

Port Powered RS-232/422 Converters

422PP9R, 422PP9TB



PRODUCT FEATURES

- Extend RS-232 data signals up to 1.2 km (4,000 ft.)
- Change RS-232 TD and RD to balanced RS-422 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 change TD and RD RS-232 lines to balanced RS-422 signals extending communication distances up to 1.2 km (4,000 ft.). Automatic Send Data Control feature enables the RS-422 driver when data is present on the RS-232 side. Control of the driver is automatic at rates up to 115.2 kbps. The RS-422 driver and receiver are always enabled.

With port-powering, no power supply is required. Power is derived from the DTR and RTS RS-232 handshake control lines. If port-powering the unit, at least one handshake line must be present, in either the positive or negative voltage state. This permits use in applications without worrying about software control of the handshake lines. Can also be powered externally.

Converters are configured to transmit both directions in an RS-232 and RS-422 system. RS-232 pinout connects directly to a computer's COM port or any other DTE device. Connections to the RS-422 side are made through the terminal blocks.

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.

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 B&B Electronics' 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 B&B Electronics RS-232 to RS-485 converters and RS-485 serial cards include Automatic Send Data Control.

ORDERING INFORMATION

MODEL NUMBER	RS-232 CONNECTOR	RS-422 CONNECTOR	OUTPUT	OPTIONAL POWER SUPPLY
422PP9R	DB9 Female	DB9 Female	RS-422	
422PP9TB	DB9 Female	Terminal Block	RS-422	✓

ACCESSORIES

422PS2 - 12 VDC (wired) power supply, 100 mA, 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 wall power supply, jack, UK BS-1363 plug

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

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.

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SPECIFICATIONS

SERIAL TECHNOLOGY

Data Rate 115.2 kbps maximum

RS-232

Connector 422PP9R: DB9 female
422PP9TB: DB9 female
Signals

RS-422

Connector 422PP9R: DB9 female
422PP9TB: Terminal block
Signals

Operation RS-422, 4-wire

Biasing Resistors 4.7k Ohms

Termination None

POWER

Source Port-powered from RS-232 handshake lines.
(422PP9TB Only) Optional, external 12-16 VDC power supply.

Power Connector Terminal Block

Input Voltage 12 VDC @ 100 mA

MECHANICAL

Dimensions 422PP9R: 6.1 x 3.3 x 1.7 cm (2.4 x 1.3 x 0.66 in)

Dimensions 422PP9TB: 8.9 x 3.3 x 1.7 cm (3.5 x 1.3 x 0.7 in)

Enclosure Plastic, In-line

Weight 0.10 lbs (45.3 g)

MTBF 422PP9R: 2094328
422PP9TB: 849670

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 0-95% Non-Condensing

APPROVALS / CERTIFICATIONS - 422PP9R, 422PP9TB

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)

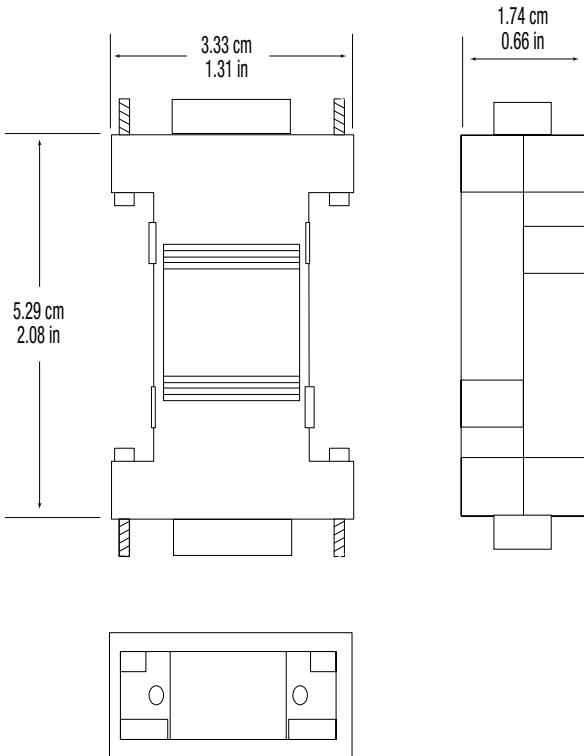
EN 61000-4-3: 2006 +A1 +A2 +IS1 Radiated Field Immunity (RFI)

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

MECHANICAL DIAGRAM - 422PP9R



MECHANICAL DIAGRAM - 422PP9TB

