

Model: rdc232ir5

RS-232 to RS-232 isolated repeater

The rdc232ir5 safely connects two RS-232 devices without danger of ground loops and damaging surges. The RS-232 signals have 2.5kV optical isolation, plus two isolated supplies for 3-port galvanic isolation. Unlike self-powered isolators which weaken the RS-232 signal and stress your hardware, the rdc232ir5 boosts the signal, effectively doubling the maximum RS-232 distance and allows guaranteed performance up to 115kbps.

The data lines Txd & Rxd and the flow control lines RTS & CTS are fully isolated, plus over 1 million ohms of impedance are added to the ground path. This effectively decouples the signal grounds and prevents surge currents. The RS-232 uses standard 9-pin d-shell connectors with AT-style serial COM port pin configuration or 5-way screw terminals

Isolation, industrial design, small size, DIN rail mount, user indication, and DC supply make the rdc232ir5 a very engineer-friendly device for your industrial data communication system.

Specification

RS-232 ports

Signal Type: RS-232C, D, and E
Voltage Level: +/- 9 vDC
Permitted Surge ..: +/- 25 vDC

Isolation

RS-232 to RS-232: 2500 v (optical, 5kV test)
Supply to Port #1.....: 2500 v (galvanic, 3kV test)
Supply to Port #2.....: 2500 v (galvanic, 3kV test)

Power Supply:

9v to 36v DC 1 watt (24v about 50mA)
5v DC +/- 5%, 100mA
LEDs (green) indicate input and isolated floating power status

Communication:

Max Speed: at least 115Kbps over 15m
Character Setting: transparent, no configuration required
User Indications: Each receive signal has LED (yellow)
Standard Distance ..: 15m per segment (per EIA-232) 30m end-to-end
Practical Distance ...: 50m per segment, 100m end-to-end
(requires quality, low-cap cable < 50 pf/m)

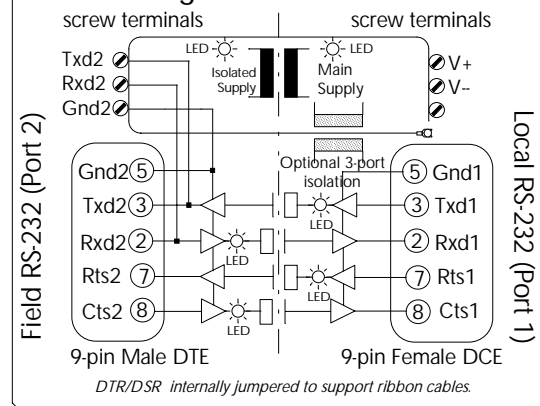
Mechanical / Environment

Operating Range ..: 0C to +60C
Storage Range: -40C to +100C
Relative Humidity : 10 to 90% RH, non-condensing
Terminals: wire up to 2.5mm (12 AWG)
RS-232 ports: 9-pin, male, DTE, gold pins rated 500 cycles
Case Material: nylon polyimide, fungus and termite resistant self-extinguishing
Weight: approx 130g
Mounting Rail: DIN EN 50 022 (best) or DIN EN 50 035

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Specifications subject to change without notice.

Block Diagram



Order Information

rdc232ir5

Galvanic Isolation Configuration

- 2p 2-port, port #1 grd = supply grd
- 3p * 3-port, port #1, #2, Supply fully isolated

Power Supply Configuration

- 5v 5v +/- 2% Regulated DC Supply
- dv * 9v to 36v Unregulated DC Supply
- av 9v to 36v Unregulated AC Supply

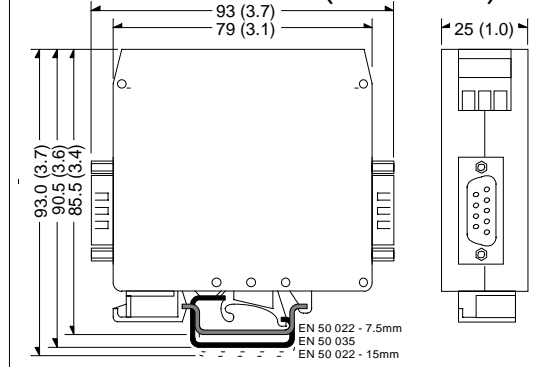
* shows factory default options

Note: Option -2p valid only with -5v. So only combinations -5v-2p, -5v-3p, and -dv-3p are valid.

Note: All isolated ports include 500 watt voltage transient suppressor diodes.

Note: Only full 3-port isolated models are warrantied 3 years.

Dimensions in mm (and inches)



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