

SCM-38I

M A N U A L



Thank you very much for selecting Autonics products.

For your safety, please read the following before using.

Caution for your safety

※Please keep "Caution for your safety" to avoid accidents or damages as using it correctly.

※The meaning of 'Warning' and 'Caution' is as follows;

Warning In case a serious injury or dead may be occurred.

Caution In case a little injury or a damage of this unit may be occurred.

※The meaning of the mark on the product and manual is as follows;

▲ is a caution mark for danger in special condition.

Warning

1. In case of using this unit with machineries(Nuclear power control, medical equipment, vehicle, train, airplane, combustion apparatus, entertainment or safety device etc), it requires installing fail-safe device, or contact us for information required.

2. Do not connect terminals when it is power on.

3. Do not disassemble and modify this unit, when it requires. If needs, please contact us.

It may give an electric shock and cause a fire.

4. Do not put metal materials in this unit.

It may cause a fire or give electronic shock.

5. Do not separate a terminal block while it is operating

It may cause human injury, serious damage or malfunction.

6. Do not disassemble this unit while it is operating.

It may cause human injury, serious damage or malfunction.

7. Put this unit into the bins for industrial scrapped material for disposing.

Caution

1. This unit shall not be used outdoors.

It might shorten the life cycle of the product or give an electric shock.

2. Please observe specification rating.

It might shorten the life cycle of the product and cause a fire.

3. Please use a dedicated driver for M2 screw at RS485 connector.

Otherwise, it may cause damage on a screw part.

4. The specified tightening torque is 0.22~0.29N·m and the max. torque is 0.4N·m at RS485 connector.

Using over power causes a screw damage and connection error.

5. In cleaning the unit, do not use water or an organic solvents.

It might cause an electric shock or fire that will result in damage to the product.

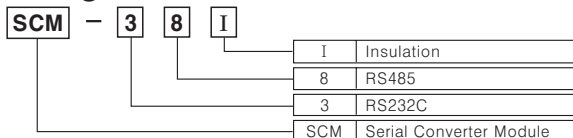
6. Do not use this unit at place where there are flammable or explosive gas, humidity, direct ray of the sun, radiant heat, vibration, impact etc.

It may cause explosion.

7. Do not inflow dust or wire dregs into inside of this unit.

It may cause a fire or mechanical trouble.

Ordering information



※The above specification are changeable without notice anytime.

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'.

●Termination resistor:

RS485 Communication has many advantages such as fast transmission rate, long distance communication and etc. But, if the impedance of transmission line does not match to RS485 network terminations, the reflected wave will be generated. In case of increasing the length of transmission line or using 1:N multi-drops, the reflected wave may cause transmission error.

Therefore in this case, please use termination resistor at both terminations.

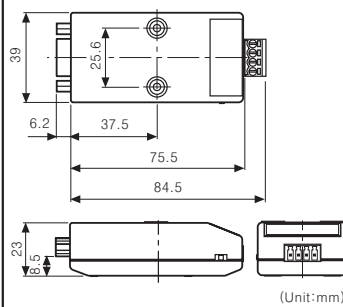
●LED display : RUN display is flickering during DATA transmitting.

Specifications

Model	SCM-38I	
Power supply	12~24VDC	
Allowable voltage range	90 ~ 110% of rated voltage	
Power consumption	Approx. 1.7W	
Data rate	1200~115200bps(1200/2400/4800/9600/19200/38400/57600/115200)	
Communication type	Half Duplex type	
Max. cable length	Max. 1.2km	
Multi-Drop	Max. 32 Multi-Drop	
Protocol(Note)	Data bit : 5~ 8 Data Bits, Stop bit : 1 or 2 Stop Bits, Parity bit : No/Odd/Even Parity Bit	
Connector type	RS232C : D-Sub 9Pin, RS485 : 4-wire screw terminal(2wire communication type)	
Dielectric strength	Between all terminals and case : 2000VAC 50/60Hz for 1 minute Between RS232C and RS485 : 2500VAC 50/60Hz for 1 minute	
Insulation resistance	Min. 100MΩ(at 500VDC)	
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°C (at non-freezing status)	
Storage temperature	-20 ~ +60°C (at non-freezing status)□	
Ambient humidity	35 ~ 85%RH	
Weight	Approx. 46g	

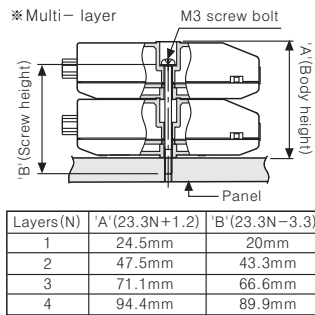
※(Note)Protocol is set by program

Dimensions

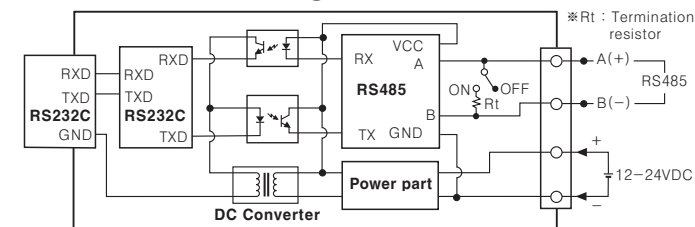


(Unit:mm)

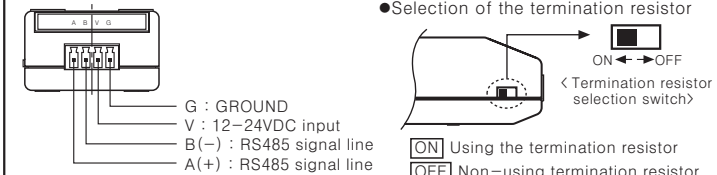
Panel mount



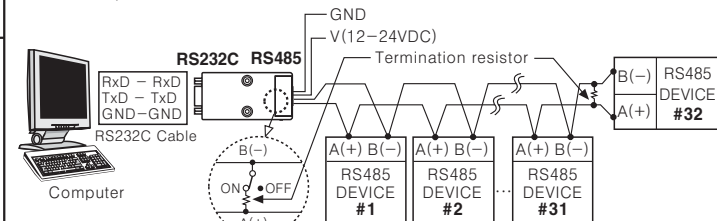
Function block diagram



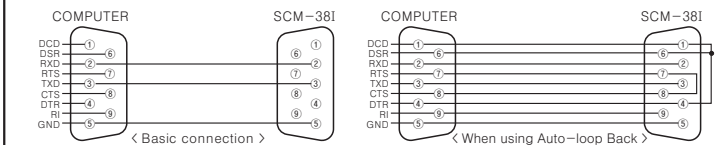
Connections



●Multi-drop connection method with PC



●RS232C cable connections



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

Caution for using

- Setting of protocol(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(AWG24), which is suitable to RS485 communication is recommended. If the Twist pair cable is not used, be sure preserving identically the length of A(+) and B(-) cables.
- After connecting the communication cable between SCM-38I and other RS485 DEVICE, be sure to attach the termination resistor(100~120Ω). (The termination resistor of SCM-38I is set by external switch)
- 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.
- Preserving way

When preserving 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. The same storing as shipping wrap is the best way.
- Installation environment
 - It shall be used indoor
 - Altitude Max. 2000m
 - Pollution Degree 2
 - Installation Category I

※It may cause malfunction if above instructions are not followed.

Main products

- COUNTER
- TIMER
- TEMPERATURE CONTROLLER
- PANEL METER
- TACHO/LINE SPEED/PULSE METER
- DISPLAY UNIT
- PROXIMITY SENSOR
- PHOTOELECTRIC SENSOR
- FIBER OPTIC SENSOR
- PRESSURE SENSOR
- ROTARY ENCODER
- SENSOR CONTROLLER
- POWER CONTROLLER
- STEPPING MOTOR & DRIVER & CONTROLLER
- LASER MARKING SYSTEM(CO₂, Nd:YAG)

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Satisfiable Partner For Factory Automation

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