

# BB-4850P

## Optically Isolated RS-422/485 Converter



### Introduction

Model BB-4850P is an optically isolated RS-422/485 signal repeater. In addition to 2KV isolation on the data lines, it can be used to extend RS-422/485 circuits an additional 1.2 km (4000 ft), thereby doubling the range. Terminal blocks for RS-422, RS-485 2 or 4-wire. Another benefit is the ability to add another 32 nodes to an RS-485 network and join 2-wire and 4-wire systems.

The compact design fits almost anywhere. Terminal blocks allow easy installation. Wiring schematic on the label eliminates guesswork. A 12 Vdc power supply is required, and included, with blades for USA, EU, UK, AU, UP & CN.

### Specifications

Serial Technology	
Protocols	RS-422 RS-485, 2-wire RS-485, 4-wire
Isolation	
Lines Protected	Data lines
Method	Optical
Rating	2000 V
Surge Suppression	
Lines Protected	Data lines
Method	TVS
Rating	6.5V, bi-directional 600W peak power dissipation
LED Indicators	
2 x Data (red)	Flashes when data is received
Industrial Bus	
Protocol	Modbus ASCII / RTU
Terminal Block	
Wire Size	22 to 14 AWG
Torque	0.5 Nm
Power	
Connector	Terminal block
Voltage	10 to 14 Vdc
Consumption	1.0 W
Source	External 12 Vdc source, required. <i>Note: one wall transformer power supply included.</i>

### Features

- Device and data 2 kV optical isolation and 1.2 km (4000 ft) extension
- Add up to 32 nodes to RS-485 network
- Inline installation
- External 12 Vdc power source required (included)
- Modbus support
- CE, FCC, UL Recognized

### Ordering Information

Model No.	Description
BB-4850P	RS-422/485 Optically Isolated Repeater

### Accessories

BB-SM16-12-V-ST – Level VI power supply, 12 Vdc, 6 Watt, 500 mA, stripped and tinned, international AC input, international AC blades. *One (1) included with repeater.*

Power Supply	
Input Voltage	96 to 264 Vac
Input Connections	AC blades for USA, EU, UK, AU, CN, JP
Output Connections	Stripped and tinned leads
Output Current	500 mA
Output Power	6 W
Efficiency Level	VI
Output Voltage	12 Vdc
Mechanical	
Enclosure Material	Plastic
IP Rating	30
Dimensions	9.7 x 6.1 x 2.5 cm (3.8 x 2.4 x 1.0 in)
Mounting	Inline installation
Environmental	
Operating Temperature	0 to +40 °C (+32 to +104 °F)
Operating Humidity	0 to 95%, non-condensing
Meantime Between Failures (MTBF)	
MTBF	453103 hours
Calculation Method	MIL 217F Parts Count Reliability Prediction
Regulatory – Approvals / Standards / Directives	
Approvals	CE, FCC, cULus Recognized File E222870
CE – Directives	2014/30/EU – Electromagnetic Compatibility Directive 2011/65/EU – Amended by (EU) 2015/863 Reduction of Hazardous Substances Directive (RoHS) 2012/19/EU – Waste Electrical and Electronic Equipment (WEEE)
CE – Standards	EN 55032 (Class B) - Electromagnetic Compatibility of Multimedia Equipment – Emission Requirements EN 55024 – Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurement EN 60950-1: +A1 +A11 +A12 +A2 - Information Technology Equipment – Safety – Part 1 General Requirements