BB-485DRCI-PH





Features

- Converts RS-232 data signals to RS-422/RS-485
- 2 KV 3-way isolation (input/output/power)
- Data rate: 1.2 to 115.2 Kbps
- Wide operating temperature: -40 to +85 °C
- · Rugged IP30 metal panel mount case
- 10-48 Vdc power (external power supply required, sold separately)
- UL Class 1/Division 2

Introduction

Model BB-485DRCI-PH is a premium, heavy industrial RS-232 to RS-422/485 isolated converter. Designed for rugged industrial environments, it has been put through some of the most exacting compliance tests in the industry. Meeting the requirements of IEC 61850-3 and IEEE 1613, it is suitable for installation in electrical substations. These specifications are more stringent than the NEMA TS1/TS2 requirements for transportation applications.

Powerful isolation on both data ports protects equipment and data from damaging ground loops and surges. Additional isolation on the power supply circuits adds a third degree of protection. An external power supply is required (not included, sold separately).

Packaged in a rugged IP30 metal case, it converts unbalanced, full or half-duplex RS-232 signals to balanced RS-422/485 signals. Featuring Automatic Send Data Control circuitry, it does not require special software control of handshake signals in RS-485 mode. Bit-wise enabled circuitry automatically detects the data rate without setting a DIP switch.

Ordering Information

| | Model No. | Description |
|--|---------------|--|
| | BB-485DRCI-PH | Heavy Industrial RS-232 to RS-422/485 Isolated Converter |

Accessories - Sold Separately

BB-MDR-40-24 – Power Supply, 24 Vdc, 1.7 A output power, DIN rail mount BB-TBKT1 – Replacement terminal block, 2-position, 5.08mm, 8A, 300V BB-TBKT2 – Replacement terminal block, 5-position, 5.08mm, 8A, 300V

Specifications

| Specifications | | | | |
|-----------------------------|--|--|--|--|
| Serial Technology | | | | |
| Data Rate | 1.2 to 115.2 Kbps | | | |
| RS-232 Connector | DB9 female (DCE) | | | |
| RS-422/485 Connector | 5-position, removable terminal block | | | |
| RS-232 Signals | TD, RD, GND | | | |
| RS-422 Signals | TDA(-), TDB(+), RDA(-), RDB(+) | | | |
| RS-485 4-Wire Signals | TDA(-), TDB(+), RDA(-), RDB(+) | | | |
| RS-485 2-Wire Signals | Data A(-), Data B(+) | | | |
| Industrial Bus | Modbus ASCII / RTU | | | |
| Biasing | Built-in, switchable 1.2KΩ XMT/RCV | | | |
| Termination | Built-in, switchable 120Ω | | | |
| solation & Surge Protection | | | | |
| Isolation | 2 KV RMS, 1 minute | | | |
| Surge Protection | 600W peak power dissipation. Clamping time <1 picosecond. | | | |
| Power | otamping and vi processia. | | | |
| Source | External power source required (not included, sold separately) | | | |
| Power Connector | 2-position, removable terminal block | | | |
| Input Voltage | 10 to 48 Vdc (56 Vdc, maximum) | | | |
| Power Consumption | 0.5 W, typical (1.9 W with termination) | | | |
| Terminal Blocks | | | | |
| Wire Size Accepted | 28 to 12 AWG, copper wire only | | | |
| Pitch | 5.08 mm | | | |
| Insulation Resistance | ≥500 MΩ @ 500 Vdc | | | |
| Torque | 5 Kg / cm (maximum) | | | |
| | | | | |

| LED Indicators | | | |
|--|---|--|--|
| Power | Red LED | | |
| TD / RD (each port) | Green LED | | |
| Mechanical | | | |
| Dimensions | 132.4 x 92.9 x 33.0 mm (5.2 x 3.7 x 1.3 in) | | |
| Enclosure | IP30 metal, panel mount | | |
| Weight | 208.65 gm (0.46 lb) | | |
| Environmental | | | |
| Operating Temperature | -40 to +85 °C (-40 to +176 °F) | | |
| Storage Temperature | -40 to +85 °C (-40 to +176 °F) | | |
| Operating Humidity | 0 to 95%, non-condensing | | |
| Meantime Between Failures (MTBF) | | | |
| MTBF | 163611 hours | | |
| Calculation Method | Parts Count Reliability Prediction | | |
| Regulatory – Approva | ils / Standards / Directives | | |
| FCC, CE UL C1/D2 (IEC 61850-3, IEEE 1613) | | | |
| CE – Directives | 2004/108/EC – Electromagnetic Compatibility Directive | | |
| | 2011/65/EU amended by (EU) 2015/863 Reduction of Hazardous | | |
| 02 Bii00iii00 | Substances (RoHS) | | |
| | 2012/19/EU – Waste Electrical and Electronic Equipment EN 55011 + AC – Information Technology Equipment – Class A | | |
| CE – Standards | RF Emissions | | |
| | EN 61000-6-2 – Generic Immunity Standard for (Heavy) | | |
| | Industrial Environments | | |

