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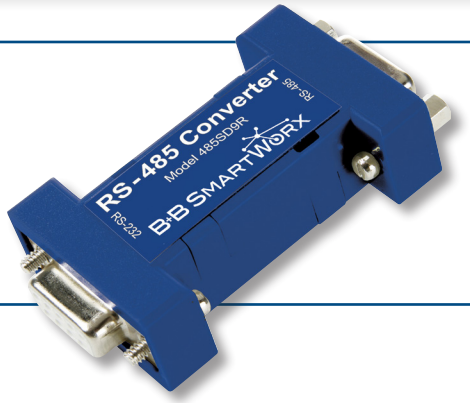
Find the *Advantech / B&B Electronics 485SD9R* at our website: *Click HERE*

Port Powered RS-232/485 Converters

485SD9R, 485SD9RJ, 485SD9TB

B+B SmartWorx

Powered by ADVANTECH



PRODUCT FEATURES

- Extend RS-232 data signals up to 1.2 km (4,000 ft.)
- Change 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.

Converters are powered by the RS-232 port DTR and RTS handshake lines. The unit is powered from the RS-232 data and handshake lines whether the lines are high or low. If the handshake lines are asserted (held High), and no termination is used, the port power efficiency is greatly increased. Less than 35mA is required to operate the converter plus the load current. 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

485PS2 - 120 VAC to 12 VDC power supply, 100 mA, tinned leads, USA

PS1EU-1000 - 220-240 VAC to 12 VDC power supply, 1A, tinned leads, Euro CEEE7/7 plug

PS1UK-1000 - 220-240 VAC to 12 VDC power supply, 1A, tinned leads, UK BS-1353 plug

9PAMF6 - DB9 male to DB9 female adapter cable, 6 ft. (1.8 m)

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.

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.

All product specifications are subject to change without notice.

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Port Powered RS-232/485 Converters

485SD9R, 485SD9RJ, 485SD9TB



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 block
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	0.18 lbs (81.6 g)
MTBF	485SD9R: 986473 485SD9RJ: 897656 485SD9TB: 968410
MTBF Calc. Method	Parts Count Reliability Prediction

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 / CERTIFICATIONS - 485SD9R, 485SD9RJ, 485SD9TB	
FCC Part 15, CISPR, EN 55022: 2010 + AC:2011 Class B Emissions	
CE	
EN 61000-6-1: 2007 Generic Standards for Residential, Commercial and Light-Industrial Environments	
EN 61000-4-2: 2009 Electro-Static Discharge (ESD) EN 61000-4-3: 2006 +A1 +A2 +IS1 Radiated Field Immunity (RFI) EN 61000-4-4: 2012 Electrical Fast Transients-Burst Immunity (EFT) EN 61000-4-6: 2009 Conducted Immunity	
Download complete Declaration of Conformity at www.bb-elec.com	

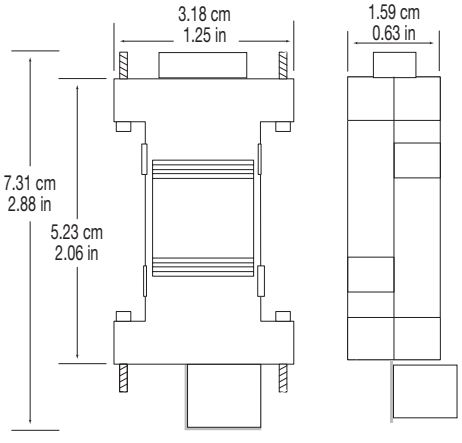
Model 485SD9R Pin-Outs

Signal	DB9S Pin #
Data A (-)	2 or 8
Data B (+)	3 or 7
Signal Ground	4 or 6

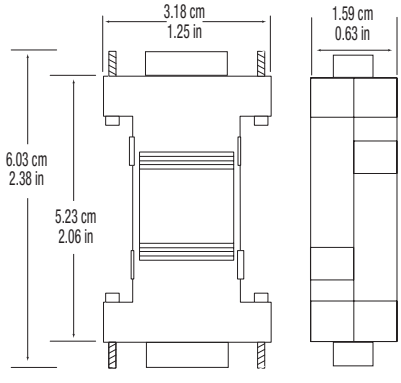
Model 485SD9RJ Pin-Outs

Signal	RJ11 Pin #
Data A (-)	2
Data B (+)	5
Signal Ground	4

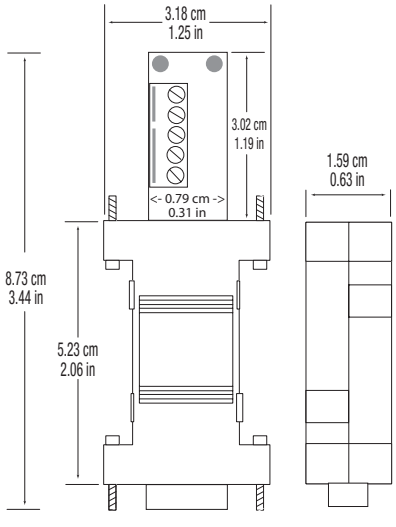
MECHANICAL DIAGRAM - 485SD9RJ



MECHANICAL DIAGRAM - 485SD9R



MECHANICAL DIAGRAM - 485SD9TB



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