

# Industrial RS-232 to RS-422/485 Converters

Models BB-SCP211-DFTB3, BB-SCP311T-DFTB3

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Model# BB-SCP311T-DFTB3  
(two panel mount brackets)

## PRODUCT FEATURES

- Convert RS-232 data signals to RS-422/485
- 2kV optical isolation (Model# BB-SCP311T-DFTB3)
- ESD protection - 8 kV contact, 15 kV air
- Data rate: up to 460.8 kbps (bit-wise enable)
- -40 to +80 °C wide operating temperature (Model# BB-SCP311T-DFTB3)
- Rugged metal panel mount case (DIN rail adapters sold separately)
- 10-30 VDC external power source (not included, sold separately)
- UL Listed

The BB-SCPx series of RS-232 to RS-422/485 converters are compact and tough, designed and tested to meet heavy industrial EMC standards. The RS-232 signal is connected via a female DB9 connector. The RS-422/485 (2-wire and 4-wire) signal is connected via a removable terminal block, making wiring easy. Bit-wise enabled circuitry automatically detects the character time-out eliminating the need to set DIP switches for the baud rate.

Power is connected through a two-position, removable terminal block. A 10-30V DC external power source is required (not included, sold separately).

Basic model BB-SCP211-DFTB3 is non-isolated and made for less demanding temperature extremes. This model can be used when isolation is not required, such as applications in which the data line does not exit the control cabinet.

Model BB-SCP311T-DFTB3 offers 2 kV isolation and stands up to -40 to +80 °C temperatures. This is the more rugged model of the series and an excellent investment for protecting your expensive control equipment.

## ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BB-SCP211-DFTB3	RS-232 to RS-422/485 Converter
BB-SCP311T-DFTB3	RS-232 to RS-422/485 Converter, Wide Temperature, Isolated

## ACCESSORIES - sold separately

- BB-MDR-40-24 - Power Supply, 24VDC, 40W, 1.7A output power, DIN rail mount
- BB-SMI6-12-V-ST - Power Supply, 12VDC, 6W, 500mA, international AC input & blades, stripped/tinned
- BB-DRAD35 - DIN rail mounting clips, 35 mm
- BB-TBKT1 - Replacement terminal block - 2-position, 5.08mm, 8A, 300V
- BB-TBKT2 - Replacement terminal block - 5-position, 5.08mm, 8A, 300V
- BB-9PAMF6 - RS-232 serial cable, DB9 male to DB9 female, 1.8 m

All product specifications are subject to change without notice.  
BB-SCP211-DFTB3\_BB-SCP311T-DFTB3\_3020ds

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Model# BB-SCP211-DFTB3  
(optional DIN rail mounting clips,  
sold separately)

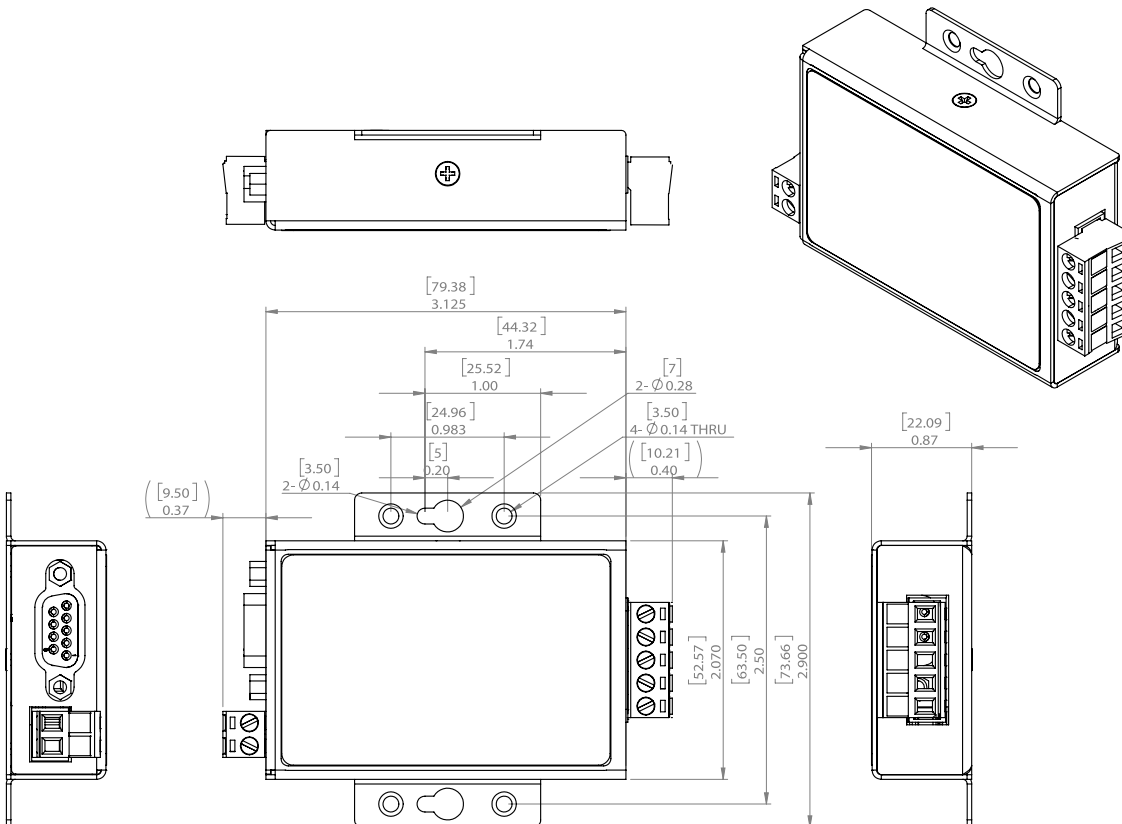


## SPECIFICATIONS

SERIAL TECHNOLOGY	
RS-232	TD, RD, GND
RS-422/485 4W	TDA(-), RDA(-), TDB(+), RDB(+), GND
RS-485 2W	Data A(-), Data B(+), GND
Data Rate	Up to 460.8 Kbps
Isolation	2 kV (Model BB-SCP311T-DFTB3 only)
Surge Protection	+/- 0.5 kV DC Ports, +/- 1 kV Signal Ports
Industrial Bus	Modbus ASCII / RTU
Bias	1 K $\Omega$ Switchable
Termination	120 $\Omega$ Switchable
Connectors	RS-232 – DB9F (DCE) RS-422/RS-485 – Removable Terminal Block
POWER	
Source	External, required (not included, sold separately)
Power Connector	Terminal Block
Input Voltage	10 to 30 VDC
Power Consumption	1.0 Watt, maximum
INDICATORS	
TD / RD	Green LED (also used to indicate power)
MECHANICAL	
Dimensions	99.1 x 22.9 x 73.7 mm
Enclosure	IP30, metal, with two panel mount brackets
Weight	0.15 kg

MEANTIME BETWEEN FAILURES (MTBF)	
BB-SCP211-DFTB3	313926 hours
BB-SCP311T-DFTB3	217576 hours
MTBF Calculation Method	MIL 217F Parts Count Reliability
ENVIRONMENTAL	
Operating Temperature	
BB-SCP211-DFTB3	0 to +70 °C
BB-SCP311T-DFTB3	-40 to +80 °C
Storage Temperature	-40 to +85 °C
Operating Humidity	0 to 95%, non-condensing
APPROVALS, DIRECTIVES, STANDARDS	
Emissions	FCC Class B, CISPR Class B (EN55022)
Regulatory	UL Listed, UL File Number: E222870
CE - Directives	2014/30/EU – Electromagnetic Compatibility Directive 2011/65/EU amended by (EU) 2015/863 Reduction of Hazardous Substances (RoHS) 2012/19/EU – Waste Electrical and Electronic Equipment (WEEE)
CE - Standards	<b>EMC:</b> EN 55032 Class B – Electromagnetic Compatibility of Multimedia Equipment - Emission Requirements EN 55024 - Information Technology Equipment – Immunity Characteristics – Limits and Methods of Measurement
<b>BB-SCP311T-DFTB3 only</b> Standards - other	EN61000-6-2 – Generic Immunity Standard for (Heavy) Industrial Environments

## MECHANICAL DRAWING



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