

Communication Converter

# CV300

## INSTRUCTION MANUAL

Thank you for purchasing HANYOUNG product.  
Please check whether the product is the exactly same as you ordered. Before using the product, please read this instruction manual carefully.

### MAIN PRODUCTS

- DIGITAL : Temperature Controller, Counter, Timer, Speedmeter, Tachometer, Panel Meter, Recorder
- SENSOR : Proximity Sensor/Photo Electric Sensor, Rotary Encoder, Optical Fiber Sensor, Pressure Sensor
- ANALOG : Timer, Temperature Controller

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**HANYOUNG NUX**



## Safety information

### WARNING

Before you use, read safety precautions carefully, and use this product properly.

1. The contents of this manual may be changed without prior notification.
2. Turn the power OFF all equipments when wiring.
3. Unless it is included company's conditions for warrantee, we are not responsible for any warranties or guarantees.
4. If the customer or any 3<sup>rd</sup> party is harmed during the use of the communication converter, or if the customer or any 3<sup>rd</sup> party is harmed by any product faults that are unpredictable either directly or indirectly, this company does not carry any responsibilities.
5. The warranty period for this product including parts is one year if this product is properly used.
6. To prevent defecion or malfunction of this product, apply a proper power voltage in accordance with the rating.
7. To prevent electric shock or malfunction of product, do not supply the power until the wiring is completed.
8. Reassemble this product while the power is OFF. Otherwise, it may be a cause of malfunction or defect.

### CAUTION

1. Before using the product, make sure that it is exactly what you ordered.
2. Make sure that there is no damage or abnormality of the product during delivery.
3. Do not use this product at any place with direct vibration or impact.
4. To avoid an effect of inductive noise to communication cable, use the product after separating the communication cable from power, output and load cables.
5. After checking the polarity of terminal, connect wires at the correct position.

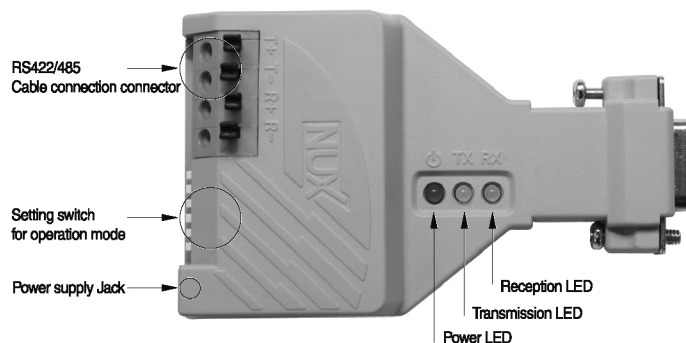
## Product's Features

- Convert RS232 signal into RS422/485 signal
- RS422/485 Line Drive auto control
- Electrical insulation (2.5 KV) between RS232 side and RS422/485 side
- Various function are available by setting switch  
(Two-wire / Four-wire system, Full duplex / Half duplex, Active / Non-active termination resistor, etc.)
- Max. 1.5 Km, 256 node could be connected.
- LED for display the status of Power and Data Communication

## Rating & Function

Power	9V, 300 mA d.c Adapter (1.3ø d.c Jack)
Communication Speed	2400 ~ 115200 bps
Communication Distance	Maximum 1.5 Km, 256 nodes
Safety	1 <sup>st</sup> & 2 <sup>nd</sup> circuit insulation, Built-in surge protection, ±15 KV ESD Protection
Function Setting	Two-wire / Four-wire communication system Automatically generated Line drive signal HIGH Speed / LOW Speed Built-in termination resistor(100 Ω) ON / OFF Full Duplex / Half Duplex
Connection Method	RS232 → DB-9 Female (Connect to COM port of PC) RS422/485 → 4 pin terminal block (Insert RS422/485 communication cable)
Setting Switch	6 pin piano type Dip-switch
Case materials	Plastic
Weight	Converter : 60g, Adaptor : 300g
Size	52 X 90 X 20 mm

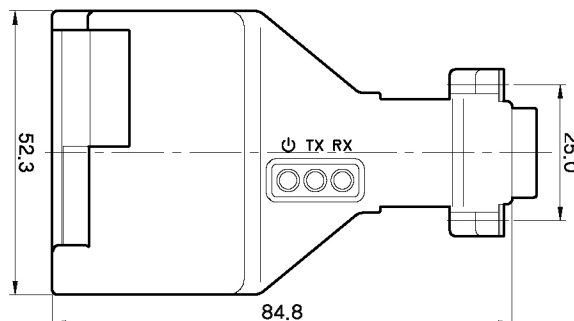
## Name and Function



## Function Setting (Dip S/W)

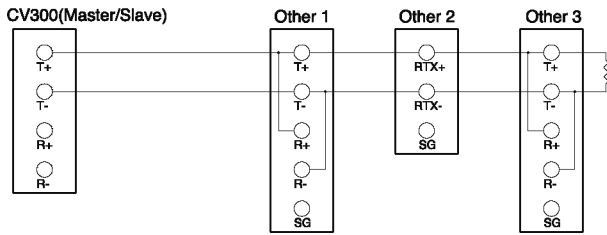
- S/W. 1 : ON → Internal connection enabled between T + & R + (for RS485 system)
- S/W. 2 : ON → Internal connection enabled between T- & R - (for RS485 system)
- S/W. 3 : ON → Built-in termination resistor enable
- S/W. 4 : No function
- S/W. 5 : ON → Half Duplex communication  
OFF → Full Duplex communication
- S/W. 6 : Time selection of Automatically generated Line drive signal  
The method of driving the communication line for a set period of time based on the start bit during data transmission. During 2-wire transmission, in order to prevent the data collision, the device at the opposite must set the response delay time.  
ON → High speed communication (19200 ~ 115200 bps)  
RS422/485, Communication line drive time is 0.6 msec (every start bit)  
OFF → Low speed communication (2400 ~ 9600 bps)  
Communication line drive time 5 msec (every start bit)

## External Dimension



## ■ Wiring diagram

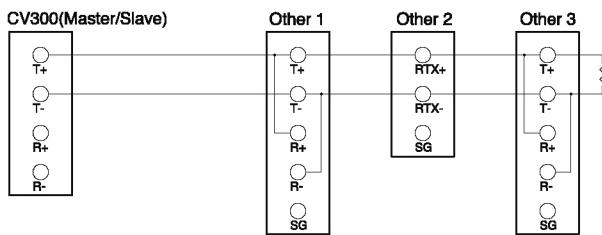
### ■ 2 Wire System(Half duplex)



Dip S/W

1	2	3	4	5	6
ON	ON	ON/OFF		ON	ON/OFF

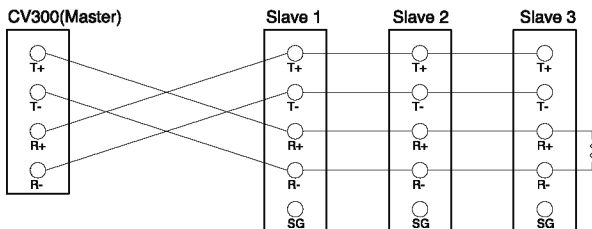
### ■ 2 Wire System(Full duplex → echo mode)



Dip S/W

1	2	3	4	5	6
ON	ON	ON/OFF		OFF	ON/OFF

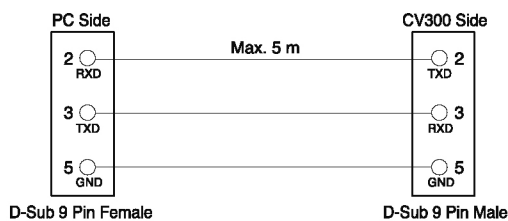
### ■ 4 Wire System(Full duplex)



Dip S/W

1	2	3	4	5	6
OFF	OFF	ON/OFF		OFF	ON/OFF

### ■ RS232 Extension cable wiring



## ■ Self Test

- Dip SW. 1 → ON(T + & R + connect for echo test)
- Dip SW. 2 → ON(T - & R - connect for echo test)
- Dip SW. 3 → ON(Built-in termination resistor enable)
- Dip SW. 5 → OFF(Full duplex system selection)
- Dip SW. 6 → OFF(Low speed communication selection)
- Connect to COM port of PC in confirmation of COM1/COM2 (Normally upper side is COM1)
- Connect the power adapter to Jack
- Open Hyper Terminal, a window's basic communication program (COM port, 9600 bps, 8 bit Data, No Parity, 1 Stop bit, No flow control)
- Type any keys on the keyboard and check they're reflected on the screen.
- If nothing appears on the screen, then check the CV300 module's power LED.
- If the power LED is ON, then check whether the data transmission/receive LED flickers when the keyboard is pressed. If not, then the CV300 has certain defects.