

BB-422LP25R

Port-powered RS-232 to RS-422 Converter



Introduction

Model BB-422LP25R converts unbalanced RS-232 signals to balanced RS-422 signals. Power is derived from the Transmit Data line (pin 2) and the Handshake Control lines (pins 4, 5, 6, 8, and 20). The converter can derive power from these lines when they are in the Positive or Negative voltage state. This permits the converter to be used in applications with no regard to software control of the handshake lines.

If no handshake lines are available and all power must be derived from the Transmit Data line, the converter can drive limited cable lengths. A guide for this condition would be to drive only several hundred feet of transmission line and not to terminate the transmission line with a resistor of less than 1000 Ohms. When more handshake lines are available, longer lengths of cable can be driven. The converter has been tested at 115.2k baud with 1220 meters (4000 ft) of cable.

Specifications

Serial Technology	
RS-232 Connector	DB25 female (DCE device)
RS-422 Connector	DB25 male (EIA-530 pinouts)
Data Rate	Up to 115.2 kbps
Operation	RS-422, 4-wire
Signals	Converts 8 channels of RS-232 to RS-422
Biasing Resistors	4.7k Ohms
Termination	None
Power	
Source	Port-powered from RS-232 handshake lines.
Power Input	7~12 Vdc, Pin 12 (Gnd) and Pin 25 (+12)
Mechanical	
Dimensions	5.4 x 6.2 x 1.5 cm (2.1 x 2.4 x 0.6 in)

Features

- Extend RS-232 data signals up to 1.2 km (4,000 ft.)
- Converts RS-232 TD and RD to balanced RS-422 signals
- Data rate: up to 115.2 kbps baud
- Powered from RS-232 handshake lines - no power supply required

Ordering Information

Model No.	Description	RS-232 Connector	RS-422 Connector
BB-422LP25R	RS-232 to RS-422 Converter	DB25 Female	DB25 Male

Accessories – Sold Separately

BB-232AMF5 - DB25 Male to DB25 Female, 1.8 m (6 ft)

BB-232AMM5 - DB25 Male to DB25 Male, 61.8 m (6 ft)

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
Meantime Between Failures (MTBF)	
MTBF	562068 hours
Calculation Method	MIL 217F using Parts Count Reliability Prediction Method
Regulatory – Approvals / Standards / Directives	
FCC, CE	
CE - Directives	2014/30/EU – Electromagnetic Compatibility 2011/65/EU – amended by (EU) 2015/863 Reduction of Hazardous Substances (RoHS) 2012/19/EU – Waste Electrical and Electronic Equipment (WEEE)
CE - 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 61000-6-1 – Generic immunity standard for residential, commercial and light-industrial environments
Other Standards	EN 61000-6-3+ A1 - Generic Emission Standard for Residential, Commercial and Light-industrial Environments (Class B) EN 61000-6-2 - Generic Immunity Standard for Industrial Environments