3200 HE Solar

Doc EDM0000773409 – v00

APPLICATIONS

DATA CENTER

- Roof top solar plants

TELECOM

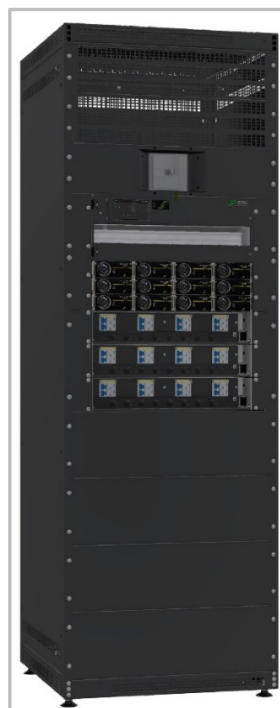
- Central office roof tops

SMART POWER

- Multiple smaller solar plants interconnected

VILLAGE POWER

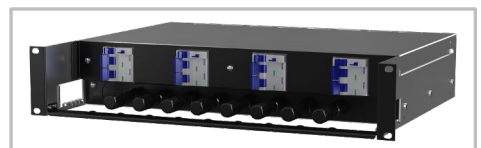
- Larger power sites
- Remote battery/inverter sites



Flatpack2 216kW rectifier cabinet in CPS solution

KEY FEATURES

- HIGH EFFICIENCY – 97 %
- MPPT – MAXIMUM POWER POINT TRACKING
- TELECOM SPECIFICATION
- FULLY INTEGRATED IN ELTEK CONTROL SYSTEM
- GLOBAL COMPLIANCE
- EARTH FAULT MONITORING OF PV STRING



2U PV connection drawer
(PN:390E35481200 & 390E35135500)



12.8kW per 1U 19" power shelf

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| Model | 380/3200 HE SOLAR |
|---|--|
| Part number | 241119.680 |
| INPUT DATA | |
| Voltage (MPPT range) ¹⁾ | 170 - 380 V _{DC} |
| Voltage (operating range) | 85 - 430 V _{DC} |
| Voltage (start-up) | 150 V _{DC} |
| Maximum current | 20.0 A _{DC} |
| Protection | Fuse, varistor for transient protection, reversed polarity, shutdown when V _{IN} is too low, earth fault check during start-up |
| OUTPUT DATA | |
| Voltage (default) | 381 V _{DC} |
| Voltage (adjustable range) | 300 ²⁾ - 415 V _{DC} |
| Max power, nominal input | ≥ 3200 W |
| Max power, de-rated @V _{IN} = 85 V _{DC} | ≥ 1500 W |
| Max current, @V _{OUT} = 336 V _{DC} | ≥ 9.71 A |
| Current sharing | Passive to optimize power available from each string of solar panels |
| Static voltage regulation (10-100% load) | ±0.5% from 0 - 100% load and supplied power not limited by PV panels |
| Dynamic voltage regulation | ±5.0% for 10-90% or 90-10% load variation, regulation time < 50ms |
| Ripple | < 1 V _{PP} , 30 MHz bandwidth |
| Protection | Fuse and ORing Diode, Overvoltage shutdown, short circuit proof, high temperature, hot plug-in inrush current limiting |
| OTHER SPECIFICATIONS | |
| Peak Efficiency | 97 % |
| Isolation | 4.2 kV _{DC} – input to output, 2.5 kV _{DC} – input to earth, 2.5 kV _{DC} – output to earth 0.71 kV _{DC} - CAN to chassis, 4.2 kV _{DC} - CAN to input/output |
| Alarms (Red LED) | High and low temperature shutdown, Converter Failure, Overvoltage shutdown on output, Fan failure, Low voltage alarm, CAN bus failure |
| Warnings (Yellow LED) | Low input voltage, Converter in power de-rate mode, Remote current limit activated, Input voltage out of range, flashing at overvoltage |
| Normal (Green LED) | Input and output ok |
| MTBF (Telcordia SR-232 Iss.3 Meth. II Case L1) | 2 068 061 (@ T _{ambient} : 25 °C) |
| Operating temperature (5 - 95% RH non-cond.) | - 40 - 75°C [-40 - 167°F] |
| Max output power de-rates above temp / to | 50°C [+113°F] / 726W |
| Storage temperature | -40 - 85°C (-40 -185°F), humidity 0 - 99% RH non-condensing |
| Dimensions[WxHxD] / Weight | 109 x 41.0 x 327mm [4.25 x 1.61 x 13"] / 1.950 kg [4.3lbs] |
| DESIGN STANDARDS | |
| Electrical safety | EN 62368-1:2020+A11:2020, IEC 62368-1:2018, UL 62368-1:2019 IEC 60950-1:2013, IEC/EN 62109-1:2010/-2:2011 (pending) |
| EMC | EN 61000-6-1:2016, -6-2:2016, EN 61000 -6-3:2007 + A1:2011/AC:2012, -6-4:2019 ETSI EN 300 386 V.2.1.1, FCC CFR47 part 15B:2020 (parts of) |
| Environment | ETSI EN 300 019: 2-1 (Class 1.2) & 2-2 (Class 2.3) EU 2015/863 (RoHS) & 2012/19/EU (WEEE) Normal operating conditions as per IEC 62040-5-3:2016 clause 4.2. Other operating conditions as per IEC 62040-5-3:2016 clause 4.3, must be advised |

1) At nominal output voltages

2) Stand-by / test operation (V_{OUT} < 336 V_{DC}) limited for V_{IN} > 350 V_{DC}

Specifications are subject to change without notice