BB-USOPTL4-x
BB-USPTL4-x
BB-USO9ML4

In-line USB Converters



Features

- Adds a COM port to your PC
- 2000 V RMS optical isolation (select models)
- 460.8 kbps data rate
- Quick, easy in-line installation
- Automatic Send Data control - no software drivers needed
- Powered by USB port; no power supply required
- High retention USB port
- USB cable included
- Locked Serial Number option (-LS models)

Specifications

Serial Technology

- **RS-422/485 4-Wire** TDA(-), RDA(-), TDB(+), RDB(+), GND
- **RS-485 2-Wire** Data A(-), Data B(+), GND
- **Connector** Terminal block (BB-USOPTL4, BB-USOPTL4-LS, BB-USPTL4, BB-USPTL4-LS)
  DB9 male connector (BB-USO9ML4)
- **Data Rate** 460.8 Kbps
- **Isolation** 2 kV RMS (BB-USOPTL4, BB-USOPTL4-LS, BB-USO9ML4)
- **Industrial Bus** Modbus ASCII/RTU
- **Bias** 4.7 KΩ on receive lines in RS-422/485 mode

USB Technology

- **USB Compatibility** 1.1 and 2.0
- **Speed** 1.5, 12 Mbps: BB-USOPTL4, BB-USOPTL4-LS, BB-USO9ML4
  480 Mbps: BB-USPTL4, BB-USPTL4-LS
- **Connector** Type B High Retention (15 N / 1.54kg-force withdrawal)
- **Windows O/S** 8.1 (32/64 bit), 10 (32/64 bit), 2008-r2 (32/64 bit), 2012 Server-r2 (32/64 bit)

Power

- **USB** Low power device (draws <100 mA)

Indicators

- **LEDs** Transmit Data, Receive Data

Mechanical

- **Dimensions** 88.3 x 42.7 x 20.2 mm
- **Enclosure** IP30, Plastic

Meantime Between Failures (MTBF)

- **MTBF BB-USOPTL4-x** 1,318,809 hours
- **MTBF BB-USPTL4-x** 1,012,584 hours
- **MTBF BB-USO9ML4** 380,087 hours
- **MTBF Calculation** MIL 217F Parts Count Reliability Method

Environmental

- **Operating Temperature** 0 to +70 °C
- **Operating Humidity** 0 to 95%, non-condensing

Regulatory - BB-USOPTL4-x & BB-USPTL4-x

- **CE - Directives** 2014/30/EC - Electromagnetic Compatibility
  2011/65/EU amended by 2015/863/EU – 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
  EN 61000-6-1 - Generic Immunity for Residential, Commercial, Light-Industrial Environments
  EN 61000-6-3 A1 - Generic Emissions for Residential, Commercial, Light-Industrial Environments (Class B)

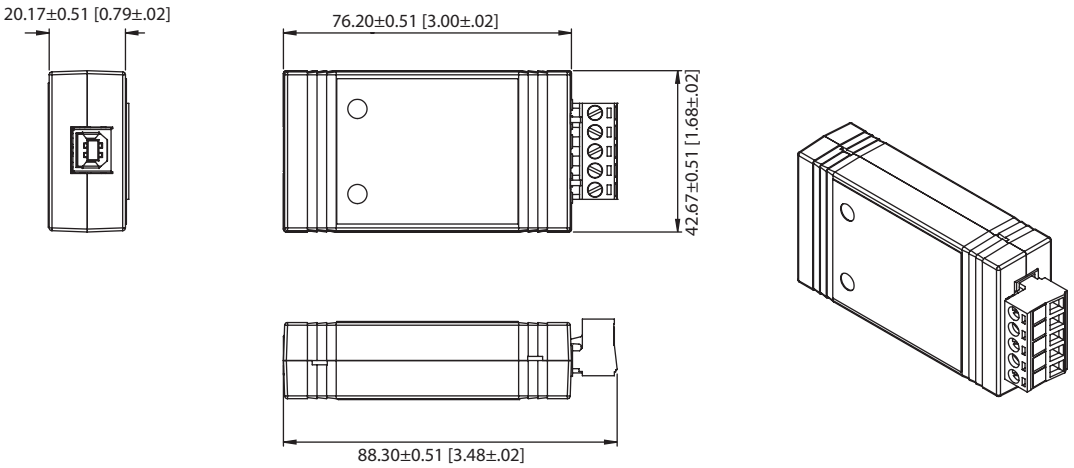
Regulatory - BB-USO9ML4

- **CE - Directives** 2004/108/EC - Electromagnetic Compatibility Directive
  2011/65/EU amended by 2015/863/EU – Reduction of Hazardous Substances Directive (RoHS)
  2012/19/EU - Waste Electrical and Electronic Equipment (WEEE)
- **CE - Standards** EN 55032 Class B - Information technology equipment - RF Emissions
  EN 55024 - Information technology equipment - immunity characteristics
  EN 61000-6-1 - Generic Standards - Residential, Commercial, Light-Industrial Environments

All product specifications are subject to change without notice.
Last updated: 2-Mar-2021

Dimensions

Unit: mm [inch]



Ordering Information

Model No.	Isolation	RS-422/RS-485 Connector	Locked Serial Number?
BB-USOPTL4	2 kV	Pluggable Terminal Block	–
BB-USOPTL4-LS	2 kV	Pluggable Terminal Block	Yes
BB-USPTL4	–	Pluggable Terminal Block	–
BB-USPTL4-LS	–	Pluggable Terminal Block	Yes
BB-USO9ML4	2 kV	DB9 Male Connector	–

Accessories – Sold Separately

- **BB-TB5P508SR-2PK** 5-position terminal block with strain relief paddle board, 2 pack
- **BB-USBAMBM-3F** 1 m Type A Male to Type B Male, gray (one included)
- **BB-TBKT2** Replacement Terminal Block - 5-position, 5.08mm, 8A, 30
- **BB-9PAMF6** DB9m/DB9f serial cable, 1.8m