# ULI-223D BB-422PP9R ULI-223T BB-422PP9TB

### **RS-422 Port-powered Converters**



### **Features**

- Convert RS-232 TD and RD to balanced RS-422 signals
- Extend RS-232 data signals up to 1.2 km
- Baud rates up to 115.2 kbps
- RS-232/RS-422 bi-directional transmission
- Quick, easy in-line installation suitable for field service
- Powered from RS-232 handshake lines no power supply required

# Introduction

These port-powered converters change RS-232 TD and RD to balanced RS-422 signals extending communication distances up to 1.2 km. Port-powered from the RS-232 DTR and RTS handshake lines, no power supply is needed. At least one handshake line must be present, in either a positive or negative voltage state. No worry about software control of the handshake lines. If port power is not sufficient, model ULI-223T can be powered from an external PSU. 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.

## **Specifications**

### Serial Technology

 RS-422 Operation RS-422 4-wire

	Termination	N	one		
	Model:	RS-232	RS-422	Data Bate max:	Biasing
		Connector:	Connector:	Data Rate, max:	Resistors:
	ULI-223D	DB9 female	DB9 female	115.2 kbps	4.7k Ohms
	ULI-223T	DD9 lellidle	Terminal block		

#### Power

Port Power

Port Power	RS-232 handshake lines		e lines
Model:	Source:	Connector:	Input Voltage:
ULI-223D	Port-power	_	-
ULI-223T	Port-power OR external PSU	Terminal block	External PSU option: 12 Vdc

#### Mechanical

Model:	Enclosure:	Installation:	Dimensions, mm:	Weight, gm:
ULI-223D	Plastic	In-line	61 x 33.3 x 17.4	45.3
ULI-223T			87.3 x 31.8 x 15.9	

#### **Meantime Between Failures (MTBF)**

 Calculation Method MIL217F Parts Count Reliability Prediction

Model:	MTBF, hours:	
ULI-223D	2094328	
ULI-223T	849670	

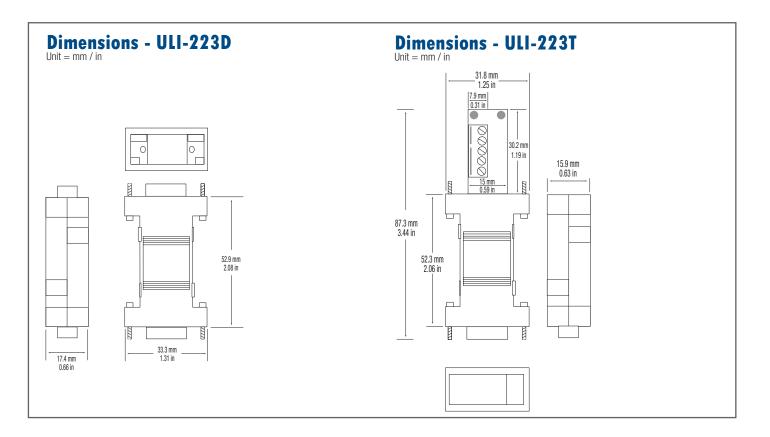
#### Environmental

- Operating Temperature 0 to +70 °C
- Storage Temperature -40 to +85 °C
- Operating Humidity 95%, non-condensing

#### **Regulatory/Approvals/Certifications**

Model:	Approvals:	CE - Directives:	CE - Standards:
ULI-223D		2014/30/EU – Electromagnetic Compatibility Directive	EN 55032 Class A – Electromagnetic Compatibility of Multimedia Equipment – Emission Requirements
ULI-223T	FCC, CE	2011/65/EU amended by 2015/863/EU – Reduction of Hazardous Substances	EN 55024 – Information Technology Equpment – Immunity Characteristics – Limits and Methods of Measurement
	Directive (RoHS) 2012/19/EU – Waste Electrical and Electronic Equipment (WEEE)		EN 61000-6-4 + A1 – Generic Emission Standard for Industrial Environments (Class A)
		Electrical and Electronic Equipment (WEEE)	EN 61000-6-2 – Generic Immunity Standard for Industrial Environments

ULI-223D	BB-422PP9R
ULI-223T	<b>BB-422PP9TB</b>



# **Ordering Information**

Model	Part Number to Order	Description
ULI-223D	BB-422PP9R	RS-422 Converter - RS-232 DB9F to RS-422 DB9F, Port-powered.
ULI-223T	BB-485PP9TB	RS-422 Converter - RS-232 DB9F to RS-422 TB, Port-powered. (Optional external PSD, sold separately.)