

# Isolated In-line Serial Converters

4WSD90TB, 4WSD250TB

B+B SMARTWORX

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## PRODUCT FEATURES

- Modbus compatible serial conversion
- Removable terminal blocks for RS-422/485
- 2,000V two-way optical isolation
- Automatic Send Data Control - no software drivers necessary
- Accepts external power from 10-48 VDC

Isolated Models 4WSD90TB and 4WSD250TB convert RS-232 to RS-422 or RS-485 (2 or 4-wire). 2,000V two-way optical isolation protects devices from power surges, spikes and ground loops in harsh electrical environments.

These in-line converters support distances up to 1,200 m (4000 ft.) and data rates up to 115.2 kbps. Switchable modes support 2-wire RS-485, 4-wire RS-485, and full duplex RS-422. Available with female DB9 or DB25 RS-232 inputs.

Removable terminal blocks for RS-422/485 and external power make wiring easy. Accepts external power from 10-48 VDC.

## ORDERING INFORMATION

MODEL NUMBER	RS-232 CONNECTOR	RS-485 CONNECTOR
4WSD90TB	DB9 Female	Removable Terminal Blocks
4WSD250TB	DB25 Female	Removable Terminal Blocks

## ACCESSORIES

485PS2 - 12VDC@100mA wall transformer power supply, tinned stripped leads

7175 - 2 position 3.5MM Replacement Terminal Block (power, included)

7372 - 5 position 3.5MM Replacement Terminal Block (data, included)

TBKT4 - 5 position 3.5MM Replacement Terminal Block

9PAMF6 - 6 ft. (1.8 m) RS-232 Serial Cable

E1250BL-BB3 - 12VDC @ 500MA European wall transformer power supply, tinned stripped leads

MMNM9 - DB9 male to DB9 male Null Modem Adapter

## SPECIFICATIONS

### SERIAL TECHNOLOGY

Data Rate 115.2 kbps maximum

LED Indicators TD and RD

### RS-232

Connectors 4WSD90TB: DB9 female  
4WSD250TB: DB25 female

Signals TD, RD, GND

### RS-422/485

Connector 4WSD90TB: Terminal block, removable  
4WSD250TB: Terminal block, removable

RS-485, 2-wire Data A(-), Data B(+), GND

RS-422/485, 4-wire TDA(-), TDB(+), RDA(-), RDB(+), GND

### POWER

Input Required 10-48 VDC

Current Draw 28 mA at 12 VDC (typical)

### MECHANICAL

Dimensions, 4WSD90TB 9.8 x 4.3 x 2.3 cm (3.9 x 1.7 x 0.9 in)

Dimensions, 4WSD250TB 9.8 x 5.5 x 2.3 cm (3.9 x 2.2 x 0.9 in)

MTBF 179604

MTBF Calculation Method MIL 217F Parts Count Reliability Prediction

### ENVIRONMENTAL

Operating Temperature 0 to +70 °C (+32 to +158 °F)

Storage Temperature -40 to +85 °C (-40 to +185 °F)

### APPROVALS / CERTIFICATIONS - 4WSD90TB, 4WSD250TB

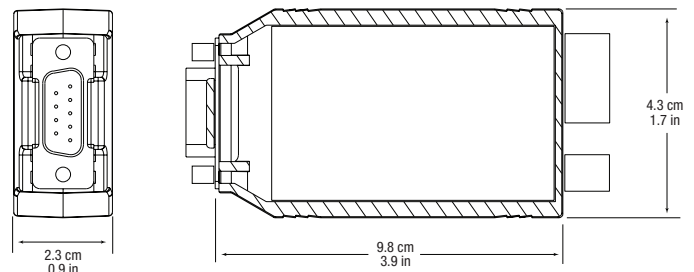
FCC Part 15, CISPR, EN 55022: 2010 + AC:2011 Class B Emissions

CE

EN 61000-6-1: 2007 Generic Standards for Residential, Commercial and Light-Industrial Environments

EN 61000-4-2: 2009 Electro-Static Discharge (ESD)

## MECHANICAL DIAGRAM



All product specifications are subject to change without notice.  
4WSDx0TB\_1916ds

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