

# Portable Automatic Current Source

High Efficiency Portable Current Source utilizing our Cathodic Protection Controller using DC power sources.



## Innovation

Corrosion Service is pleased to offer our Battery Powered Portable Automatic Current Source that contains our Portable Cathodic Protection DC-to-DC converter designed to supply continuous power for cathodic protection applications. This light weight, reliable and easy to use Portable Automatic Current Source is highly efficient and robust given its size and weight.

## Description

This unit is a small, high efficiency, 100-volt portable power supply containing a fully automatic controller that provides adjustable control for the output, based on potential, voltage, and current control set-points.

Unlike SCR-based rectifiers which require AC input, the switching operation of this controller allows it to be powered from multiple DC sources such as external batteries or the internal battery within the unit. Users can switch back and forth depending on their requirements.

The output is controlled by a rotary dial and has a two-line liquid crystal display that provides measurements of voltage, current, and potentials on the top row, and set current, voltage, and potentials on the bottom row.

## Reliable

Our system is based on our long history of providing reliable current sources and industry solutions for the ever-evolving corrosion prevention industry.

## Features

- + High efficiency Switching Current Source provides over 95% efficiency.
- + Due to its high efficiency, less heat is generated, and less cooling is required during operation.
- + Small form factor makes it easy to transport.
- + DC output 0–100 V, 0–10 A.
- + Output can maintain constant voltage, constant current, or constant potential.
- + Under-voltage lock-out to ensure device is protected under low voltages.
- + Output overcurrent protection - the output current is limited to 12 A to protect the power switches.
- + In-house designed and built by Corrosion Service with a history of quality products and services.
- + Cooling and overtemperature protection included with the unit.

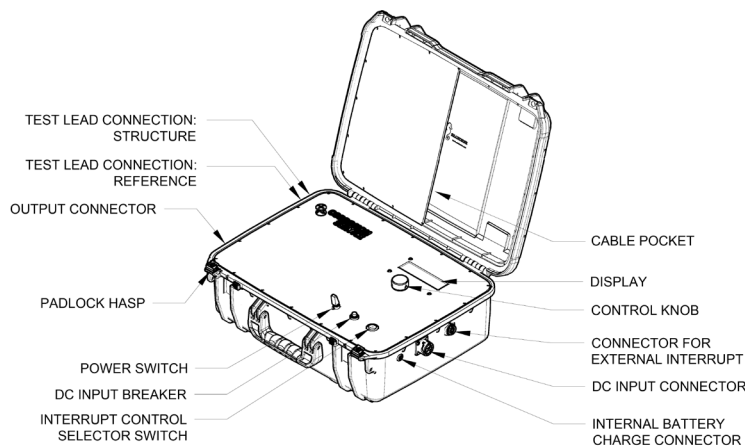
## Technical Data

### OUTPUT

<b>Maximum Output Power</b>	500 W (> 30 VDC input) 450 W (> 24 VDC < 30 VDC) 350 W (When powered by the internal battery)
<b>Output Voltage</b>	0-100 VDC (Limited by maximum power)
<b>Output Current</b>	0-10 ADC (Limited by maximum power)
<b>Control Modes</b>	Voltage Current Reference Potential
<b>Potential Control Range</b>	-4000 to 1000 mV
<b>Output Connect Type</b>	NAC3MX-W
<b>Internal Interrupter</b>	Yes (Solid state relay, non-GPS synchronised)
<b>External Interrupter</b>	Compatible with Mobiltex SPI1 external interrupter (SPI1 connector)

### INPUT

<b>Charger Voltage</b>	100-120 VAC (Charger included)
<b>Charger Frequency</b>	60 Hz
<b>Input Current</b>	23 A (Maximum)
<b>Input Voltage</b>	24-55 VDC
<b>DC Input Connection Type</b>	PWM-02RMFS-TS7001 DC Cable and connector included
<b>Efficiency</b>	95% (At nominal 30 VDC input, 25°C (77°F) ambient and 500 W output)



### DIMENSIONS

<b>Size</b>	510 mm L x 390 mm W x 190 mm H (20" L x 15.6" W x 7.6" H)
<b>Weight</b>	12 kg (26.5 lbs)

### BATTERY

<b>Battery Capacity</b>	432 Wh 12 Ah
<b>Discharge Time</b>	1 Hr 15 Min (Internal battery @ full output)
<b>Type</b>	NMC (Nickel-Manganese-Cobalt)
<b>Lifecycle</b>	1000+ charge cycles
<b>Charging time</b>	4 Hr 30 Min (From fully discharged state)

### ENVIRONMENT

<b>Ambient Charge Temperature</b>	0°C to 45°C (32°F to 113°F) *In shaded environment
<b>Ambient Discharge Temperature</b>	-20°C to 40°C (-4°F to 104°F) *In shaded environment
<b>Recommended Storage Temperature</b>	-20°C to 60°C (-4°F to 140°F) *In shaded environment

### ACCESSORIES AND GENERAL

<b>Accessories</b>	DC Positive and Negative Cable DC Charging Cable AC Charging Transformer and Cable
<b>Battery Expansion</b>	Yes - External
<b>Security</b>	Lockable
<b>User Interface</b>	Digital LCD Display

### Components

The Interface Module provides the user a display and a multifunctional rotary control button.

The Core Control Module performs several functions including but not limited to regulating output, voltage and potentials.

The Power Module converts the input power to the required output as driven by the Core Control module.

**Includes:** Charger for internal battery, DC input cable & DC output cable as well as an interruption port to plug in a third-party portable interrupter.

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