



SPA 230, Ex nAnC II T5, Solar Panel



II 3 G



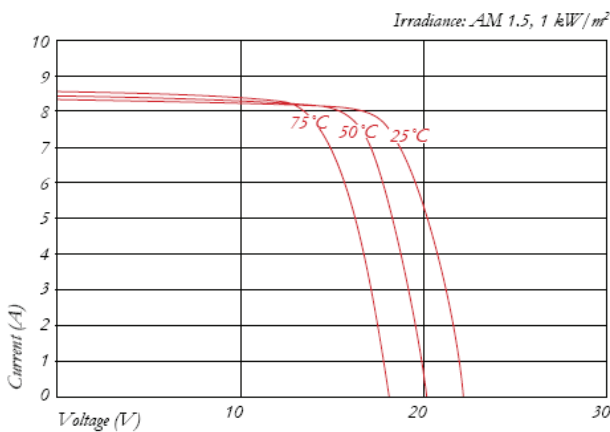
The SPA 230 photo voltaic Solar Panel is a Zone 2 ATEX Ex nAnC certified product for hazardous area applications. The cells of the panel are encapsulated between a tempered glass cover and EVA pottant to provide maximum protection in the most extreme environmental conditions.

Typical applications for this new energy and cost saving concept are to monitor remote pipelines and unmanned offshore oil & gas installations where the location and the proximity of a hazardous area, deem conventional power sources and manpower to be less economical.

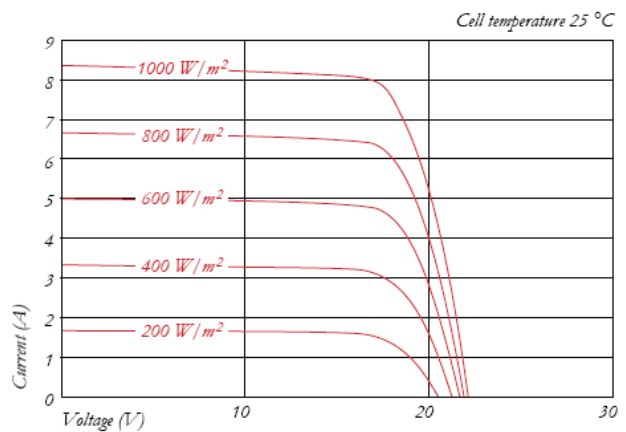
Complimented by other JCE Group products like hazardous area batteries and EExd control enclosures, the SPA 230 can be supplied as part of a complete control and monitoring system. Combined with a compatible inverter housed in our Ex nA enclosures, it is suitable for AC applications.

ELECTRICAL CHARACTERISTICS

Current-Voltage characteristics at various cell temperatures



Current-Voltage characteristics at various irradiance levels



Materials and Finish

Aluminium mounting frame.
Terminal enclosure made of GRP
with 2 Exe ATEX M25 glands.

Earthing

All panels are supplied with 6mm stainless steel earth studs.

Protection Grade

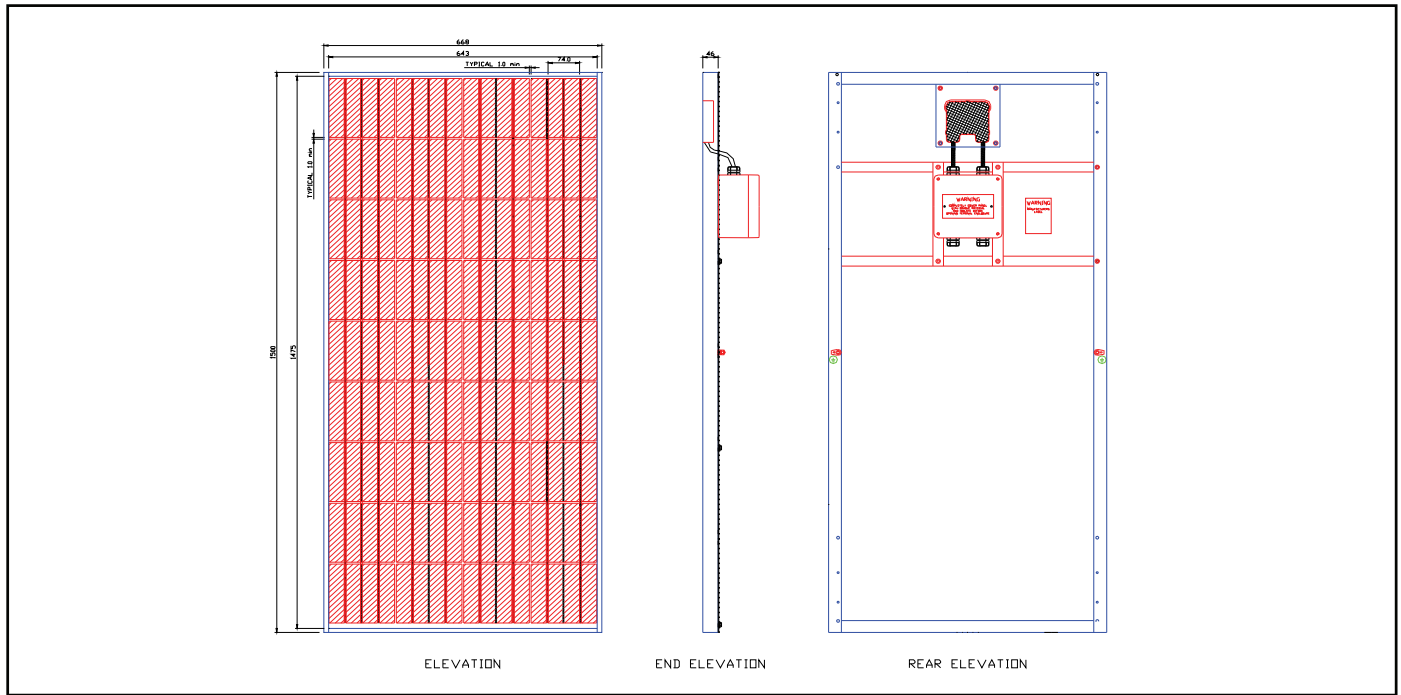
The terminal enclosure provides Ingress protection to IP66.

Certification

ATEX Group II Category 3 Gas

JCE Group

Dimensions



Technical Data

ELECTRICAL PERFORMANCE

At 1000 W/m²(STC)*

| | | |
|-----------------------------|-----|------|
| Maximum Power | [W] | 140 |
| Maximum System Voltage | [V] | 1000 |
| Maximum Power Voltage | [V] | 17.7 |
| Maximum Power Current | [A] | 7.63 |
| Open Circuit Voltage (Voc) | [V] | 22.1 |
| Short Circuit Current (Isc) | [A] | 8.37 |

At 800 W/m²(NOCT)**

| | | |
|-----------------------------|------|------|
| Maximum Power | [W] | 95 |
| Maximum Power Voltage | [V] | 15.6 |
| Maximum Power Current | [A] | 6.1 |
| Open Circuit Voltage (Voc) | [V] | 19.9 |
| Short Circuit Current (Isc) | [A] | 6.82 |
| NOCT | [°C] | 49 |

| | | |
|--|--------|---------|
| Power Tolerance | [%] | 5/-5 |
| Maximum Reverse Current IR | [A] | 15 |
| Series Fuse Rating | [A] | 15 |
| Temperature Coefficient of Voc | [V/°C] | -0.08 |
| Temperature Coefficient of Isc | [A/°C] | 0.00501 |
| Temperature Coefficient of Max. Power | [W/°C] | -0.614 |
| Reduction Of Efficiency (from 1000W/m ² to 200 W/m ²) | [%] | 5.8 |

DIMENSIONS

| | | |
|---------------------------|------|----------------|
| Length | [mm] | 1500 (+/-2.5) |
| Width | [mm] | 668 (+/-2.5) |
| Depth/ incl. Junction Box | [mm] | 136 |
| Weight | [kg] | 14 |
| Junction Box | [mm] | 160 x 160 x 92 |
| IP Code | | IP66 |

CELLS

| | | |
|---------------------|------|-----------------|
| Number per Module | | 36 |
| Cell Technology | | Polycrystalline |
| Cell Shape (Square) | [mm] | 156 x 156 |
| Cell Bonding | | 3 busbar |

CERTIFICATION

| | | |
|---------------|--|--------------|
| Ex Protection | | Ex nAC II T5 |
|---------------|--|--------------|



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* Electrical values under standard test conditions(STC): irradiation of 1000 W/m², airmass AM 1.5 and all temperature of 25 °C

** Electrical values under normal operating all temperature (NOCT): irradiation of 800 W/m², airmass AM 1.5 wind speed 0s 1m/s and ambient temperature of 20 °C

*** 10 year or 90% of the minimally specified power P under standard test conditions (STC)

**** 20 years on 80% of the minimally specified power P under standard test conditions (STC)