

# Cathodic Protection Microgrid (CPM)

Putting Power Where You Need It



## Innovation

Corrosion Service is pleased to offer our Cathodic Protection Microgrid system designed to supply continuous power during harsh North American winters. Depending on the location, the solar array can be mounted vertically to reduce snow build for locations with high snow loading or angled for regions with limited snow loading allowing higher system efficiency. Our energy storage technologies are matched to your specific requirements using rechargeable conventional economical metal battery systems, or our industry-leading advanced Lithium-Ion batteries utilizing our in-house battery management system that will significantly extend life and capacities over traditional battery systems. Each system is designed to supply uninterrupted power regardless of the time of year and is designed to operate without direct sunlight for 1 - 7 days.

## Reliable

Our Solar System is based on our long history of providing reliable industry solutions for the ever-evolving Cathodic Protection industry. Renewable power is generated by advanced LG 410W NeON commercial solar panels that are setting the industry benchmark with improved performance over conventional solar panels. We have leveraged our history of building lithium-ion battery storage systems for the pin brazing industry and have incorporated this knowledge and equipment into our solar storage systems, ensuring reliable uninterrupted operation and extended battery life.

To reduce inspection intervals, we have incorporated optional remote monitoring capabilities that allow performance monitoring of the battery pack and solar panels.

## Features & Benefits

- + High-efficiency solar panels.
- + Optimized for winter low light.
- + Designed for cold climate use.
- + DC output: 0 - 50 or 0 - 100 volt.
- + DC output: Up to 10 amp.
- + Lithium-Ion or Lead Acid Battery systems.
- + Output automatic controlled (voltage, potential or current modes).
- + In-house designed and built battery management system.
- + 1 - 7 days of no direct sun days continuous operation.
- + Remote monitoring options.
- + Heated batteries to prevent freezing and improved charging efficiency.

## Technical Data

### DC INPUT

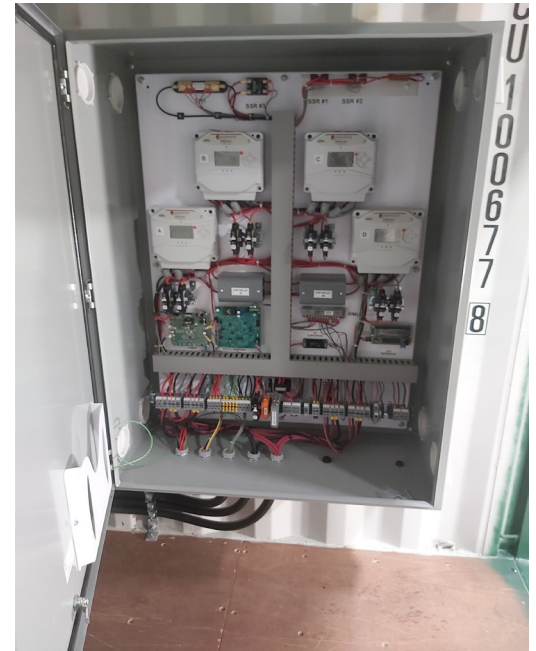
<b>Battery</b>	Lithium-Ion or Lead Acid, size and number dependent on system output requirement
<b>Heater</b>	70 Watts (required for cold climates)
<b>Insulated</b>	Yes, to maintain constant temperature for charging and discharging
<b>Battery Management System</b>	Corrosion Service designed and built in-house BMS

### DC OUTPUT

<b>Volts</b>	0 - 50 Standard, 0 - 100 Optional
<b>Amps</b>	0 - 10 amps (higher capacities are available but are custom designed)
<b>Control</b>	Automatically controlled modes (Potential or Current or Voltage)

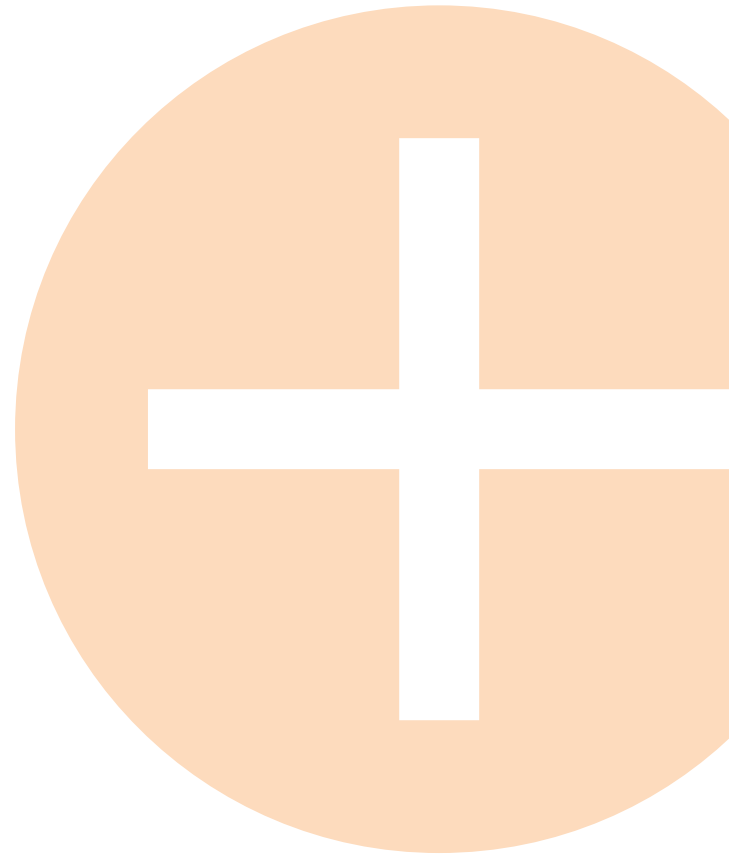
### DESIGN CHARACTERISTICS

<b>Displays</b>	Displayed values can include output current and voltage, battery voltage, and charge current
<b>Operation Temperature</b>	-40°C to 45°C -40°F to 113°F
<b>Protection</b>	DC Circuit breakers on input (from panels) charge controller, batteries and controller output
<b>Surge Arrestors</b>	On Output Circuits optional surge protection between solar panels and control enclosure
<b>Certifications</b>	CSA as Standard, Others upon request



## Description

The Corrosion Service Cathodic Protection Microgrid now extends the application of impressed current for remote locations where traditional power is not feasible to install or is not available at all. Our systems will supply years of uninterrupted service requiring limited maintenance and can be fully monitored using remote monitoring to validate reliability, while ensuring your asset is protected.



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SAM-PCP-20-0002\_REV4