


Converter Module

Serial Converter Module(RS232C ↔ RS485 convertable)

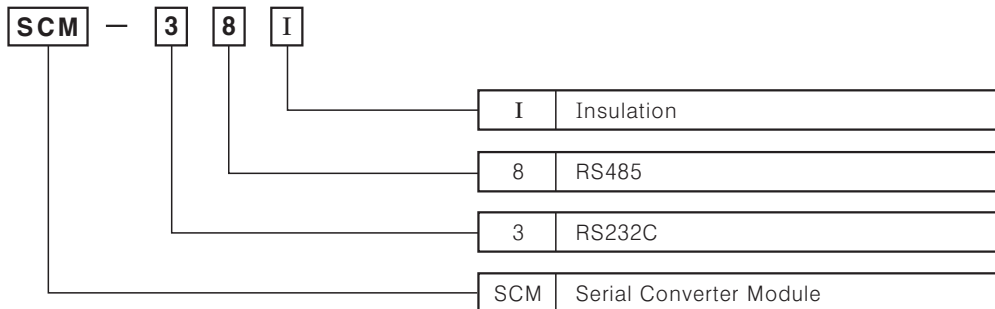
■ Features

- Includes the circuit of surge protection.
- The insulation type of signal line(Insulating 232C and 485)
- Create Tx-Enable signal automatically


 Please read "Caution for your safety" in operation manual before using.



■ Ordering information



■ Specifications

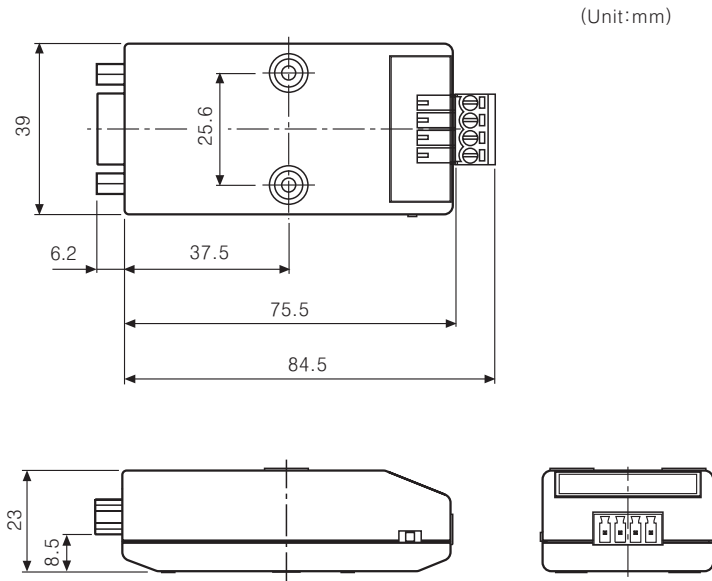
Model		SCM-381
Power supply		12-24VDC
Allowable voltage range		90 ~ 110% of rated voltage
Power consumption		Approx. 1.7W
Maximum communication speed		1200~115200bps (1200/2400/4800/9600/19200/38400/57600/115200)
Communication type		Half Duplex type
Available communication distance		Max. 800m
Multi-Drop		Max. 32 Multi-Drop
(Note) Data type	Data Bit	5 ~ 8 Data Bits
	Stop Bit	1 or 2 Stop Bits
	Parity Bit	No/Odd/Even Parity Bit
Connection type	RS232	D-Sub 9Pin
	RS485	4-wire Screw terminal(2wire communication type)
Insulation resistance		Min. 100MΩ (at 500VDC mega)
Dielectric strength		2500Vrms
Noise strength		±500V the square wave noise(pulse width:1μs) by the noise simulator
Vibration	Mechanical	0.75mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 1 hour
	Malfunction	0.5mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 10 minutes
Shock	Mechanical	300m/s ² (Approx. 30G) 3 times at X, Y, Z direction
	Malfunction	100m/s ² (Approx. 10G) 3 times at X, Y, Z direction
Ambient temperature		-10 ~ +55℃ (at non-freezing status)
Storage temperature		-20 ~ +60℃ (at non-freezing status)
Ambient humidity		35 ~ 85%RH
Approval		
Unit weight		Approx. 46g

※ (Note) Data type is set by program.

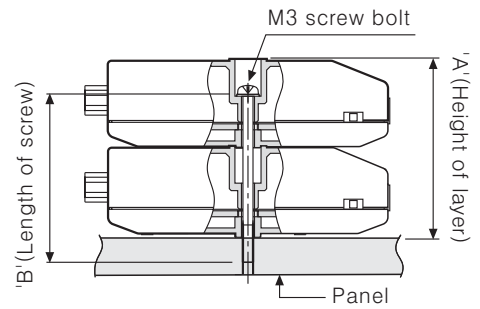
- (A) Counter
- (B) Timer
- (C) Temp. controller
- (D) Power controller
- (E) Panel meter
- (F) Tacho/ Speed/ Pulse meter
- (G) Display unit
- (H) Sensor controller
- (I) Switching power supply
- (J) Proximity sensor
- (K) Photo electric sensor
- (L) Pressure sensor
- (M) Rotary encoder
- (N) Stepping motor & Driver & Controller
- (O) Graphic panel
- (P) Field network device
- (Q) Production stoppage models & replacement

SCM-38I

Dimensions

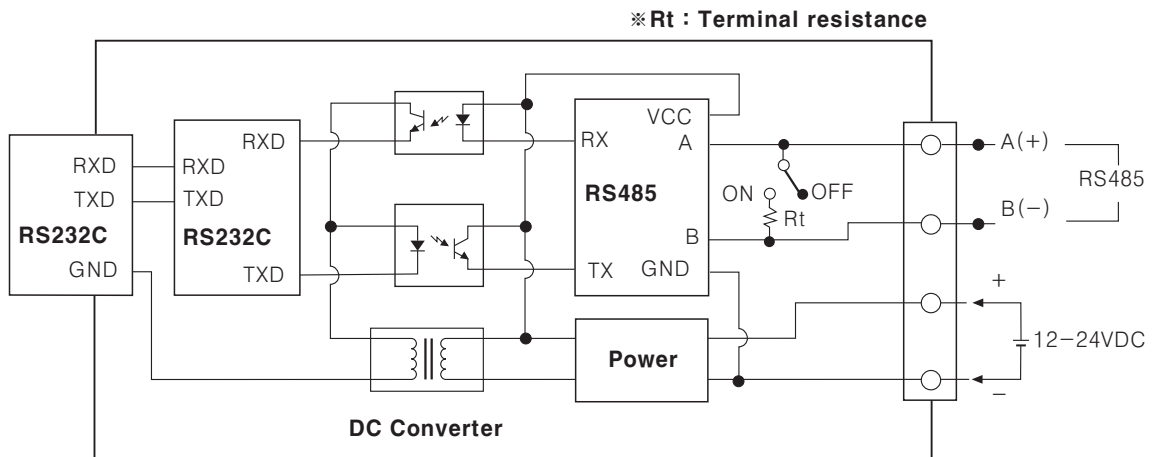


Side view of the multilayer

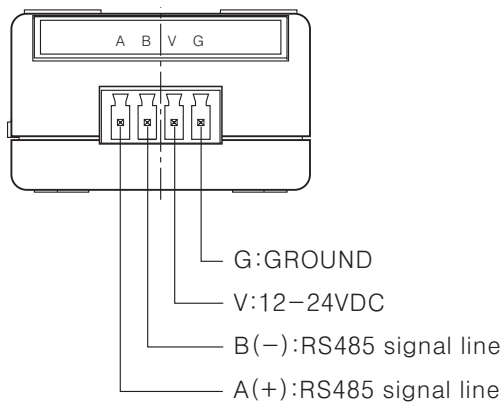


Number of layers(N)	"A" Size (23.3N+1.2)	"B" Size (23.3N-3.3)
1	24.5mm	20mm
2	47.5mm	43.3mm
3	71.1mm	66.6mm
4	94.4mm	89.9mm

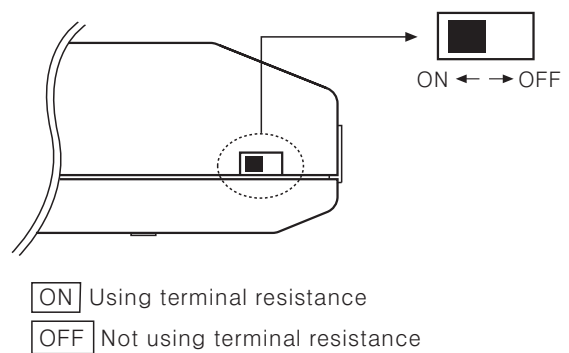
Functional block diagram



Connections

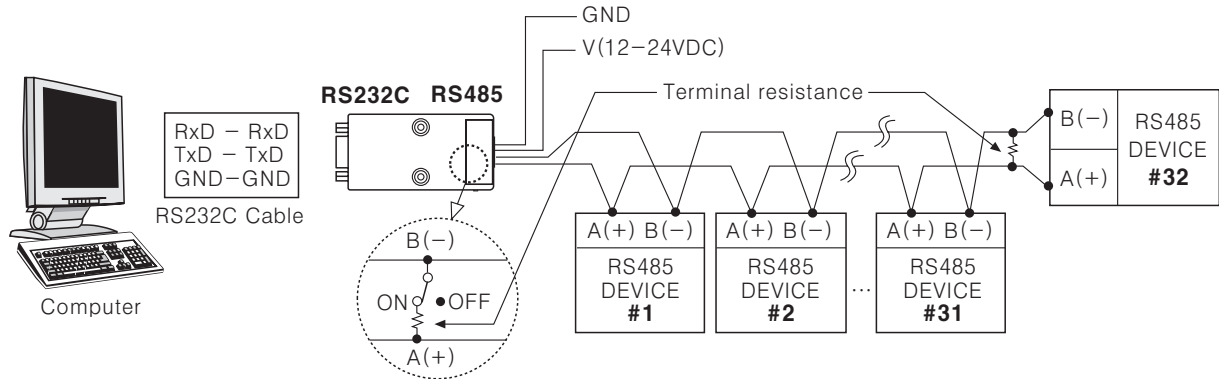


Terminal resistance selection

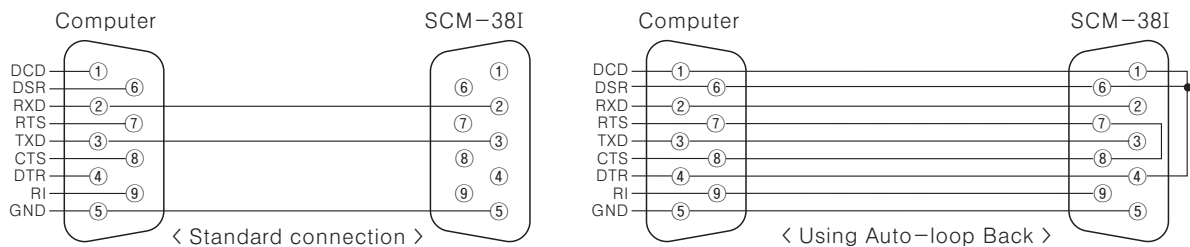


System organization

Multi-Drop connection method with PC



RS232C cable connection



When the software of the communication driver uses Auto-loop Back, please connect as the above.

Proper usage

Tx_Enable signal (RTS signal) :

Tx_Enable signal (RTS signal) is automatically generated according to protocol.

Auto-loop Back : When Auto-loop Back is required, please use as 'RS232C cable connections'.

Setting of protocol rule (Start bit, Stop bit, Parity bit, Data bit, Baud rate) can be set by software without external input or internal setting.

Using the Twist pair cable (24-AWG), which is suitable to RS485 communication is recommended. If the twist pair cable is not used, be sure preserving the length of A(+) and B(-) cables.

The extension of communication cable is maximum 1.2km, and the number of available connecting communication product is 32 items.

After connecting the communication cable between SCM-38I and lower system, be sure to attach the terminal resistance (100~120Ω). (The terminal resistance of SCM-38I is set by external switch)

For the connection be sure that protocol is consisted with each communication product when programming the software program by connecting to other communication products.

Terminal resistance : RS485 communication have a rapid transmission speed and long communication distance, if the communication line and impedance between Driver, Receiver of RS485 are not matched, it causes a reflective wave.

It can make an error for using, please use the terminal resistance at the tip of the network. (Terminal resistance : 100~200Ω)

To avoid inductive noise, separate the wires from high voltage cable and power cable.

Do not this unit as following place

- A place where vibration, shock is occurred.
- A place where strong alkali or acid material is used.
- A place where the direct ray of light is occurred.
- A place where strong magnetic force or electric noise is occurred.

Storage

To preserve for long term, please avoid direct ray of light and keep it under the temperature from -20°C ~60°C and the relative humidity less than 35~85%RH. Wrap same as shipping for optimum storage.

Installation environment

- It shall be used indoor
- Altitude Max. 2000m
- Pollution Degree 2
- Installation Category I

(A) Counter

(B) Timer

(C) Temp. controller

(D) Power controller

(E) Panel meter

(F) Tacho/Speed/Pulse meter

(G) Display unit

(H) Sensor controller

(I) Switching power supply

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