

Port Powered RS-232/485 Converters

Models 485SD9R, 485SD9RJ, 485SD9TB

B+B SMARTWORX

Powered by

ADVANTECH

www.advantech-bb.com



Model
485SD9R

PRODUCT FEATURES

- Extend RS-232 data signals up to 1.2 km (4,000 ft)
- Convert RS-232 TD and RD to RS-485 signals
- Automatic Send Data Control - no software drivers necessary
- Baud rates up to 115.2 kbps
- Powered from RS-232 handshake lines - no power supply required

These port-powered, two channel converters allow your computer to communicate longer distances by converting TD and RD RS-232 lines to RS-485 signals. RS-485 also provides multi-drop capability.

All converters feature Automatic Send Data Control which enables the driver when data is present on the RS-232 side. Control of the driver is automatic at speeds up to 115.2 kbps.

The unit is powered from the RS-232 data and handshake lines whether the lines are high or low. No handshake line change is necessary to control the data lines. The RS-485 driver is enabled with each bit of data. The RS-485 receiver is disabled when the driver is enabled and is enabled when the driver is disabled. Model 485SD9TB can be optionally powered by an external 12 VDC power supply.

These converters are suitable for field service, where a power supply would add clutter, or anywhere you need compact, easy-to-use, economically priced serial conversion.

ORDERING INFORMATION

| MODEL NUMBER | RS-232 CONNECTOR | RS-485 CONNECTOR | OUTPUT | OPTIONAL POWER SUPPLY |
|--------------|------------------|------------------|---------------|-----------------------|
| 485SD9R | DB9 Female | DB9 Female | RS-485 2-wire | - |
| 485SD9RJ | DB9 Female | RJ11 | RS-485 2-wire | - |
| 485SD9TB | DB9 Female | Terminal Block | RS-485 2-wire | ✓ |

ACCESSORIES - SOLD SEPARATELY

SMi6-12-V-ST - Power Supply, 12 VDC 6 Watt, Stripped and Tinned, International AC Input, International AC Blades

9PAMF6 - DB9 Male to DB9 Female Adapter Cable, 1.8 m (6 ft)

Automatic Send Data Control Explained

As operating systems become more complex, it is increasingly difficult to control an RS-485 driver with standard software and the RTS line. This is especially true in Windows and multi-tasking operating systems. With Advantech B+B SmartWorx' Automatic Send Data Control circuit, driver control is in the converter hardware, so you do not have to work with software at all.

The circuit monitors data flow and enables the driver during transmission and automatically disables it when no data is being sent. There is no need to rework software or install new drivers. Most Advantech B+B SmartWorx RS-232 to RS-485 converters and RS-485 serial cards include Automatic Send Data Control.

Why use an "optional" power supply with a port-powered converter?

Simply put, all RS-232 ports are not created equal. Many laptop PC's, for example, deliberately reduce power to the RS-232 port to save the battery. And, if you are working at the distance limits of RS-422 or 485, you might need an extra boost. For the majority of applications though, the converter's port powering is sufficient to accomplish the task.

All product specifications are subject to change without notice.
485SD9R, 485SD9RJ, 485SD9TB_0918ds

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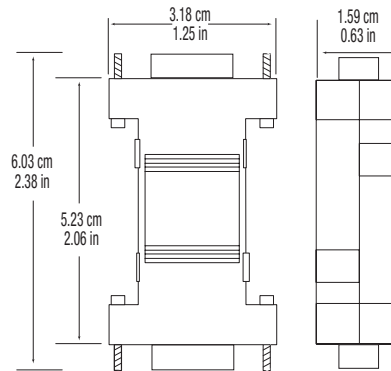


SPECIFICATIONS

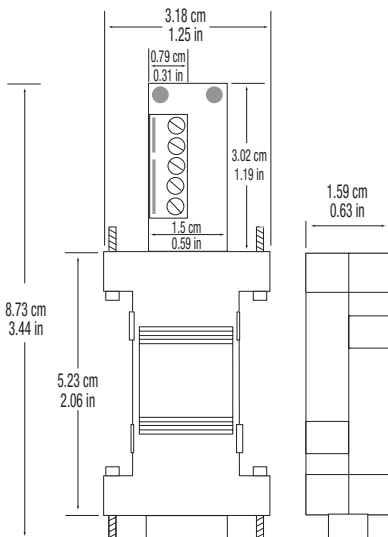
| SERIAL TECHNOLOGY | |
|---|--|
| Data Rate | 115.2 kbps maximum |
| RS-232 | |
| Connector | 485SD9R: DB9 female 485SD9RJ: DB9 female 485SD9TB: DB9 female |
| RS-485 | |
| | 485SD9R: DB9 female 485SD9RJ: RJ11 485SD9TB: Terminal board |
| Biasing Resistors | 4.7k Ohms |
| POWER | |
| Source | Port-powering: from RS-232 handshake lines. External power option, 12-16 VDC (485SD9TB only) |
| Power Connector | Terminal block (485SD9TB only) |
| Input Voltage | 12 VDC (485SD9TB only) |
| Power Consumption | 40mA maximum |
| MECHANICAL | |
| Dimensions | 485SD9R: 6.0 x 3.2 x 1.6 cm (2.4 x 1.3 x 0.6 in) 485SD9RJ: 7.3 x 3.2 x 1.6 cm (2.9 x 1.3 x 0.6 in) 485SD9TB: 8.7 x 3.2 x 1.6 cm (3.4 x 1.3 x 0.6 in) |
| Enclosure | Plastic |
| Weight | 81.6 g (0.18 lb) |
| MTBF | 485SD9R: 986473 hours 485SD9RJ: 897656 hours 485SD9TB: 968410 hours |
| MTBF Calc. Method | MIL 217F Parts Count Reliability Prediction |
| WIRING INFORMATION | |
| Refer to Quick Start Guide for wiring information, including terminal and pin identification. Available on website. | |

| ENVIRONMENTAL | |
|----------------------------------|---|
| Operating Temperature | 0 to +70 °C (+32 to +158 °F) |
| Storage Temperature | -40 to +85 °C (-40 to +185 °F) |
| Operating Humidity | 0 to 95% non-condensing |
| APPROVALS, DIRECTIVES, STANDARDS | |
| FCC Part 15, CISPR, CE | |
| Directives | 2014/30/EU - Electromagnetic Compatibility Directive 2011/65/EU - Reduction of Hazardous Substances Directive (RoHS) 2012/19/EU - Waste Electrical and Electronic Equipment (WEEE) |
| Standards | EN 55032 Class A - Electromagnetic Compatibility of Multimedia Equipment - Emission Requirements EN 55024 - Information Technology Equipment - Immunity Characteristics - Limits and Methods of Measurement EN 61000-6-4 + A1 - Generic Emission Standard for Industrial Environments (Class A) EN 61000-6-2 - Generic Immunity Standard for Industrial Environments |

MECHANICAL DIAGRAM - MODEL 485SD9R



MECHANICAL DIAGRAM - MODEL 485SD9TB



MECHANICAL DIAGRAM - MODEL 485SD9RJ

