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Introduction

The 8000 Series of modules is comprised of analog and digital I/O modules designed for a wide variety of data acquisition and signal conditioning functions. These modules are designed for an RS-485 communication network, and require an RS-485 to RS-232 converter in order to be accessed through a standard PC serial port. The 8520/8520R module performs this function. Each 8520/R converter module can accommodate 256 modules over 4000 feet. The 8510 repeater module is used to extend the RS-485 network an additional 4000 feet per repeater module, or to add an additional 256 modules to the network. The 8510 module can also be used to segment a very long 8000 network into smaller isolated portions to protect the system from transient energy surges.

Like the 8520 module, the 8510 contains a unique Self-Tuner ASIC which permits it to process signals from multiple modules operating at different baud rates and with different data formats.

Features:

Input: RS-485

Output: RS-485

Speed: “Self Tuner” inside, auto switching baud rate, 300 to 115.2 kbps.

Isolation Voltage: 3000 VDC
2.1 Pin Assignment

2.2 Specifications

8510 : RS-485 Repeater

Input: two-wire RS-485, (D+,D-)
Output: two-wire RS-485, (D+,D-)
Speed: Internal “Self Tuner,” automatic switching baud rate, from 300 to 115,200 BPS
Isolation voltage: 3000V
Connector: plug-in screw terminal block
Power Requirements: +10V to +30VDC
Power Consumption: 2.2W(Max)
2.3 Block Diagram

Figure 2.3.1 8510 block diagram

2.4 Basic Wire Connection

Figure 2.4.1 8510 wire configuration