

# Speed up Installation and Commissioning



## Key Features

- Current monitoring and diagnostics on string level
- Maximum string voltage: 600V
- Maximum string fuse: 20A
- 6 or 12 string version
- Uses Ferraz Shawmut ATMR Class CC Trap fuses
- Modbus communication interface
- NEC Compliant ETL listed to UL 1741 (12-string only) NEMA type 4X Enclosure
- Vertical or horizontal mount
- Patent pending

## Cost-effective Solutions

Energy Recommerce's unique DC Monitoring Combiner Box provides DC current monitoring down to the string level. This helps to localize problems and minimize downtime. An Alarm ensures notice of the failure and allows prompt action. The patent pending monitoring solution is fully integrated into the DC Monitoring Combiner Box, which eliminates installing separate current transducers for each monitoring point. Also, use of standard communications interfaces give flexibility to design and integration. Supporting application examples and CAD schematics further help reduce engineering cost. Available also without monitoring.

## Verify and Troubleshoot Problems Quickly

Provisions for an optional diagnostics installation tool helps isolate problems and faulty installations, without the need for Web access.

## Lower Maintenance Cost

The ability to remotely monitor the solar system over the Web in combination with the alarm helps lower the maintenance costs by minimizing the number of unnecessary site visits.

## Future Proof Solutions

Use of standard open solutions gives the Energy Recommerce DC Monitoring Combiner Box the flexibility to grow with the users evolving needs. The communications interface is an option that easily can be added at a later time to provide Web-based monitoring or integration to other systems.

## Easy to Install and Manage

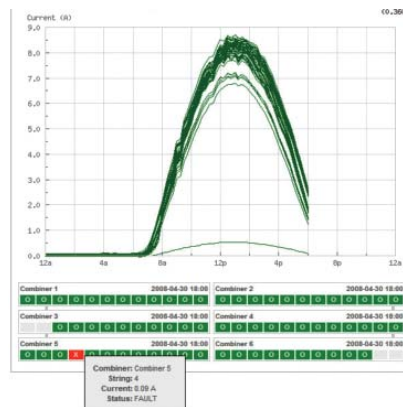
- Designed to facilitate quick installation.
- Monitoring requires very minimal extra installation and configuration.
- No shunts or current transducers needed.
- Fully integrated with the REctrack™ Monitoring System.





**Application**

Designed as a cost-effective solution to combine and fuse multiple high-voltage PV arrays in commercial applications. Available in 6- or 12-string versions with DC monitoring on string level.



Product Number	REC102	REC103
Maximum DC Voltage	600 VDC	600 VDC
Maximum Input Fuse Rating (fuses not included) *	20 A	20 A
Number of Strings	6	12
Maximum String Short-Circuit Current	12.8 A	12.8 A
Non-Fused String Input Wire Size (AWG)	#20 - #6	#20 - #6
Fused String Input Wire Sizes (AWG)	#14 - #6	#14 - #6
Small Combined Output Wire Sizes (AWG)	#14 - #2/0	#14 - #2/0
Large Combined Output Wire Sizes (AWG or KCMIL)	N/A	#6 - 350MCM
Number of Small Ground Terminals	6	12
Small Ground Terminal Wire Size (AWG)	#14 - #6	#14 - #6
Number of Large Ground Terminals	1	3
Large Ground Terminal Wire Size (AWG)	#14 - 1/0	#14 - 1/0
UL 1741-compliant	no	YES-ETL # 3161796
Enclosure Type	NEMA 4x (vertical & horizontal)	NEMA 4x (vertical & horizontal)
Unit Size (WxHxD)	16"x16"x6"	20"x20"x6"
Material/Finish	G90 Galvanized steel ANSI 61 powder coating	G90 Galvanized steel ANSI 61 powder coating
Operating Environment	±0 to +50°C, 20-90% RH non condensing	±0 to +50°C, 20-90% RH non condensing

Monitoring	Individual string current. 5 years monitoring (data logging & alarming) and hosting service on MYPVDATA.com included.
Communication	RS485 2-wire, 1200 - 115200 bps
Protocol	Modbus RTU
Power Supply	24 VDC, 6W, terminal block, min AWG#20, see handbook for proper sizing
Communication Cable	Terminal block, #22-18 AWG twisted pair with shield wire
Sampling	16-bit ADC, 10 MSPS samples

\* Fuses are not included. Energy Recommence recommends Ferraz Shawmut ATMR Class CC Trap fuses. To select the proper fuse size, please refer to the User Guide.

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