

DST Controls soon to release new technology in Smart Combiner

DST Controls has long been known for the accuracy and reliability of our Smart Combiners. DST currently uses military grade current shunts that have a 0.25% accuracy and are not affected by swings in environmental conditions and do not require constant recalibration for zero offset and floating zero issues like Hall Effect sensors inherently have. Hall Effect sensors are typically 3-5% accurate right out of the box. The monitoring service may always see information from the Hall Effect sensors but how accurate that information is questionable.

Manufacturing a Smart Combiner with current shunts is more costly since all inputs have to be wired to data modules. With certain Hall Effect sensors the wires just pass through the sensor and the on-board electronics handle the data without any additional wiring except for the data cable and the 24VDC power.

DST Controls has teamed up with engineers from a reputable power automation company on a compromise to current shunts and Hall Effect sensors that will provide our clients with the stability, accuracy, and affordability needed in the solar market to implement accurate and consistent string level monitoring.

Note: DST Controls will retain our existing current shunt combiners and sub-combiners for those critical utility grade projects or where our clients prefer more stability and accuracy.

Our new “Configurable” Smart Combiner will provide:

- Up to 32 string 20A 1000VDC monitoring nodes in a single enclosure
- Connection of up to 63 32-string enclosures in a daisy chain for a complete system
- Modular construction
- Up to 1000VDC isolation
- RS-485 (Modbus RTU) communications
- Amp-hour calculation
- LED indication of faults
- Accuracy of 1%
- Touch Safe fuse holders with PV UL2579 listed fuses
- Option for UL98B certified DC disconnects
- Option for a transient voltage suppressor
- Option for an on-board DC to DC power supply (100 to 1000VDC input, 24VDC output)
- Option for mounting and wiring Tyco or MC4 style string connectors
- Option for adding conduit hubs
- Option for enclosure (painted steel, poly/fiberglass, or stainless steel)
- Option to comply with clients design for output power distribution block

Stay tuned for the official release of our new design.