

June 10, 2010

Connection between MCM Unit and MOXA Unit

1 MCM Unit



MCM uses 2 or 4-wire RS 422/RS485 communications with optically isolated (to 2500V) inputs and outputs. MCM is configured as a slave device and needs to be addressed before it will communicate over the bus. It will support communication rates of up to 19,200 Baud over distances exceeding 1000m, but this rate can be degraded if the environment is especially noisy.

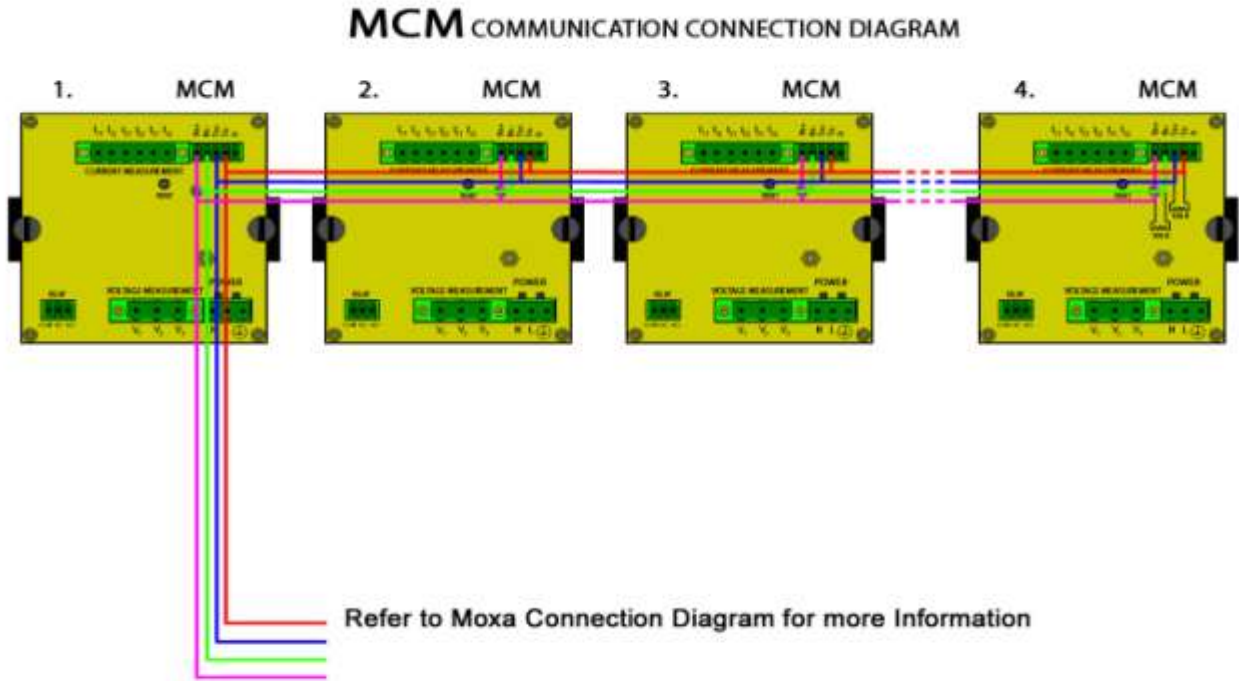
In the diagrams given above, the terminals marked 0 on each MCM device are connected together and with the 0 terminal on the converter. Internally, these terminals are connected to the local ground via 100 Ω resistors. This optional connection is provided in order to have a quality return path for the differential signals, which can in some circumstances reduce noise and lead to better communications. In cases where the ground quality is adequate, this connection can be left unused. Similarly, terminating resistors between the terminals on the last device in the daisy chain (star topologies are not recommended) are indicated. These resistors (typically of value 120 Ω , depending on the impedance of the cable used) may not be needed in short networks with few devices, but at higher baud rates and as the network length increases, their inclusion becomes essential.

Note: Refer to page 19 of the MCM User's Manual to see wiring diagram. The important items to remember when installing serial communications are the following items.

1. Use 4 or 5 wire optically isolated cable that has a foil shield and ground wire
2. Do not install in cable runs with electrical AC cables only low voltage runs.
3. Use insulated Wire Ferrules on all your serial terminations at the MCM Units
4. Moxa configuration uses 4 wire communications
5. Use resistors when necessary

Note: North America is using RS-232/422/485 serial over a TCP/IP Ethernet network

MCM TECHNICAL NOTES



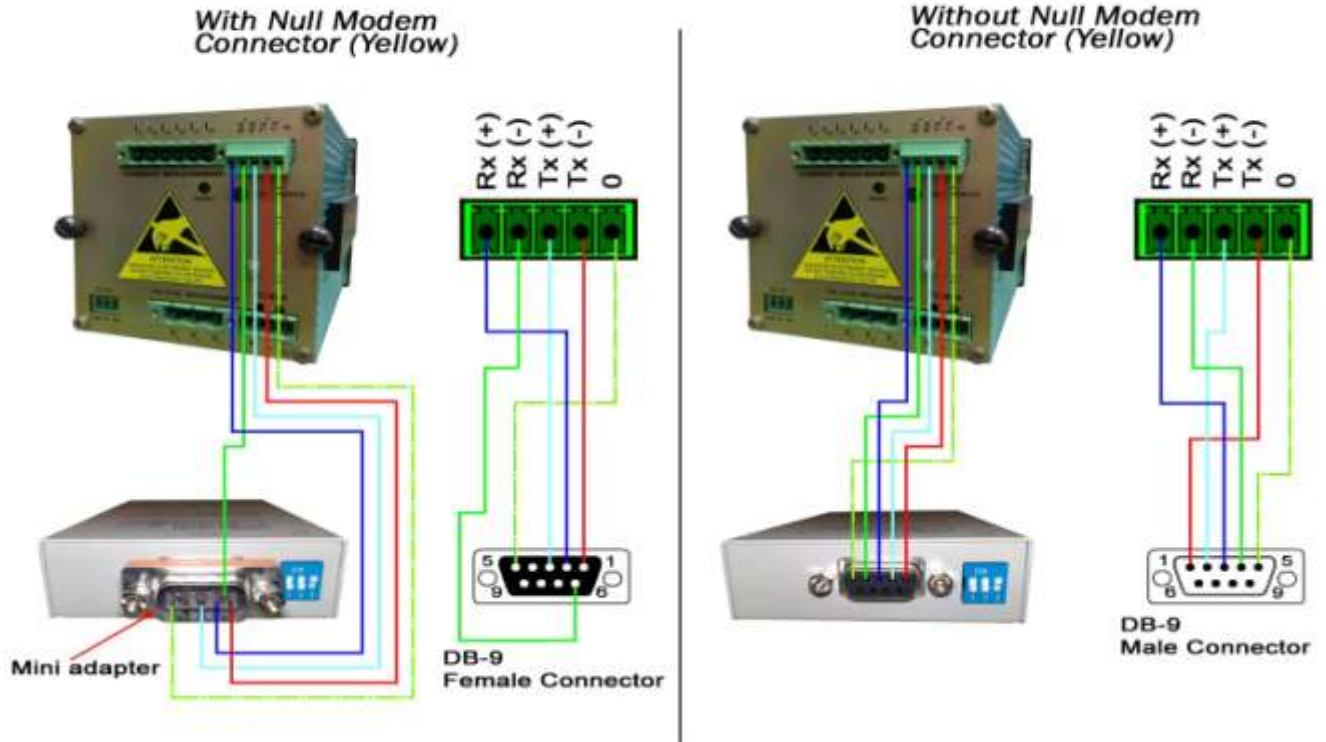
Note: Moxa device has been tested and approved for use with MCM system



NPort DE-311 is easy-to-use and powerful t-port serial device server for connecting RS-232, RS-422 and RS-485 serial devices to an Ethernet network.

2 Connection Diagram between MCM Units and Serial at Moxa

MOXA Connection Diagram



Note: Use DB9 Mail serial connector and Solder your connections points.