## UNIVERSAL 104HUMLESS"Residential Storage System

This is the solar power industry's first all-in-one ESS that intelligently manages the flow of electricity from any source for any use. It integrates with any existing residential grid-tied solar system and works with any manufacturer's panels. Humless Universal is the first to enable simultaneous AC/DC Coupling and is very expandable.

"This largely plug-and-play energy storage system for residential solar installations is another step in the evolution of renewable energy for consumers," states Franklin Sullivan, EVP, Lead Market Manager for ABB Electrification business in the United States. "The unique versatility of this system allows installers to recommend a tested, single unit upgrade to solar systems that have no battery backup, thus providing a more intelligent energy management system."



The advanced intelligent energy controls in the Humless Universal paired with the ABB UNO-DM-TL-PLUS line of digitally enhanced inverters give the customer options to match grid needs/requirements; for example, load shaving, time of use, generator auto start, and smart outputs. This provides intelligent energy management for customers' power needs, lowers electrical costs dramatically and extends battery life.

- 10 kWh lithium battery (LiFePO4)
- 4 kVa High efficiency inverter
- Universal Energy Management (UEM)
- LCD display & remote monitoring
- AC and DC couple simultaneously from PV
- Can run any PV inverter in off-grid mode (Universal Retrofit)
- Keep solar panels operational even when the grid fails
- Expandable modular system
- Backup Power

- On and Off-grid capable
- Programmable smart outputs (For managing separate loads)
- Peak/Demand load shaving
  (Offset higher demand peak charges)
- Net metering (Sell power back go the grid)
- Arbitrage (Buy power at a low rate then sell it back at a higher rate)
- Programmable charging times
- 2 Wire Generator autostart
- BACnet compatible (Automation system protocol)

## Take Charge