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Energy Information Made Obvius

A89DC-08B
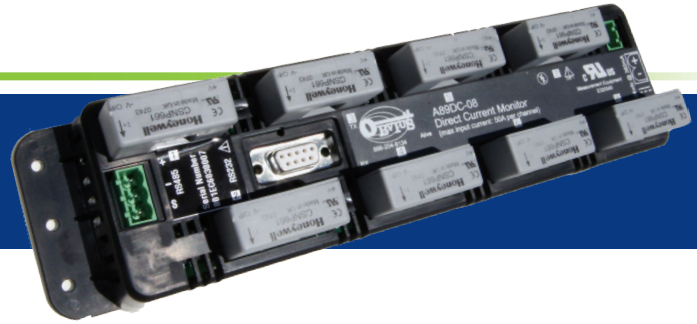### Solar PV String Monitor

SOLAR PV STRING MONITOR A89DC-08B

Obvius' solar PV string monitor allows owners and integrators of PV systems to monitor the performance of each string or sub array by providing high accuracy direct current readings. The A89DC-08B can monitor eight strings using non-contact Hall Effect sensors and provides a Modbus RS-485 output. When used with the Obvius AcquiSuite, users can set alarms and receive notifications when strings deviate from their expected value. The A89DC-08B is a cost-effective way to monitor key performance parameters, quickly identify system issues and reduce time on-site.

WHY USE THE OBVIUS SOLAR PV STRING MONITOR

- Designed specifically for DC monitoring of Photovoltaic (PV) systems
- Easily add to any Modbus RTU network
- Alarming for troubleshooting field issues
- Ability to daisy chain up to 32 devices (expandable)
- UL Recognized
- High accuracy +/- 1%
- LEDs for visual verification / status
- Field upgradable firmware
- Available OEM partners offering UL 1741 "smart" combiners

COMPATIBILITY

The solar PV string monitor is compatible with virtually any Modbus master, allowing customers the flexibility to use the A89DC-08B in existing Modbus networks. Use with the Obvius AcquiSuite and take advantage of plug-and-play communication or use with the Obvius ModHopper for wireless communication. Ask about the Obvius Commissioning Console, a free commissioning software.

PARTNERS

Obvius' outstanding integration and software partners supplement our products and services to ensure you receive the very best energy monitoring solution. Including several OEM partners offering UL 1741 "smart" combiner boxes using our A89DC-08B. Visit our partner page: **www.obvius.com**.

APPLICATIONS

- DC current monitoring
- Operations and Maintenance tool
- String monitoring for photovoltaic (PV) systems
- Monitor key performance and production parameters
- Quickly identify panel issues
- Alarm notification to key personnel
- DC module for OEM smart combiner box manufacturers

ABOUT OBVIUS

Obvius manufactures data acquisition and wireless connectivity products specifically for energy management. We deliver cost-effective, reliable hardware designed to speed up installation. Our products are based on an open architecture allowing our customers to collect and log energy information from virtually any meter or sensor. The ability to support multiple communication options provides remote access to all your energy information. Founded in 2003, Obvius is located in Hillsboro, Oregon. We serve a global clientele and continue to drive innovation by simplifying data collection.

SOLUTIONS

- Data Acquisition
- Wireless Communication
- Meters & Sensors
- Custom Packaged Solutions
- Integration & Software Partners

HEADQUARTERS
Hillsboro, Oregon

CONTACT US
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A89DC-08B

The Obvius Solar PV String Monitor allows user to monitor DC generation in renewable energy applications. It is also the perfect solution for OEMs looking to add monitoring to "smart" combiner boxes. If used with our AcquiSuite, Obvius can deliver a true plug-and-play string-level monitoring solution.

Specifications	
Processor	ARM 7 embedded CPU
LEDs	Alive (green), RS-485 TX, RX (yellow)
Power	
Power Supply	24VDC, 382mA. Required (not included)
Communication	
Protocols	Modbus/RTU
Serial Port	RS-485 two wire, 9600 baud, 8N1. Supports up to 32 external devices (expandable)
Addressing	Modbus address may be set from 1 to 247 via Modbus register
Inputs	
CTs	8 DC Hall Effect sensors, non-contact (intended to be used with insulated wire) CAT I measurement device
Range	Maximum +50A to -50A DC at 1200VDC
CT Aperture	0.49" x 0.35" opening for load wire
Accuracy	± 1% of full scale (± 0.5A)
Measurements	• DC current per channel, instantaneous and average • Total DC current (sum of 8 channels), instantaneous and average • Average DC current (of 8 channels), instantaneous and average
Alarming	• Low alarm may set as a percent of DC average of other channels • Alarms may be disabled below a minimum average current level • Minimum time for alarm may be set to prevent alarms on brief events • Unused channels may be disabled to exclude them from total and average calculation
Isolation	RS-485 terminals are electrically isolated to 1500V from the remainder of the A89DC-08B board
Physical	
Weight	0.83lbs (0.375kg)
Size	10.25" x 2.5" x 1.75" (260mm x 64mm x 45mm)
Environment	
North America	-30 to 60C, 0-95% humidity, non-condensing
Altitude	2000M max
Pollution	Degree 2
Codes and Standards	
Emissions	FCC CFR 47 Part 15, Class A, EN 61000, EN 61326
Safety	UL61010 Recognized, EN61010
Additional Notes	
For indoor and outdoor use when used in an appropriate NEMA enclosure	
For use with any Modbus RTU device / server	
Manufactured in the USA	