



PC Meterbus Adapter™

Morningstar's **PC Meterbus Adapter (MSC)** converts a controller's meter port (RJ-11 phone type connector) to a standard RS-232 serial connector for connection to a PC or other equipment. The MSC may be used with any Morningstar controller or inverter equipped with a meter connection that does not also already have a RS-232 port.



By converting to RS-232, the MSC allows Morningstar's controllers and inverters to communicate with a variety of third party serial enabled devices such as:

- A PC running Morningstar's MS View software or any other compatible software.
- A serial enabled device such as an internet gateway.
- Another MODBUS enabled hardware device at the site that needs to access solar system information.

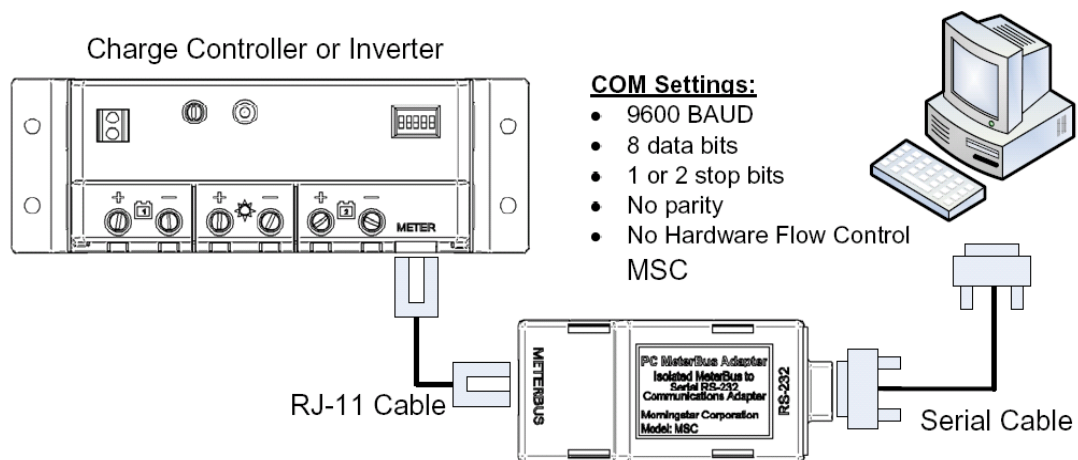
Establishing a communications link enables the monitoring or logging of data from the controller or inverter as well as the customizing of any user-adjustable settings. The MSC makes available a wide variety of data stored in Morningstar's products such as (varies by product):

- Battery Voltage (including minimum and maximum)
- Solar charge current to the battery
- Load current from the battery
- Accumulated solar and load amp hours
- Charge Stage
- Errors and alarms
- Local and battery temperature
- Data logging files

All data is transmitted in the form of MODBUS protocol. This industry standard was chosen for a high level of compatibility with a variety of equipment. Each Morningstar product has its own data specification (see our website for full details).

The MSC is sold as a kit that includes the following:

- PC Meterbus Adapter
- RS-232 cable with connectors: 1.8 meters (5.9 feet)
- RJ-11 cable with connectors: 1 meter (3.3 feet)



WARRANTY: Five year warranty period. Contact Morningstar or your authorized distributor for complete terms.

AUTHORIZED MORNINGSTAR DISTRIBUTOR:

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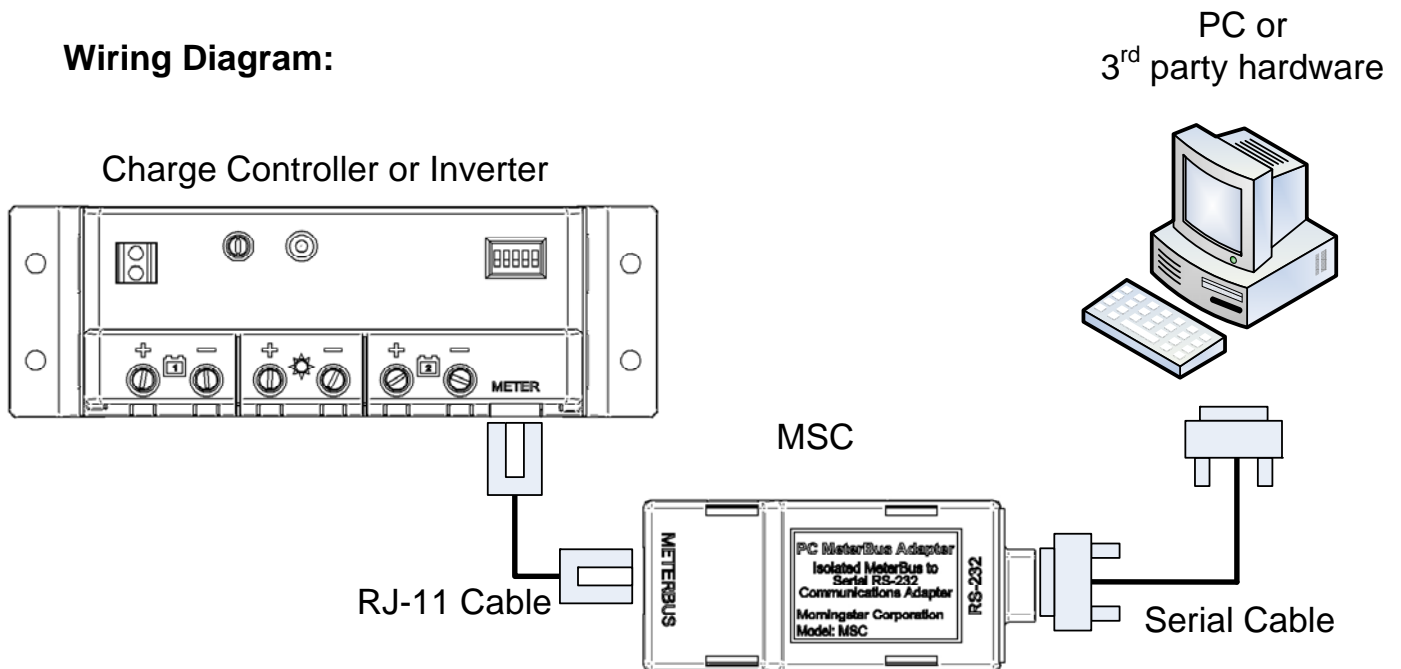
Morningstar PC Meterbus Adapter Instructions

Description:

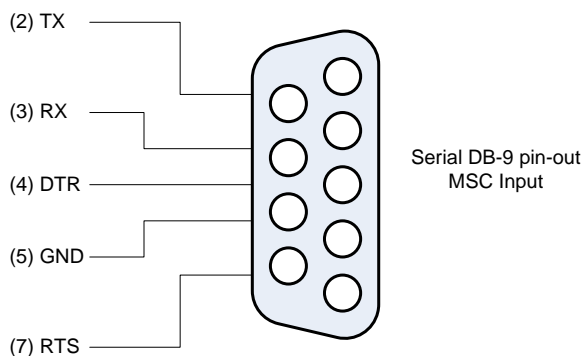
The PC Meterbus Adapter (model: MSC) converts the Morningstar MeterBus RJ-11 electrical interface to a standard RS-232 interface which allows communication between a PC and a Morningstar charge controller or inverter**. The MSC is required for programming custom charging setpoints and logging data using Morningstar's MSView PC software. The MSC is also required for serial communications with any 3rd party hardware that supports Modbus communication.

** controllers or inverters with a Meterbus connection that do not have a serial port or other communications port

Wiring Diagram:



RS-232 Pin-out:



COM Settings:

- 9600 BAUD
- 8 data bits
- 1 or 2 stop bits
- No parity
- No Hardware Flow Control

Notes:

1. Virtually all PC serial ports conform to the MSC pin-out requirements.
2. RS-232 GND is NOT the same ground as RJ-11! The MSC is fully opto-isolated on all pins.
3. + power must be asserted on DTR and/or RTS pins
4. - power must be asserted on RTS and/or RX pins

Modbus documentation including register locations, scaling, and definitions can be found on Morningstar's website at:

www.morningstarcorp.com