

Communication Module

Model : DSP-CM44



Sam
Wha DSP Ltd.



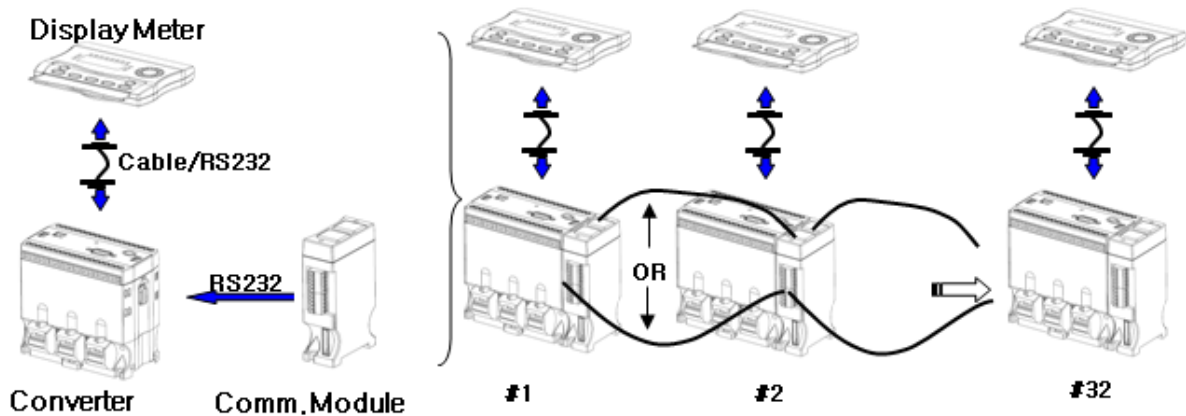
Communication Module

1.Feature

- Internal communication with a converter of VIP
- External communication with a Master(PC, PLC) through 485/422 as a RTU,Modbus
- Able to communicate with PC directly through a protocol converter of 485 < > USB/232
- Convenient engagement for a termination resistance of extreme end unit by DIP SW
- Possible to meet 485 or 422 by the DIP SW selection
- Convenient wiring connection through RJ45 or 10P screw terminal
- Available communication speed : 9.6Kbps~115.2 Kbps

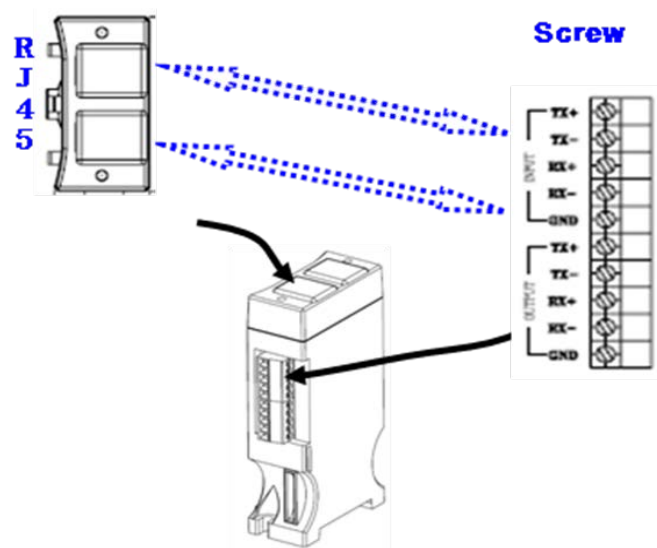
2. Structure

a.Coupling with converter

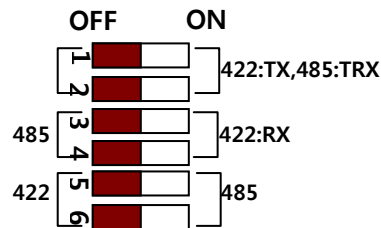


b.Detailed communication module

- **Serial communication wiring through RJ45 or screw terminal**



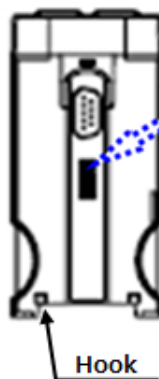
► DIP SW selection for 485/422 & termination resistance



*1-2,3-4:Termination Resistance/Only "ON" for extreme ends,"OFF" for mid-units.

*5-6 : selection for 422 or 485

6P DIP SW



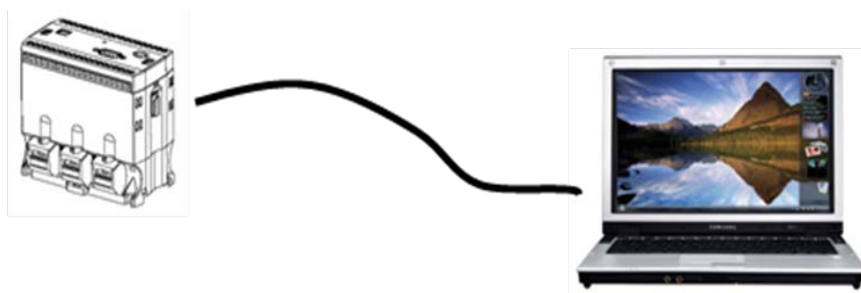
Terminal NO.	Function		Terminal NO.	Function	
	422	485		422	485
1	TX+	TRX+	6	TX+	TRX+
2	TX-	TRX-	7	TX-	TRX-
3	RX+		8	RX+	
4	RX-		9	RX-	
5	Signal GND		10		

Movable Terminal:10P

3.Useful usage

a.in case the interface between Note PC and DSP directly by RS232 to monitor and to preset data , it is desirable that a power source for Note PC will be provided through an insulated transformer and a proper fuse , otherwise a communication could be interfered from Note PC.

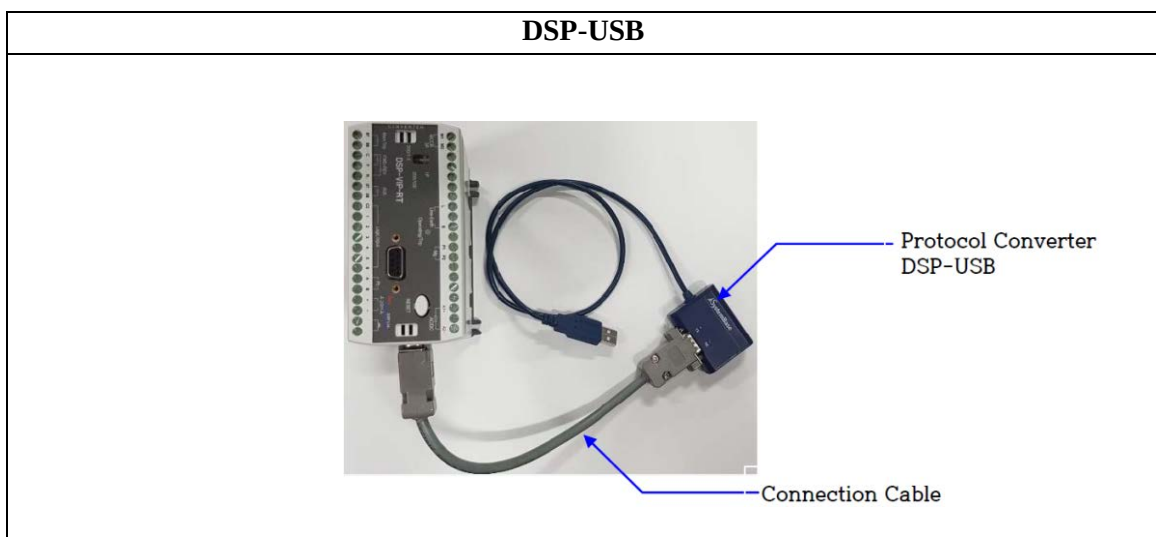
Also if a direct connection between PC USB Port and VIP 232 port(D-sub,9 Pin) is basically wired through a pin position as below, **but protocol converter DSP-USB** is able to make simple solution without doing interconnection between pin position ,#2,#3 each other



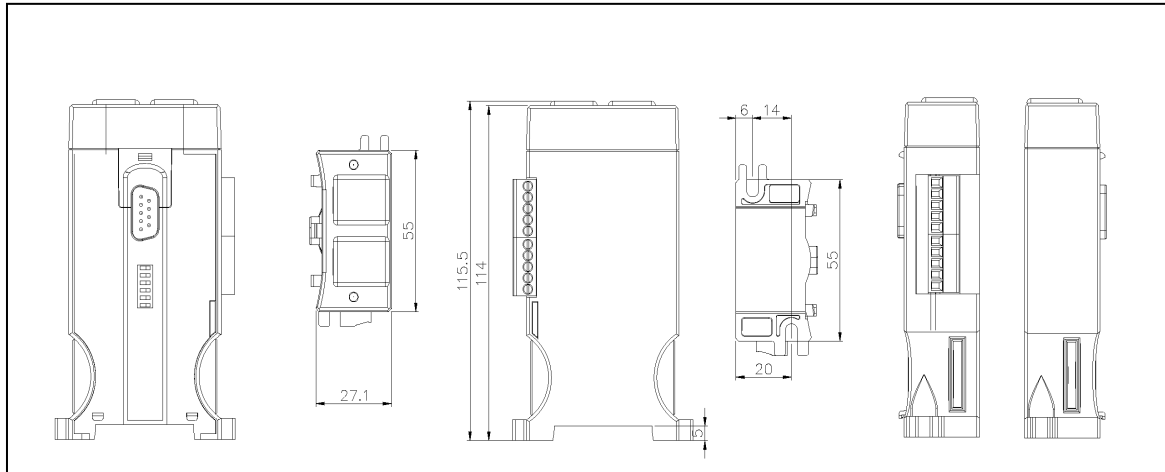
Monitor and input through Note PC



- b. It is not possible that an operator presets a data directly through a communication module and PC while a motor is working, so if user wants to do so, motor must be stopped.
- c. An operator need to give a very attention to combine this module with VIP converter through 9 pin D-sub which is located in inside of this module, because a connection pin could be damaged by unwanted enforcement during a combining job.
As like a same manner, a separation for this module from the converter must be done carefully.
- d. An operator need to check carefully additional selection by DIP SW for 485/422 or termination resistance before combining, not to make a separation again to preset DIP SW or termination resistance
- e. To prevent a pin damage during a combination, follow a next procedure
 - 1) check a pin condition if there is any defect, corrooked state or not.
 - 2) put a hook into the hole in the bottom of VIP converter
 - 3) align a D-sub connector each other
 - 4) press a top side of module slightly toward a converter untill a cricking sound is sensed
- f. As possible as you can, do not seperate this module once after combining in order not to give a damage caused by an unwanted force to seperate to a pin of D-sub connector
- g. If a separation is needed inevitably, give a force slightly to expand a clearance between a converter and a module on the center part of top side as using something like a thin driver.
- h. Operator needs to use RS 422/485 < > RS232(USB) protocol converter to communicate with a converter of VIP through Note PC which is operated in "Samdsp" operating program.
"Samdsp" is provided by a manufacturer in free of charge, which is is loaded in our web site(www://samwhadsp.com) or CD. Also this converter is not included in standard product of DSP-VIP.
- i. The model name of protocol converter above mentioned is classified by two types.
The one is DSP-CMB(Multi-1U/USB Combo @ Cross Cable, 485 < > USB), which is only available for testing serial communication and VIP by using RJ45 or 10P terminal of CM-44 communication module.
The other is DSP-CMB-A(485, termianl < > 232/9pin, male), which is available for actual serial communication connection in the field, also DSP-CMB-A contains isolated power adapter(AC 220V < > DC9V).
So if neccessary, a purchaser of DSP-VIP needs to order this protocol converter seperately because this item is very common in the market.
The more detail is referred in DSP-CMB manual



4. Dimension



5. Order Form

Item	Reference Code	Description
CM44/communication module	DSP-CM44	*Available for VIP-PM/PL, VIP-RM/RL, VIP-RTM/RTL *RS232 with VIP *RS485 with Master
DSP-USB	DSP-USB	*Protocol converter : 232 < > 232(PC) *Included interconnection cable with female D-sub in both end side *Cable length : 1m