

# OPERATION MANUAL for PASSIVE CONVERTER

Model: 232-422

## 1. INTRODUCTION

In order to communicate between various standard ports of computers, external equipments and intelligent instruments etc. we have to convert signals first. This converter is specially designed to convert such signals and is compatible with RS-232C and RS-422 standards.

This converter is able to convert RS-232C signal to RS-422 balanced differential signal, as a result, the communication distance can be extended to 1.2 KM.

It is passive (does not need any external power supply), and adopts a particular pump to get power-supply from RS-232C signal source without initializing RS-232C interface.

The converter supports 4-wire RS-485 and RS-422 communications, which only allows two peer participants (or one master and multiple slaves), but is full-duplex (both peers or the master and one slave may talk at the same time). The transmission rate 75 ~ 230,000 bps is capable of applying between host computers, host computer and its external equipments, from point to point, point to multi-points network.

This converter is widely used in industrial automation, door safety, all-in-one card, parking, ATM, bus charge, eatery sell-out, staff attendance management, high-way toll gate, PLC, PLD etc.

This converter is also characterized at anti static- electric and anti electric-surge.

## 2. FEATURES

- [1] interface: compatible with EIA/TIA RS-232C and RS-422 standard
- [2] Electronic Interface: DB9 female (hole type) connector is used on RS-232C side, while DB9 male (needle type) connector and 6-pole connection board are adopted

on RS-422 side.

- [3] Working Mode: Asynchronous, full-duplex, differential transmission.
- [4] Transmitting Media: Twisted Pair (TP) or Shielded Twisted Pair (STP)
- [5] Transmitting Rate: 75 ~ 230,000 bps
- [6] Transmitting Distance: 5M on RS-232C side  
1,200M on RS-422 side
- [7] signals
  - RS-232C: TXD, RXD, RTS, CTS, DTR, DSR, DCD, GND
  - RS-422: TX+, TX-, RX+, RX-, GND
- [8] Product Dimension: 95 x 33 x 17 MM
- [9] Working & Storage Conditions:
  - Temp.: 0 ~ 70 °C
  - Relative Humidity: 5% ~ 95%

## 3. CONNECTOR & SIGNAL DEFINITION

### [1] RS-232C connector definition

DB9 female	RS-232C signal
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	-

### [2] RS-422 connector definition

DB9 male	RS-422 Connection Board
1	TX+
2	TX-
3	RX+
4	RX-
5	GND
6	+5V ↔ +12V

Note:

This converter has 2 type power-supply:

- [1] directly supply power to pin 3 from RS-232C port
- [2] power supplied via DB9 male pin 6 (+5V ↔ +12V) and pin 5 (GND) when RS-232C can not supply power normally