


SCM-38I

Serial Converter Module(RS232C ↔ RS485 convertable)

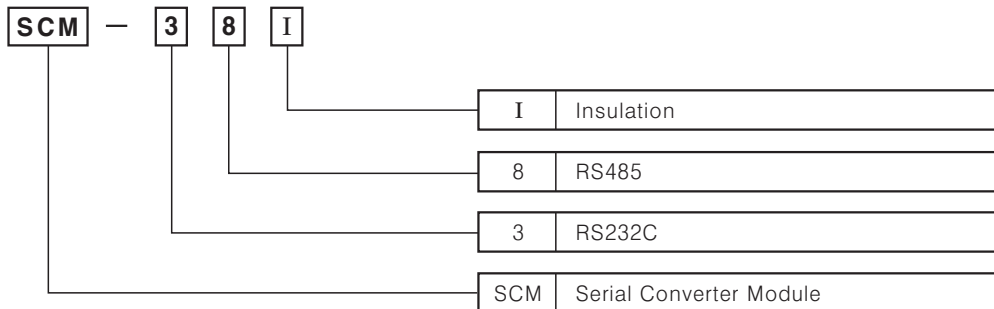
■ Features

- 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



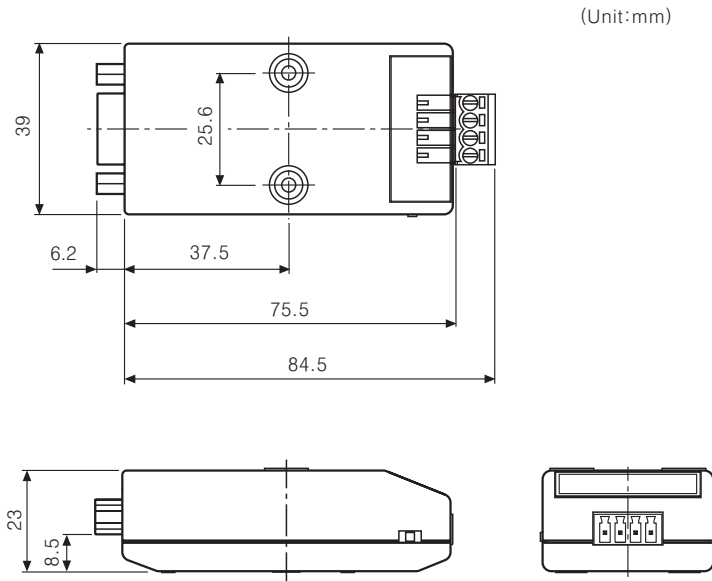
■ Specifications

Model		SCM-38I
Power supply		12-24VDC
Allowable voltage range		90 ~ 110% of rated voltage
Power consumption		Approx. 1.7W
Maximum communication speed		1200 ~ 115200bps (1200/2400/4800/9600/12800/25600/56700/115200)
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

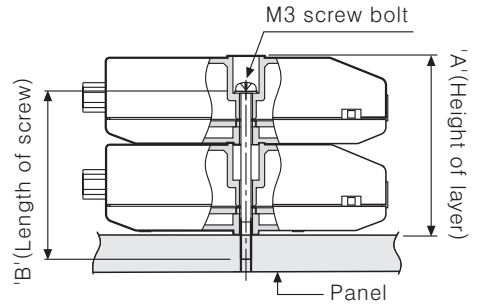
※ (Note) Data type is set by program.

Converter Module

Dimensions

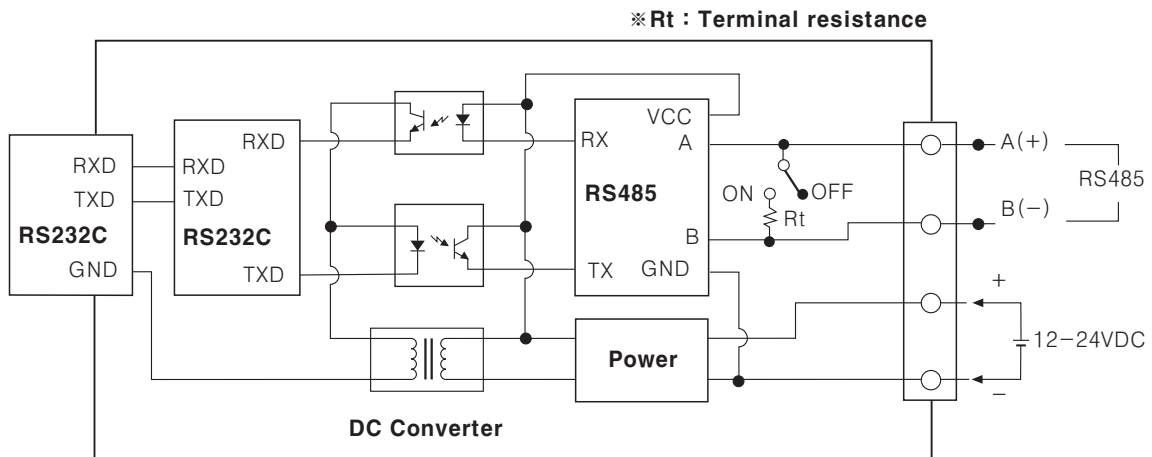


Side view of the multilayer

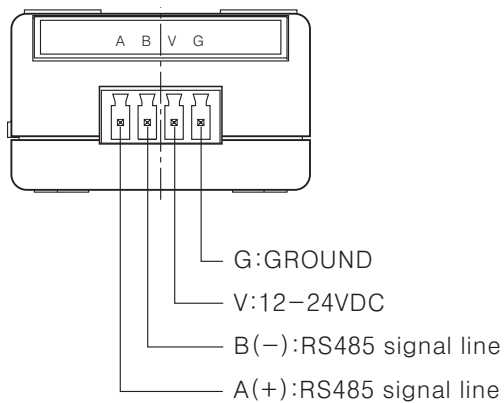


Number of layers(N)	"A" Size (23.3N+1.2)	"B" Size (23.3N-3.3)
1	24.5mm	20mm
2	47.5mm	43.3mm
3	71.1mm	66.6mm
4	94.4mm	89.9mm

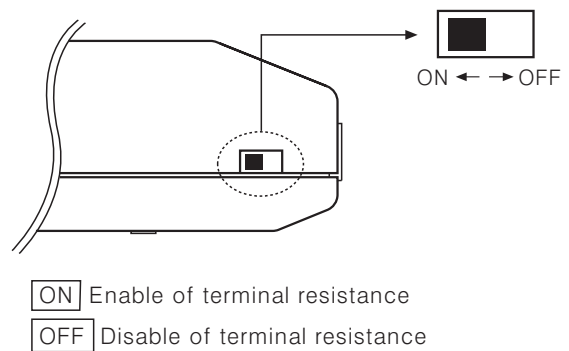
Functional block diagram



Connections



Enable/Disable of terminal resistance



(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

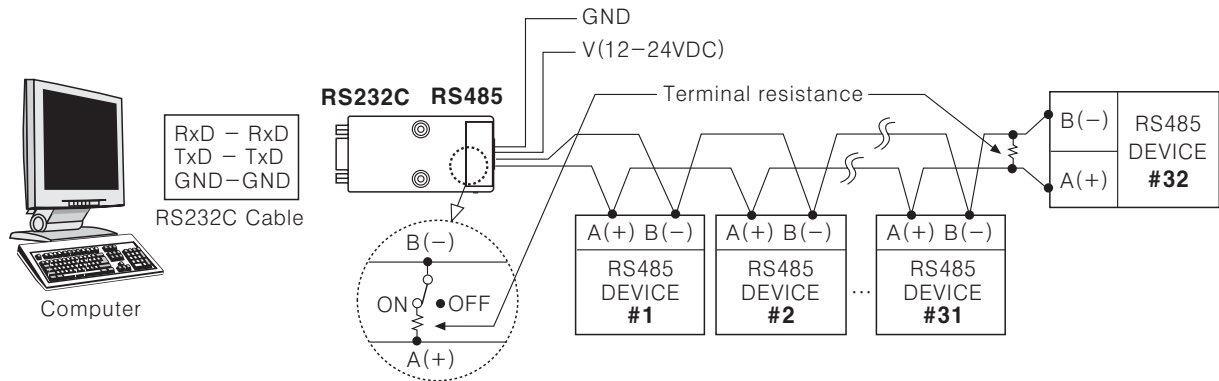
(N)
Stepping
motor &
Driver &
Controller

(O)
Graphic
panel

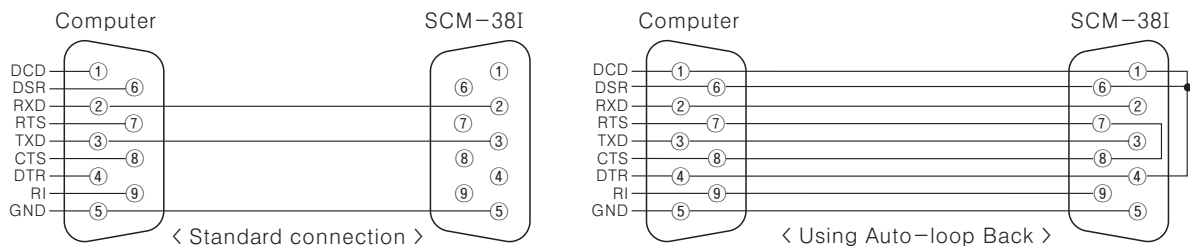
(P)
Production
stoppage
models &
replacement

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℃ ~60℃ 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