

ULI-226D BB-485SD9R
ULI-226J BB-485SD9RJ
ULI-226T BB-485SD9TB

RS-232 to RS-485 Port-powered Converters



Features

- Extend RS-232 data signals up to 1.2 km
- 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



Introduction

These port-powered serial adapters convert TD and RD RS-232 to RS-485 allowing signals to transmit longer distances. RS-485 provides multi-drop capability. Automatic Send Data Control enables the driver when data is present on the RS-232 side. Converters are powered from the RS-232 data/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 enabled when the driver is disabled. Model ULI-226T can also be powered by an external 12 Vdc PSU.

Specifications

Serial Technology

- **RS-485 Operation** RS-485 2-wire

Model:	RS-232 Connector:	RS-485 Connector:	Data Rate, max:	Biasing Resistors:
ULI-226D	DB9 female	DB9 female	115.2 kbps	4.7k Ohms
ULI-226J		RJ11		
ULI-226T		Terminal board		

Refer to Quick Start Guide for wiring, terminal and pin identification, information. Available on website.

Power

- **Port Power** RS-232 handshake lines

Model:	Source:	Connector:	Input Voltage:	Power Consumption:
ULI-226D	Port-power	-	-	<40 mA, max.
ULI-226J				
ULI-226T	Port-power <i>OR</i> external PSU	Terminal block	External PSU: 12-16 Vdc	

Mechanical

Model:	Enclosure:	Installation:	Dimensions, mm:	Weight, gm:
ULI-226D	Plastic	Inline	60.0 x 32.0 x 16.0	82
ULI-226J			73.0 x 32.0 x 16.0	
ULI-226T			87.0 x 32.0 x 16.0	

Meantime Between Failures (MTBF)

- **Calculation Method** MIL217F Parts Count Reliability Prediction

Model:	MTBF, hours:
ULI-226D	986473 hours
ULI-226J	897656 hours
ULI-226T	968410 hours

Environmental

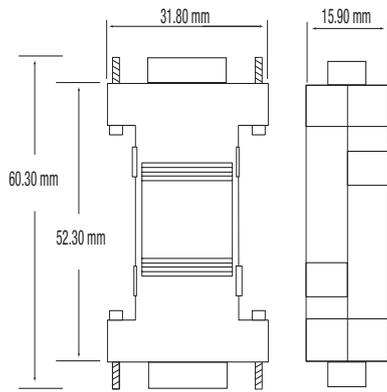
- **Operating Temperature** 0 to +70 °C (+32 to +158 °F)
- **Storage Temperature** -40 to +85 °C (-40 to +185 °F)
- **Operating Humidity** 95%, non-condensing

Regulatory/Approvals/Certifications

Model:	Approvals:	CE - Directives:	CE - Standards:	Standards - other:
ULI-226D	FCC Part 15, CISPR, CE	2014/30/EU - Electromagnetic Compatibility (EMC)	EN 55032 Class B - Electromagnetic Compatibility of Multimedia Equipment - Emission Requirements	EN 61000-6-1 - Generic Immunity Standard for Residential, Commercial and Light-industrial Environments
ULI-226J		2011/65/EU amended by 2015/863/EU - Reduction of Hazardous Substances Directive (RoHS)	EN 55024 - Information Technology Equipment - Immunity Characteristics - Limits and Methods of Measurement	EN 61000-6-3 + A1 (Class B) - Generic Emission Standard for Residential, Commercial and Light-industrial Environments
ULI-226T		2012/19/EU - Waste Electrical and Electronic Equipment (WEEE)	EN 61000-6-1 - Generic Immunity Standard for Residential, Commercial and Light-industrial Environments	

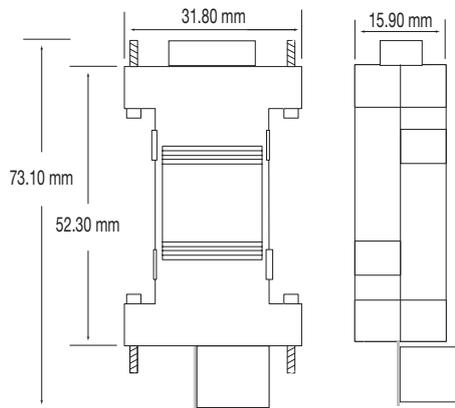
Dimensions - ULI-226D

Unit = mm / in



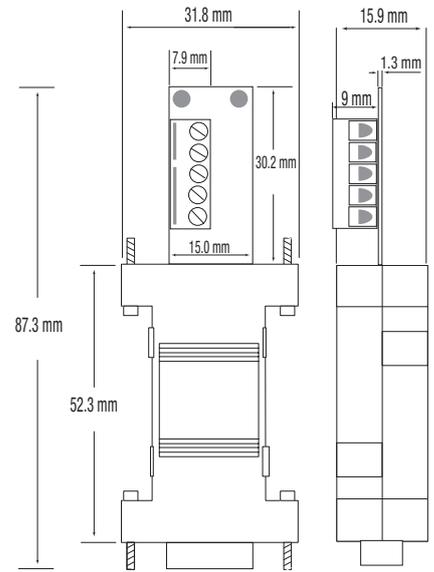
Dimensions - ULI-226J

Unit = mm / in



Dimensions - ULI-226T

Unit = mm / in



Ordering Information

Model	Part Number to Order	Description
ULI-226D	BB-485SD9R	RS-485 Port Powered Converter, DB9F/DB9F
ULI-226J	BB-485SD9RJ	RS-485 Port-Powered Converter, DB9F/RJ11
ULI-226T	BB-485SD9TB	RS-485 Port-Powered (or external PSU) Converter, DB9F/TB

ULI-226 Series Selection Guide

RS-232 to RS-485 Port-powered Converters



Common Features

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

Serial Port-powered Converters Comparison Table

Model Number	ULI-226D	ULI-226J	ULI-226T
Part Number to Order	BB-485SD9R	BB-485SD9RJ	BB-485SD9TB
Description	Port-powered, RS-232 to RS-485 Converters		
Key Features	Inline Installation		
Industrial Rating	Light		
RS-232 Connector	DB9 female		
RS-485 Connector	DB9 female	RJ11	Terminal block
Data Rate, max.	115.2 kbps		
Mode (RS-485 2 wire)	✓		
Automatic Send Data Control	✓	✓	✓
Operating Temperature	0 to +70 °C		
Power Source	Port-power (RS-232 handshake lines)		Port-power or external PSU
Power Input Voltage	-		External PSU: 12-16 Vdc
Power Connector	-		Terminal block (external power)
Power Consumption, max.	<40 mA		
Enclosure	Plastic		
Mounting Installation	In-line		
Dimensions, mm	60.0 x 32.0 x 16.0	73.0 x 32.0 x 16.0	87.0 x 32.0 x 16.0
MTBF (MIL217F), hours	986473	897656	968410
Regulatory/Approvals/ Certifications	FCC Part 15, CISPR, CE EN55032/B, EN55024		
	EN 61000-6-1	EN 61000-6-3 + A1 (Class B)	EN 61000-6-1