

Model: rdc485Arb

Isolated 3-way RS-485 Arbitrator

The rdc485Arb allows arbitration between two masters and one slave. It has three RS-485 ports complete with full 4-port 1 KV optical/galvanic isolation. Each port is fully isolated (with floating ground) from each other, including the power supply. Full galvanic isolation protects the rdc485Arb from common mode surges.

The rdc485Arb will prevent the corruption of line data when two masters attempt to poll a common slave at the same time. This means that the query packet of one master is buffered, and will be allowed to pass through after the other master has received its response. Although primarily designed for Modbus, the rdc485Arb will work with any client-server based protocol that follows the 8,N,1 serial data format.

Isolation, industrial design, compact size, DIN rail mount, user indication, and a wide input DC supply range make the rdc485Arb a very engineer-friendly device for your industrial data communication system.

Specification

Interface

Serial: RS-485 (2-wire mode)
Connectors: RS-485 3-way Screw Terminal
: Power Supply 3-way Screw Terminal

Power Supply

9 to 36 VDC: 2.4 W Nominal (100 mA @ 24 Vdc)
User Indications: Green LED for main power supply

Isolation

1 KV between all ports

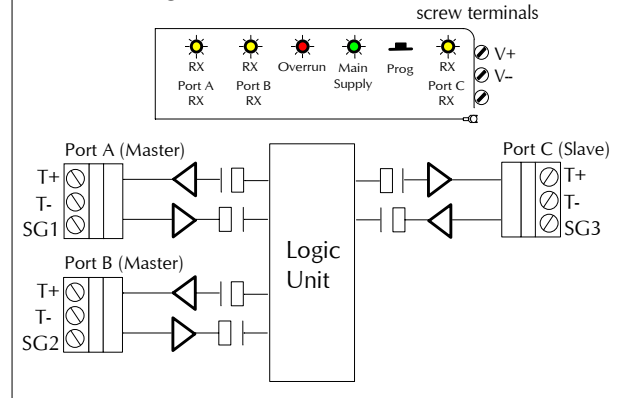
Communication

Programmable Speeds: 9600, 19200, 38400, 57600, 115200 bps
User Indications: Yellow LED for all communication ports RX
: Red LED for Overrun Indication,
Practical Distance: 2 km

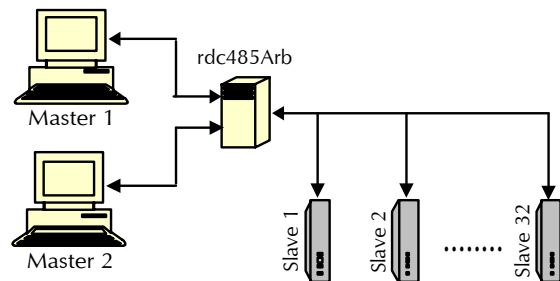
Mechanical / Environment

Operating Range: -40C to +65C
Storage Range: -40C to +100C
Relative Humidity: 10 to 90% RH, non-condensing
Case Material: nylon polyimide, fungus and termite resistant self-extinguishing
Weight: approx 130g
Mounting Rail: DIN EN 50 022 or DIN EN 50 035

Block Diagram



Typical Application



Arbitration occurs when :

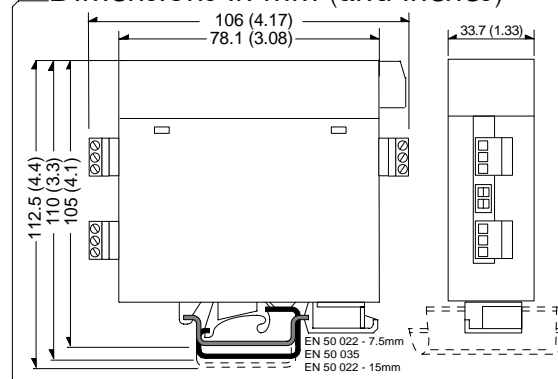
1. When two masters query a slave at the same time, or
2. When one master sends out a query, and the other master sends out a query before the first master receives its response

Order Information

rdc485Arb-dv-4p- **Serial Port Connectors**
 C 3-way Removal Screw Connectors for all ports

Boxes in bold denote factory default options

Dimensions in mm (and inches)



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