

SCM9B-A1000/A2000



RS-232C/RS-485 Converters, RS-485 Repeaters

Description

The A1000 and A2000 series converter boxes convert RS-232 communication signal levels to the correct electrical signals required by RS-485. The RS-485 communications standard is recommended when many SCM9B modules, or other addressable devices, must be connected to a host computer over long distances. The A1000 and A2000 converters allow communications bus lengths up to 4,000 feet and data rates up to 115kbps using one twisted pair of wires.

The RS-485 standard allows for bidirectional data on the same pair of wires. Therefore, some means of arbitrating the data direction is required. The A1000 and A2000 automatically control the bus direction without external handshaking signals from the host. Host software written for half-duplex RS-232 may be used without modification, RS-485 bus control is completely transparent to the user.

The A1000 and A2000 can also operate as repeaters for RS-485. Repeaters are required to extend communications bus lengths or to allow more than 32 RS-485 devices to be connected to a communications bus. A repeater simply reamplifies, or boosts, existing RS-485 signals transmitted over long distances.

Specifications

Communications
<ul style="list-style-type: none"> • Max common mode voltage: 1500Vrms, 1 minute duration. • Data rates: 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200bps.
Environmental
<ul style="list-style-type: none"> • Temperature range (operating & storage): -25°C to +70°C. • Relative humidity: 0 to 95% Noncondensing.
A1000 Power Specifications
<ul style="list-style-type: none"> • Power requirements: 115VAC (order SCM9B-A1000-115) or 230VAC (order SCM9B-A1000-230) ±10%, 50-60Hz. • Power consumption: 30W full load. • Power supply output: +24VDC at 1A.

► Features

- Completely Transparent to Host Software
- No External Flow Control Signals Required
- Optically-Isolated Bidirectional Data Flow
- Standard Data Rates: 300 to 115kbps
- Automatic Internal RS-485 Bus Supervision
- Networking up to 4,000 Feet
- CE Compliant

Ordering Information

Model	Description
SCM9B-A1000-115	RS-232C/RS-485 Converter/Repeater, 115VAC
SCM9B-A1000-230	RS-232C/RS-485 Converter/Repeater, 230VAC
SCM9B-A2000	RS-232C/RS-485 Converter/Repeater, +10 to +30VDC

A2000 Power Specifications

- Power requirements: +10 to +30VDC unregulated.
- Power consumption (at +15VDC): Max. current w/RS-485 output short, 100mA.
- Idle current w/LEDs off, less than 10mA.

Mechanical and Dimensions

- Case: Impact resistant ABS.
- Weight: 2.8lbs. (A1000), 1.0lb. (A2000).
- Dimensions: 8.08"W X 2.50"H X 6.25"D (A1000).
7.06"W X 1.53"H X 5.30"D (A2000).

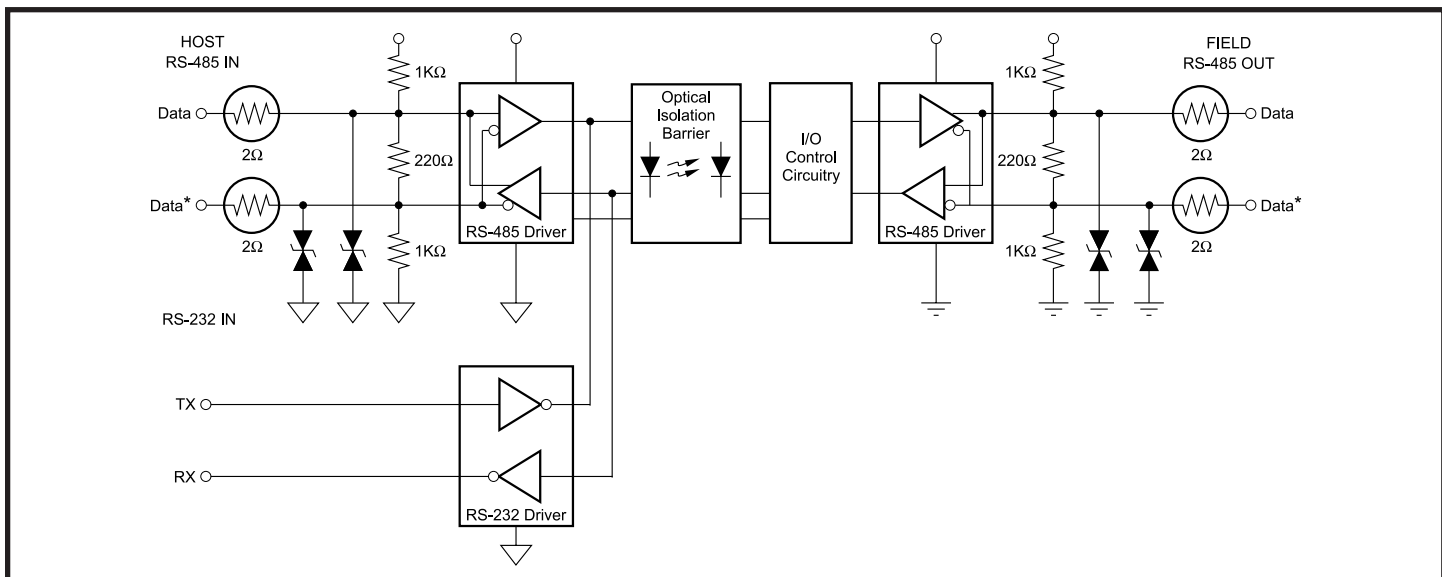


Figure 1: SCM9B-A1000/A2000 Block Diagram

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