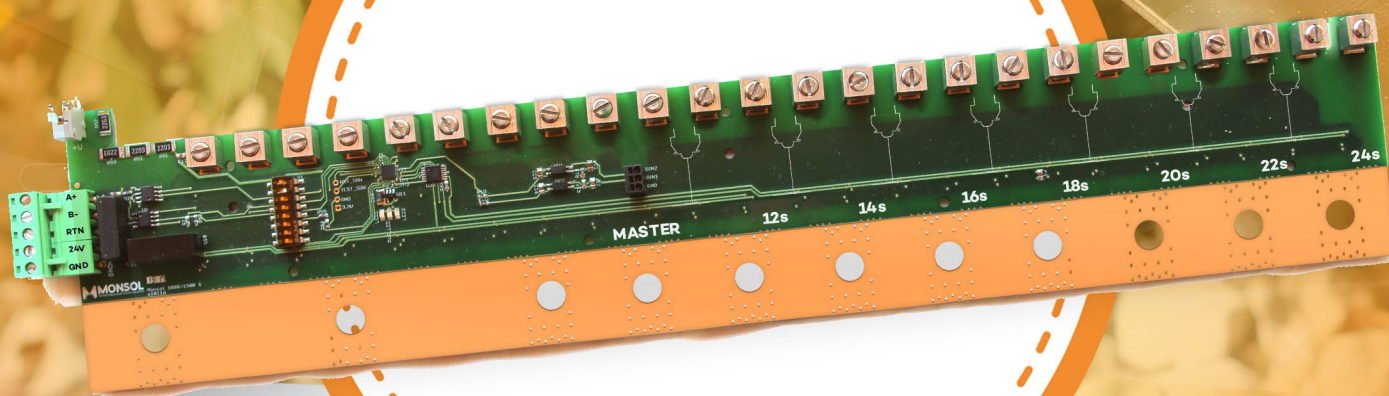


SHUNT DATA SHEET

MONSOL 1000|1500V STRING MONITOR

Calle La Gitanilla 17, Nave 26
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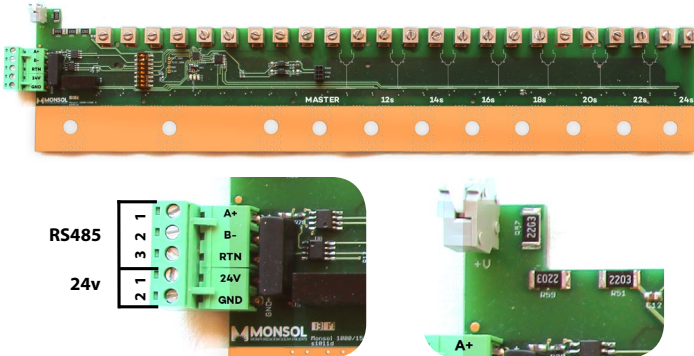


Monsol 1000/1500 SHUNT (Photovoltaic string current monitor)	
Number of channels	Up to 24 channels
Number of strings	Up to 48 strings (2 per channel)
Photovoltaic field voltage	Up to 1500 V
Max. current circulation	Up to 30 A
Current measurement range	30 A
Max. recommended operation current	20 A (2 strings)
Digital inputs	2
Measurement error	< ±1% (FS)
Temperature reading	Internal
Configuration	Compact from 10 to 24 inputs
Measuring location	Negative pole
Voltage monitoring	Integrated
Mounting	Integrated with a busbar
Electrical connection	Metal Terminals
Communication	Modbus RTU (RS485)
Power Supply	24 V DC ±10 %
Consumption	<80 mA
DIMENSIONS	
Max. Height x Length x Thickness	86 x 387 x 25 mm
Measurement resolution	14 bits

CURRENT MONITOR FOR PV PANEL STRINGS

Established in 2005, Monsol specializes in the design, development and manufacturing of software and hardware for the monitoring of PV installations. We are now broadening our range of individual string monitoring devices to achieve the highest possible measurement accuracy. We have created a more compact device and integrated current and voltage monitoring to guarantee a better performance of the installation. Thanks to its groundbreaking connection concept and the innovative measuring and manufacturing technology, this new device reduces both, space and installation costs. (C.E./U.L. Certification)

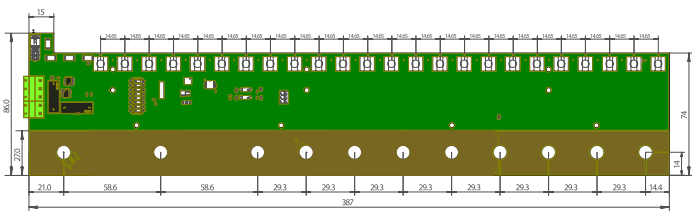
Up to 1500 V / 35 A Operating temperature -40 to +80° C



The device is able to measure string box output voltage without any additional systems and observes the voltage drop by comparing the voltage of the string box with that of the inverter input.



Monsol 1000/1500 Shunt® is a measuring device designed to monitor current flowing from the first or second level combiner boxes all the way to the inverter. Its design replaces a multi-phase electric distribution busbar. We recommend that it should be installed during the assembly of the first level combiner box.



Measuring up to 24 current inputs

HOMOLOGATION:

Temperature testing
 EN 60068-1-1:2007
 EN 60068-2-1:2007
 UL 61010 (PENDING)



TECHNICAL PARAMETERS

- Adaptable from 10 to 24 channels per device
- Up to 30 A per channel, recommended operation current 20 A
- Precision error $\leq \pm 1\%$ (FS) (14 bits)
- Compatible with 1000V and 1500V strings
- Up to 60 readings per minute
- 2 closed/open type isolated digital inputs
- Temperature reading on the board
- RS485 port
 - Standard Modbus RTU protocol
 - 3kV isolation
 - Surge protection
 - Transient voltage protected
- Selection of Modbus address by microswitch
- Industrial operating temperature range -40°C to +80°
- LEDs indicating power supply and data flow
- Power supply 24 V DC $\pm 10\%$ with 3kV isolation
 - Surge protection
 - Transient voltage protected
 - Polarity reversal protection
- PCB thickness of 2 mm suited for industrial handling
- Innovative manufacturing technology for high current
- Current busbar of up to 240 A without an external conductor (copper plate)
- Electroless nickel immersion gold finish for maximum conductivity
- Tropicalized
- 2 years warranty

IMPORTANT: In order to maximize space and minimize final installation costs, it is possible (always on request) to adapt the size of the device, modify the PCB and adapt the number of channels. In this manner, we can obtain devices with a number of channels adapted for each project. Possible configurations include 10, 12, 14, 16, 18, 20, 22 and 24 channels.

