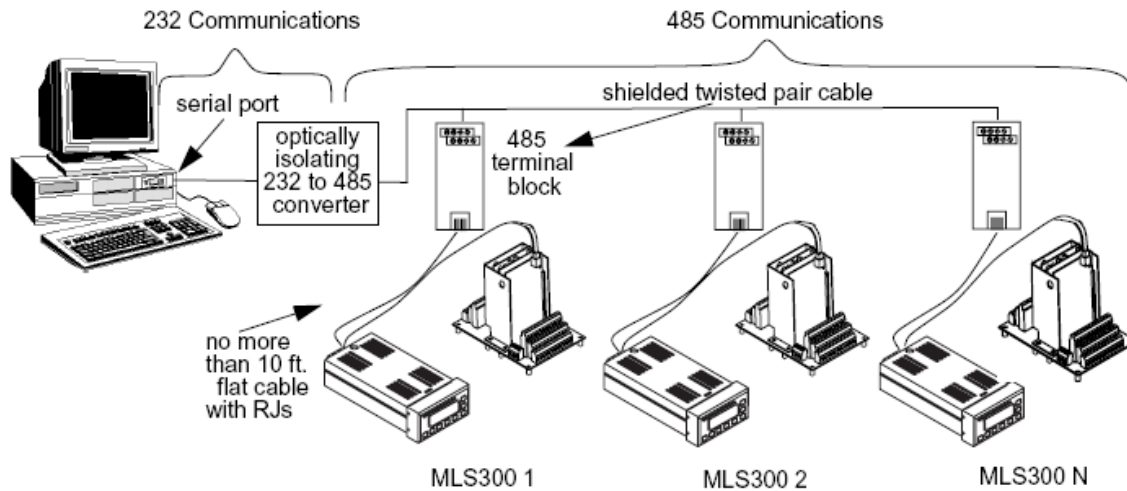




MLS300 communications utilizing the 485 terminal block

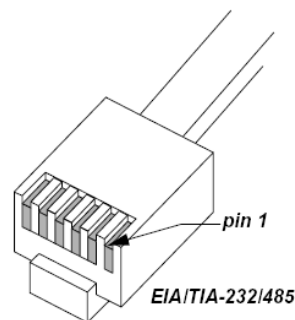
The purpose of this paper is to show how to correctly wire two or more MLS300 controls to an EIA-485 network using the 485 terminal blocks.



Network wiring should approximate a daisy chain as closely as possible. Keep the distance from the point at which the wires are split to the MLS300 as short as possible. Long spurs can cause destructive interference of the signals.

The 485 terminal block accepts an RJ12 cable connector and converts each line on the cable to a screw terminal. Use the 485 terminal block to wire multiple MLS300 controllers together on the same EIA-485 network. Pins on the terminal block are designated 1 to 6. The function and number of each pin corresponds to the function and pin numbers of the EIA-485 ports on the MLS300 module.

The part number for ordering an EIA-485 terminal board with 2-foot MLS communications cable Z100-30786-000. The part number for ordering an EIA-485 terminal board with 4-foot MLS communications cable Z100-30786-100.





MLS300 communications utilizing the 485 terminal block

WATLOW

EIA/TIA-485 Connector Pin Out and Connections

RJ12 Pin #	Wire Color	485 Terminal Block Pin #	MLS Function	Converter Connection
1	Bare	1	N/C	Earth Ground
2	Yellow	2	TX+	RXB
3	Green	3	Common	Common
4	Red	4	RX-	TXA
5	Black	5	TX-	RXA
6	Blue/White	6	RX+	TXB

The colors in the table are for Watlow cables.

By placing jumpers between the (TX+ & RX+) pins and between the (RX- & TX-) pins on the 485 terminal blocks, EIA-485 systems may be configured for two wire connections as well. Use the same cables with RJ12 plugs as you would use for four wire connections to connect from the 485 terminal blocks to the serial ports on each MLS300. Connect the two wire EIA-485 network to the 485 terminal block

In some installations, particularly when transmission lines are long, the transmission lines must be terminated. The MLS300 receive lines can be terminated by setting a jumper on the last MLS300 control. To terminate the lines set jumper JU3 on the last MLS300 control on the network to the B position. This places a 200 ohm resistor across the receive lines.