

# CS-428/9AT-ISO



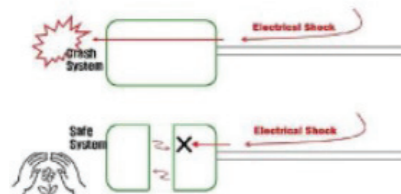
## » Features

- RS232 to RS422/485 Converter
- Working distance of up to 1.2Km
- Enables the use of external DC power supply (7~12V)
- Auto Toggling available on RS485 mode
- Fully compatible with PC serial COM ports
- Communication status can be monitored through LEDs
- RS422/485 mode, Echo mode selectable through jumper
- Max. 10 Device Connectivity for RS422 mode
- Max. 32 Device Connectivity for RS485 mode
- Surge Protector integrated.
- 2.5KV Isolation protector

## Overview

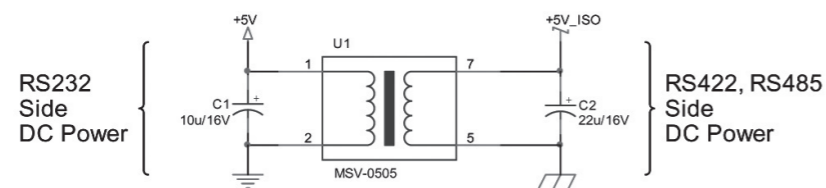
CS-428/9AT-ISO converts RS232 signals to RS422 or RS485. It is an efficient solution applying advantages of RS422/485 to RS232 devices. It operates with no extra software installation. With simple DIP switch toggling, RS422 or RS485 can be selected. CS-428/9AT-ISO also has high performance 2.5KV Opto-Isolation which enables stable environment.

### Protect your system from electrical shock!

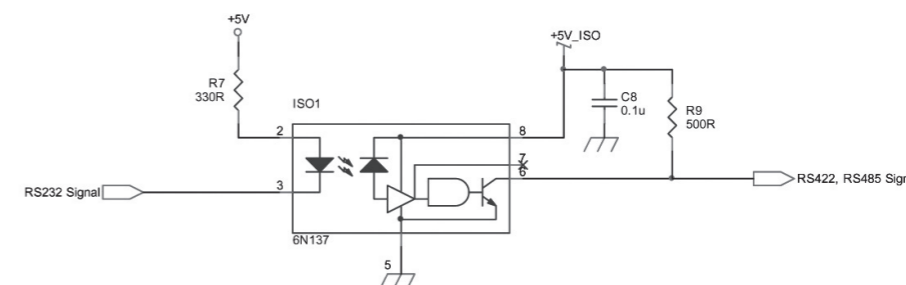


### Opto Isolation

CS-428/9AT-ISO's Opto-Isolation protects up to DC 2.5KV between RS232 and RS422, RS485 sides. Opto-isolation perfectly isolates two ends of communication so that the device can be protected from unfavorable conditions such as ground potential differences, lightning and line interference. Thus a more stable and reliable communication is guaranteed.



Power Isolation between RS232 side and RS422, RS485 side is implemented by DC-DC Converter.



Signal Isolation between RS232 side and RS422/485 side is implemented by Opto-Coupler

### Auto RTS Control (Auto Toggling)

Under 1:N communication environment, it is undesirable that multiple devices send data at once, causing electrical collision that leads to an error. In order to prevent this, only one device needs to send data at a time which means that data I/O control is necessary at certain points. CS-428/9AT-ISO performs automatic toggling by hardware, saving extra programming work.

### What is Isolation?

When electrical shock caused by power or ground is passed on to the system, the whole system can be damaged. However, the internal system can be protected using Isolation technique. Furthermore, isolation can settle problems caused by signal distortion and signal line impedance matching.

# Converter

## Specification

### Serial

Mode	Asynchronous serial communication
Speed	Up to 230.4 Kbps
Distance	Max. 1.2Km @230.4Kbps, 24AWG twisted pair cable
Connector	RS232 : DB9 Female (Male : optional) RS422/485 : Terminal Block 5P
Signals	TXD, RXD, RTS, CTS, GND for RS232
Protection	15KV Surge Protection for all signals
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
RS422 mode	Point-to-Point, Multi-Drop
RS485 mode	Echo, Non-Echo
RTS Control	CS-428/9AT -ISO: Auto Toggling
Switch	CS-428/9AT -ISO : RS422/485 mode switch

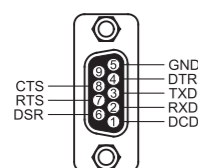
## Ordering Information

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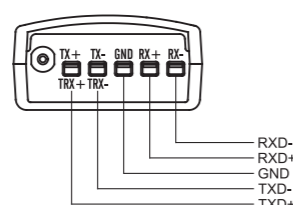
CS-428/9AT-ISO	RS232 to RS422/485 Converter with Auto RTS Control (Auto Toggling) DB9 Female Connector for RS232 and Terminal Block for RS422/485
AC ADAPTER	AC Adapter / Input : AC 110/220V 60Hz, Output : DC 12V 1000mA
Package Contents	CS-428/9AT-ISO Converter, Manual, Adapter

## Pin Assignment

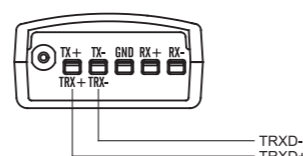
RS232 DB9 Female



RS422 Terminal Block

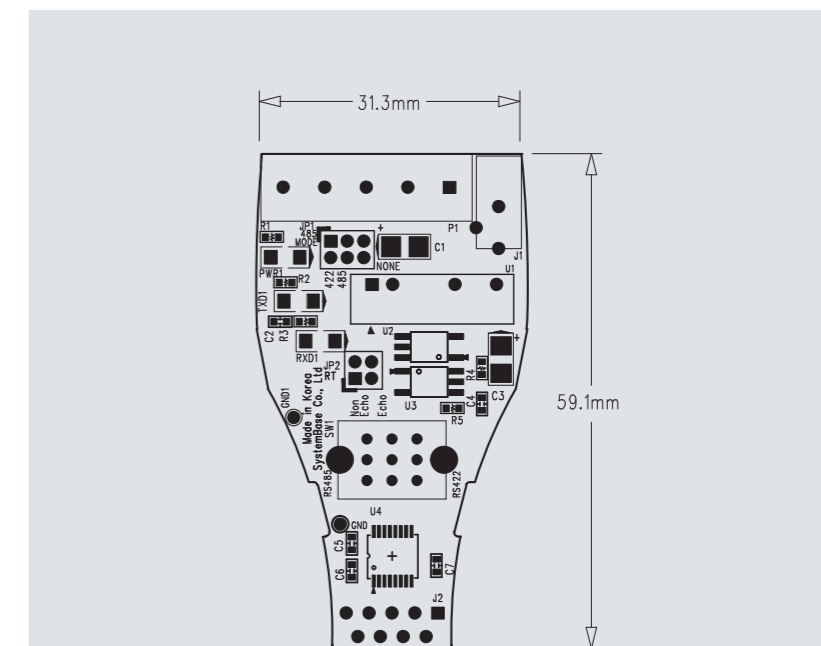


RS485 Terminal Block

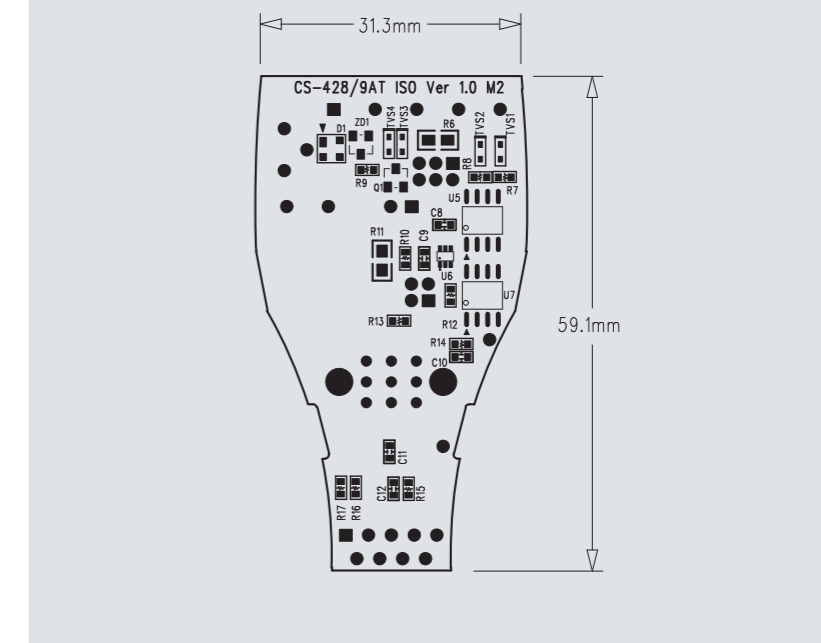


## Dimension

### Top



### Bottom



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