

Model: rdc232ir3-TTL

RS-232 to TTL isolated converter

The rdc232ir3-TTL safely converts an RS-232 signal to a TTL/CMOS signal without the danger of ground loops and damaging surges. The data lines TXD & RXD 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. In addition, both signal ports have 2.5kV of optical isolation between them. With the 3-port isolation option, even the power supply can be isolated from both ports.

The rdc232ir3-TTL guarantees performance up to 115kbps. The RS-232 port uses a standard 9-pin d-shell connector with AT-style serial COM port pin configuration.

Isolation, industrial design, small size, DIN rail mount, user indication, and DC supply make the rdc232ir3-TTL a very engineer-friendly device for your industrial data communication system.

Specification

RS-232 port

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

TTL port

Signal Type : Standard 5 V TTL/CMOS compatible

Isolation

RS-232 to TTL : 2500 v (optical, 5kV test)
Supply to Port A..... : 2500 v (galvanic, 3kV test)
Supply to Port B..... : 2500 v (galvanic, 3kV test)

Power Supply:

9v to 36v DC..... : 1 watt (50mA @ 24 Vdc)
5v DC +/- 5%..... : 100mA
User Indication... : Green LEDs to indicate power status

Communication:

Max Speed : Up to 115Kbps over 15m
Character Setting ...: Transparent, no configuration required
User Indications: Yellow LEDs for signal reception
Standard Distance .. : 15 m per segment (end to end)
Practical Distance ...: 50m per segment, 100m end-to-end
(requires quality, low-cap cable < 50 pf/m)

Standard and Practical distance applies to RS-232 side only.
For TTL side, distance is dependent on transmission speed and load.

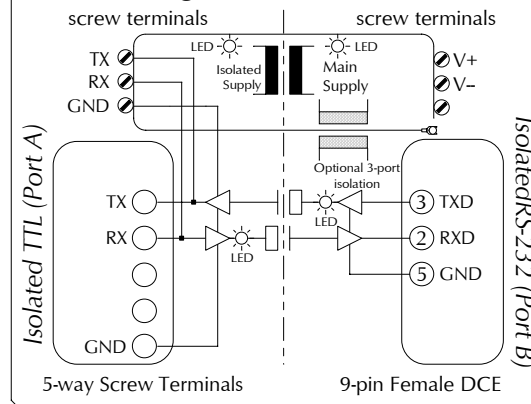
Mechanical / Environment

Operating Range .. : -20C to +65C
Storage Range : -40C to +100C
Relative Humidity .. : 10 to 90% RH, non-condensing
Terminals : wire up to 2.5mm (12 AWG)
RS-232 / TTL ports : 9-pin, male, 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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(Version 1.0) Specifications subject to change without notice.

Block Diagram



Order Information

rdc232ir3-TTL---

Connectors
dd Port A = DB9 Male
 Port B = DB9 Female
cd Port A = 5-Way Removal Screw Terminal
 Port B = DB9 Female

Galvanic Isolation Configuration
2p 2-port, port B grd = supply grd
3p 3-port, port A, B and Supply fully isolated

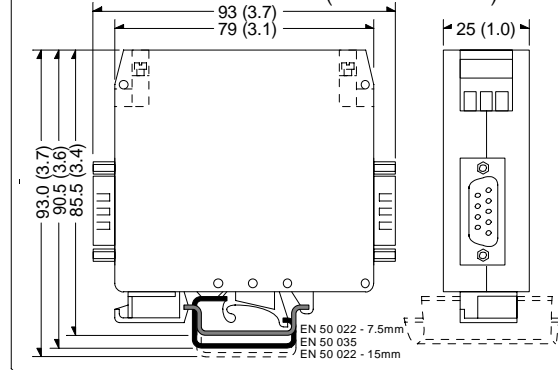
Power Supply Configuration
5v 5v +/- 2% Regulated DC Supply
dv 9v to 36v Unregulated DC Supply
hv 48v +/- 10% Unregulated AC Supply

Boxes in BOLD denote factory default options

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

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

Dimensions in mm (and inches)



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