Industrial RS-232 to RS-422/485 Converters

Models BB-SCP211-DFTB3, BB-SCP211T-DFTB3, BB-SCP311T-DFTB3

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Model# SCP311T-DFTB3
two panel mount brackets

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

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 (select models)
- Rugged metal panel mount case (DIN rail adapters sold separately)
- 10-30 VDC external power source (not included, sold separately)
- UL Listed

The BB-SCP series RS-232 to RS-422/485 serial 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. Power is connected through a two-position, removable terminal block. A 10-30VDC external power source is required (not included, sold separately). Bit-wise enabled circuitry automatically detects the character time-out eliminating the need to set DIP switches for the baud rate.

Basic model BB-SCP211-DFTB3 is non-isolated and made for less demanding temperature extremes. If you need a wider operating temperature but do not require isolation, model BB-SCP211T-DFTB3 is available. These models should 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 will stand up to -40 to +80 °C temperature variations. This is the most rugged model in this series. The BB-SCP311 series products are 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-SCP211T-DFTB3	RS-232 to RS-422/485 Converter, Wide Temperature
BB-SCP311T-DFTB3	RS-232 to RS-422/485 Converter, Wide Temperature, Isolated

ACCESSORIES - sold separately

BB-MDR-40-24 - Power Supply, 24VDC, 1.7 A output power, DIN rail mount
BB-DRAD35 - DIN rail mounting clips, 35 mm
BB-TBKT1 - Replacement Terminal Block - 2-position, 5.08mm, 8A, 30
BB-TBKT2 - Replacement Terminal Block - 5-position, 5.08mm, 8A, 30
BB-9PAMF6 - RS-232 serial cable, DB9 male to DB9 female, 1.8 m (6 ft)

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)
Surge Protection	+/- 0.5 kV DC Ports, +/- 1 kV Signal Ports
Industrial Bus	Modbus ASCII / RTU
Bias	1 KΩ Switchable
Termination	120 Ω 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 x 22.9 x 73.7 mm (3.9 x 0.9 x 2.9 in)
Enclosure	IP30, Metal, with two panel mount brackets
Weight	0.15 kg (0.33 lb)

MEANTIME BETWEEN FAILURES (MTBF)	
BB-SCP211x models	313926 hours
BB-SCP311-DFTB3	217576 hours
MTBF Calculation Method	MIL 217F Parts Count Reliability
ENVIRONMENTAL	
Operating Temperature	
BB-SCP211-DFTB3	0 to +70 °C
BB-SCP211T-DFTB3	-40 to +80 °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
Directives	2014/30/EU – Electromagnetic Compatibility Directive 2011/65/EU – Reduction of Hazardous Substances Directive (RoHS) 2012/19/EU – Waste Electrical and Electronic Equipment (WEEE)
EMC Standards	EN 55032 Class B – Electromagnetic Compatibility of Multimedia Equipment - Emission Requirements EN61000-6-2 – Generic Immunity Standard for (Heavy) Industrial Environments

All product specifications are subject to change without notice.
BB-SCP211x & BB-BB-SCP311T-DFTB3 series_1019ds

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