



# SOLAR POWER UNITS



REVISION 1

## APPLICATION

Onshore pipelines and plant in safe and hazardous areas.

## SOLAR GENERATING UNIT DATA



In remote areas, providing AC power for impressed current cathodic protection systems can be a major constraint. Solar electricity is a solution to this problem. Solar generators provide a reliable and low maintenance source of power that can be used for cathodic protection.

The control equipment is an integral part to the reliability and performance of the Solar generator. We use world leaders in the design, manufacture and supply of these controls to cover an extensive range of requirements. The CP controller utilises high-speed pulse width modulated switching technology to ensure the highest conversion efficiency fully maximising the power from the SGU.

The controller which is a DC-DC converter is suitable for connection to 12, 24 or 48Volt DC systems with output current options of 25A and 50A. The controller is capable of controlling the power delivered to the load to a maximum of 1V below the input voltage.

## CONTROLLER FEATURES

Control - Operating parameters are set by multi-turn controls with LED and volt free contacts for indication of control mode

- Constant Output Voltage Mode
- Constant Output Current Mode
- Constant Reference Electrode Voltage
- Low Current Alarm LED and Volt-Free Contacts
- High Current Alarm LED and Volt-Free Contacts
- Crystal Controlled Interrupt Timer (1-999 seconds ON and 1-999 seconds OFF)
- Output Circuit Breaker to protect the unit and allow the user to isolate the output.

## METERING & DISPLAY VIA LCD DISPLAY

- Voltage Set Point
- Output Voltage
- Current Set Point
- Output Current
- Reference Electrode Set Point
- Reference Electrode Voltage
- Low Current Alarm Set Point
- High Current Alarm Set Point

## TERMINATIONS

- 2 Power Input Terminals (M8 Studs)
- Positive and Negative Output Terminals (M8 Studs)
- 2 Input Terminals to connect the Reference Electrode/Pipeline with an input impedance of 1M $\Omega$

## ENCLOSURE

- Stainless Steel to IP66 as defined in BS EN 60529:1992 (alternatives available)
- Dimensions: 600H x 400W x 200D (mm)

## OUTPUT

- Voltage to within 1Volt of the Battery Voltage
- Current to the Maximum stated
- Output Resistance  $\geq 0.25\Omega$



# SOLAR POWER UNTIS


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## ENVIRONMENT

The controller will operate in the following conditions:

- 99% relative Humidity
- -100 to +55°C Ambient Temperature

## REMOTE MONITORING & CONTROL

- Optional Remote Monitoring
- Optional Remote Control
- Optional Radio Synchronisation of Interrupt Timer
- Optional RS 232 Port

## SOLAR ARRAYS

### SOLAR ARRAY FEATURES

We offer a wide range of different solar array types to meet the specific application and site where they are intended to be used. Solar modules are usually the traditional mono-crystalline cells but other high density cells are also available. The mono-crystalline solar cells deliver maximum power even under reduced light conditions. All modules are assembled into robust weatherproof sub-arrays including cabling.

- Mono-crystalline solar cells deliver maximum power even under reduced light conditions
- Dense packing of cells provides more power where space is a limitation and creates a uniform aesthetic
- Tight electrical specifications guarantee industry leading energy yield performance
- Highly transparent tempered glass delivers more power and ensures high impact resistance and protection against hail, snow, ice and storms
- Long and reliable service life backed by a 25 year warranty.



## BATTERIES

### MAIN CHARACTERISTICS

The batteries we offer are Dryfit type which are sealed, maintenance free lead acid batteries. It is no longer necessary to refill with water.

- Lead Acid System
- Sealed Units
- Rechargeable
- Maintenance Free
- Pb-Ca-Sn Alloy
- Immobilised Gel Electrolyte (preventing acid layer formation)
- Extremely Economical and Efficient

