



# We're changing the genset game. And securing your position in it.

Your generator technology is truly cutting-edge. Your service is spectacular. Because of the powerful solutions you provide, your customers continue doing business at a high rate of success, productivity and efficiency.

But there is one glaring soft spot in your solutions. For as long as you can recall, it's always been there: engine failure to start. And when it happens, everything fails.

The problem is usually associated with the battery system. And until now, there simply has never been a better way to mitigate the risk that comes with relying solely on batteries to provide the power to start.

Now, there's a better, smarter solution: the Maxwell Technologies Generator Starting Solution (GSS).

It's our state-of-the-art answer to an age-old problem that has always plagued, worried and limited the industry. And now it's ready to power everyone to a whole new level of success.



## Ultracapacitors

Ultracapacitors are energy storage devices that provide burst power for applications requiring high power functions. Unlike batteries, which store energy via chemical reaction, ultracapacitors store energy by electrostatically (physically) separating positive and negative charges. The ultracapacitor's electrostatic energy storage permits the device to be rapidly charged and fully discharged for hundreds of thousands of cycles,\* as compared to batteries, which typically perform only hundreds or thousands of charge/discharge cycles.

Ultracapacitors are a reliable, energy-efficient and cost-effective solution for storing energy.

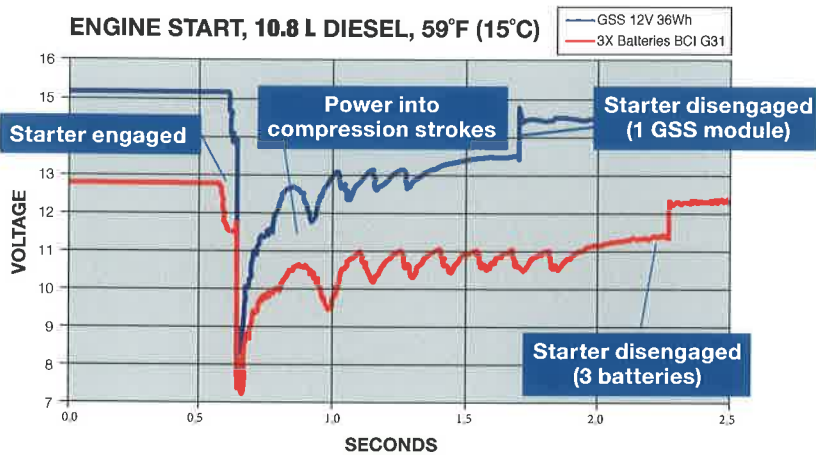
## About Maxwell

Maxwell Technologies is the global leader in ultracapacitor technology and is changing the way energy is used and stored. Our ultracapacitor products offer power and efficiency to a variety of applications, including consumer electronics, hybrid vehicles and renewable energy sources. Our proprietary electrode technology and global manufacturing facilities allow us to deliver unsurpassed value to our customers, while tailoring performance to specific applications.

\*Results may vary. Additional terms and conditions, including the limited warranty, apply at the time of purchase. See datasheet for applicable operating and use requirements.

GSS modules are capable of being charged to a higher voltage than batteries and have lower equivalent series resistance (ESR), so power is transferred more efficiently. The graph below shows how one 3-Terminal GSS module starts an engine faster than three same-sized batteries.

### Engine Starting: 3 Batteries vs. 1 GSS ULTRA 31/1800 Module



### Key Benefits of GSS Modules:

- Uses ultracapacitor technology. No lead. No acid.
- Consistent power from -40°F to +149°F (-40°C to +65°C)
- No electrolyte maintenance, ever
- 10-year limited warranty\*
- Less than half the weight of batteries
- RoHS and UL2200 certified
- Configurable for gensets from 15 kW to 2 MW+
- Assembled in the USA

Maxwell offers a variety of 2-Terminal and 3-Terminal 12V and 24V BCI Group 31 modules so you can create the optimum solution for anything from rental gensets to 3.5 MW+ stationary power systems.

### GSS 2-Terminal Series

One or more GSS 2-Terminal ultracapacitor modules and a Maxwell-approved charger can be used without batteries for ultra-low maintenance, powerful starting, or with batteries and the available diode network if longer cranking duration is required. Interconnecting the GSS module and charger with batteries also delivers more burst power and longer reserve, and may extend the life of the batteries. GSS 2-Terminal modules are UL2200 rated and meet IP67.

### GSS 3-Terminal Series

GSS 3-Terminal ultracapacitor modules offer a single, sealed, drop-in solution for gensets from 15 kW to 350 kW. Each module contains an internal charger that is powered by the battery system. The charger continually maintains the ultracapacitors at optimum voltage even if battery voltage is low.

For towable gensets, GSS 3-Terminal ultracapacitor modules offer a quick retrofit that ensures your entire generator fleet can be powerfully and confidently deployed at a moment's notice. GSS 3-Terminal modules are warranted for four years in towable genset applications.



\*2-Terminal modules only, when charged only with a Maxwell-approved charger. Additional terms and conditions, including the limited warranty, apply at the time of purchase. See datasheet for applicable operating and use requirements.

# When it has to start, start strong with Maxwell GSS.



For NFPA 110 Level 1 and 2 sites, Maxwell GSS modules can be installed alongside existing batteries, providing high current starting power even in the event of battery system failure.



For sites not subject to NFPA 110 Level 1 or 2, Maxwell GSS modules can replace batteries entirely, providing up to 10 years of maintenance-free starting.\*



Provides high cranking power for starting gensets as large as 3.5 MW



Extended operating temperature range for reliable year-round performance in outdoor enclosure installations



Reliable starting for towables up to 16 liters (Maxwell 3-Terminal GSS)

**To get started with Maxwell GSS, email [contactus@maxwell.com](mailto:contactus@maxwell.com) or call (877) 511-4324  
For more information, visit [www.maxwell.com/gss](http://www.maxwell.com/gss)**

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