

# Industrial Isolated Converter

Model BB-485LDRC9

# ADVANTECH

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## PRODUCT FEATURES

- Converts RS-232 to RS-422/485
- 2 kV optical isolation on input/output; 500W surge suppression
- 115.2 kbps data rate; extends data up to 1.2 km (4000 ft)
- -40 to +80 °C wide operating temperature
- 35 mm DIN rail mount (panel mount adapter available)
- cULus Recognized, NEMA TS2, CE, UL508
- Modbus compatible
- External power supply required (not included, sold separately)

Model BB-485LDRC9 is an optically isolated RS-232 to RS-422/485 converter. RS-232 signals interface through a DB9 female connector or a terminal block. RS-422/485 signals and power inputs connect to the terminal block. Terminal blocks are arranged to allow easy wiring inside a control panel.

Built-in Automatic Send Data Control circuitry allows quick set-up and eliminates the need for external software drivers to control handshake signals. The converter operates on externally sourced 10-30 VDC power (required, not included, sold separately).

Optically isolated data lines (2,000 V on input/output) with 500W surge suppression ensure that connected equipment is protected even in the harshest environments. DIN rail mount design snaps on standard 35mm rail and the small form factor fits neatly into tight cabinets.

Modbus compatible, Model BB-485LDRC9 is ideal for critical industrial communications, factory automation, in-cabinet conversion, warehouse automation, security, and many other applications.

## ORDERING INFORMATION

| MODEL NUMBER | RS-232 CONNECTOR             | RS-422/485 CONNECTOR |
|--------------|------------------------------|----------------------|
| BB-485LDRC9  | DB9 Female or Terminal Block | Terminal Blocks      |

## ACCESSORIES – sold separately

BB-MDR-20-24 – Power supply, 24W, 24V, slim-line, DIN rail mount, plastic  
BB-9PAMF6 - 1.8 m (6 ft) RS-232 DB9 male to DB9 female serial cable

## SPECIFICATIONS

| SERIAL TECHNOLOGY   |   |
|---------------------|---|
| Data Rate           | 115.2 kbps  |
| RS-232 - 2 options  |   |
| Option 1: Connector | DB9 female (DCE)  |
| Option 1: Signals   | TD, RD, GND   |
| Option 2: Connector | Terminal block  |
| Option 2: Signals   | TD, RD, GND   |
| RS-422              |   |
| Connector           | Terminal block  |
| Signals             | TDA(-), TDB(+), RDA(-), RDB(+), GND   |
| Termination         | 120 (switchable)  |
| RS-485              |   |
| Connector           | Terminal block  |
| Signals             | TDA(-), TDB(+), RDA(-), RDB(+), GND   |
| Modes               | 2-wire and 4-wire   |
| Termination         | 120 Ohm (switchable)  |
| ISOLATION           |   |
| Lines Protected     | Data lines  |
| Method              | Optical   |
| Rating              | 2,000 V   |
| SURGE SUPPRESSION   |   |
| Lines Protected     | Data lines  |
| Method              | TVS   |
| Rating              | 7.5V bi-directional avalanche breakdown device<br>500W peak power dissipation |
| Response Time       | < 1 pico-second   |
| INDUSTRIAL BUS      |   |
| Modbus              | ASCII/RTU   |

All product specifications are subject to change without notice.  
BB-485LDRC9\_1319ds

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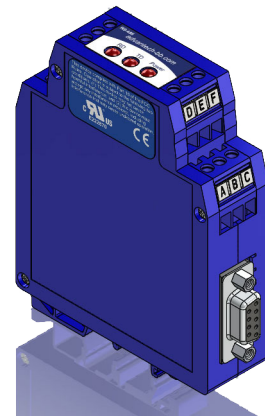
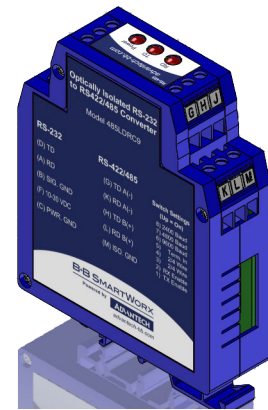
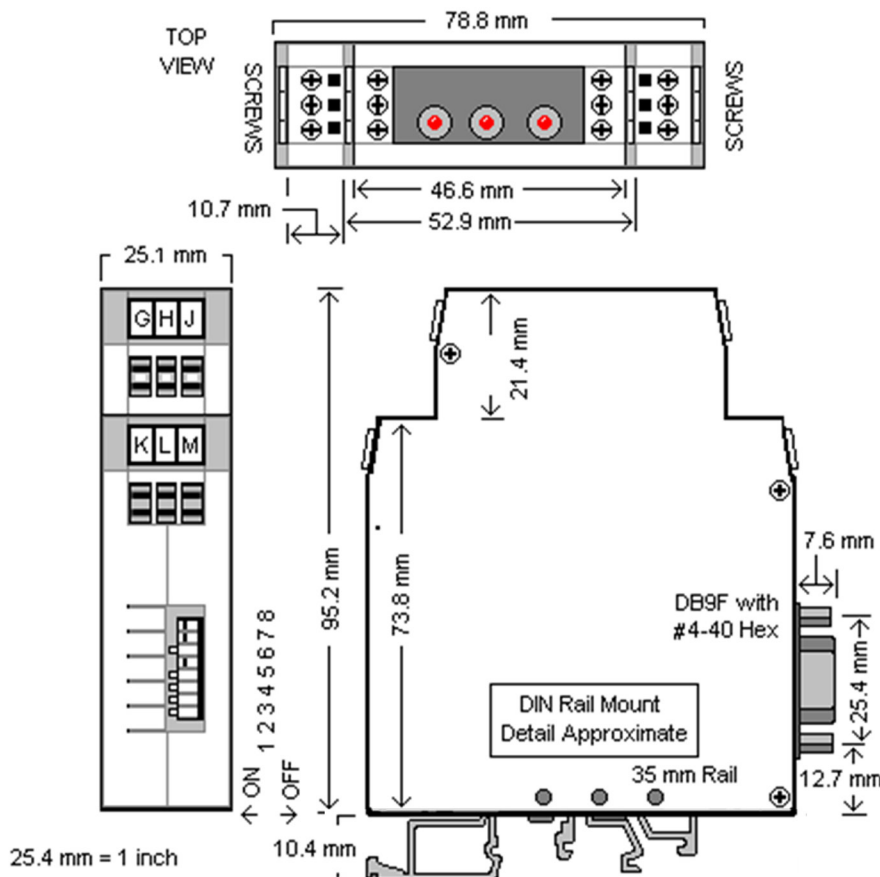
Model BB-485LDRC9



| SPECIFICATIONS - CONTINUED |  |
|----------------------------|--|
| <b>POWER</b>               |  |
| Connector                  | Terminal block   |
| Voltage                    | 10-30 VDC  |
| Consumption                | 0.5 W  |
| Source                     | External power source required (not included, sold separately) |
| <b>TERMINAL BLOCKS</b>     |  |
| Wire Size                  | 24 to 14 AWG   |
| Torque                     | 4 kfg-cm   |
| <b>LED INDICATORS</b>      |  |
| Power (RED)                | On when power applied  |
| TD (RED)                   | Flashes when RS-422/485 data is transmitted                    |
| RD (RED)                   | Flashes when RS-422/485 data is received                       |
| <b>ENCLOSURE</b>           |  |
| Material                   | Plastic  |
| IP Rating                  | 20   |
| Dimensions                 | 2.5 x 7.9 x 9.5 cm (1.0 x 3.1 x 3.7 in)                        |
| Mounting                   | 35 mm DIN rail (panel mount adapter available)                 |

|  |   |
|--|---|
| <b>ENVIRONMENTAL</b>                           |   |
| Operating Temperature                          | -40 to +80 °C (-40 to +176 °F)  |
| Storage Temperature                            | -40 to +85 °C (-40 to +185 °F)  |
| Operating Humidity                             | 0 to 95% non-condensing   |
| <b>MEANTIME BETWEEN FAILURES (MTBF)</b>        |   |
| MTBF   | 257448 hours  |
| Calculation Method                             | MIL 217F Parts Count Reliability Prediction   |
| <b>REGULATORY / APPROVALS / CERTIFICATIONS</b> |   |
| cULus Recognized, UL508, NEMA TS2              |   |
| Directives - CE                                | 2014/30/EU - Electromagnetic Compatibility Directive (EMC)<br>2011/65/EU - Reduction of Hazardous Substances Directive (RoHS)<br>2012/19/EU - Waste Electrical and Electronic Equipment (WEEE)              |
| Standards - CE                                 | EN 55032 Class B - Electromagnetic Compatibility of Multimedia Equipment - Emission Requirements<br>EN55024 - Information Technology Equipment - Immunity Characteristics Limits and Methods of Measurement |

## MECHANICAL DIAGRAM



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