

# SCM-US

## Communication converter(USB to Serial converter)

NEW

### Features

- Applicable OS : Windows 98, 98SE, ME, 2000, Server 2003, XP, Vista, Windows 7
- Both USB 1.1 and USB 2.0 compatible
- Data transmission / power supply indicating LED
- Easy to connect with PC
- Built-in protection circuit
- Ferrite core cable for noise reduction
- Non-isolation type

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



※ This unit is specifically designed to connect to particular Autonics products.

### Ordering information

SCM	-	U	S		Isolation type	Blank	Non-isolation
						S	Serial(TTL level)
						U	USB
					Item	SCM	Serial Converter Module

### Specifications

Model		SCM-US
Power supply	(※1)	5VDC USB bus power
Power consumption		Max. 1W
Communication speed	(※2)	1,200 to 115,200bps(Recommended : 9,600bps)
Communication type		Half duplex
Communication distance		1.5m(No extension allowed)
Isolation type		Non-isolated
Vibration	Destruction	0.75mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each X, Y, Z direction for 1 hour
	Malfunction	0.5mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each X, Y, Z direction for 10 minutes
Shock	Destruction	300m/s <sup>2</sup> (30G) in X, Y, Z directions for 3 times
	Malfunction	100m/s <sup>2</sup> (10G) in X, Y, Z directions for 3 times
Ambient temperature		-10 to 55℃ (at non-freezing status)
Storage temperature		-20 to 60℃ (at non-freezing status)
Ambient humidity		35 to 85%RH
Connector type		• Computer ⇄ USB(Type A) / • Autonics products ⇄ Earphone jack (4 pole stereo phone plug)
Approval		CE KC
Unit weight		Approx. 41g

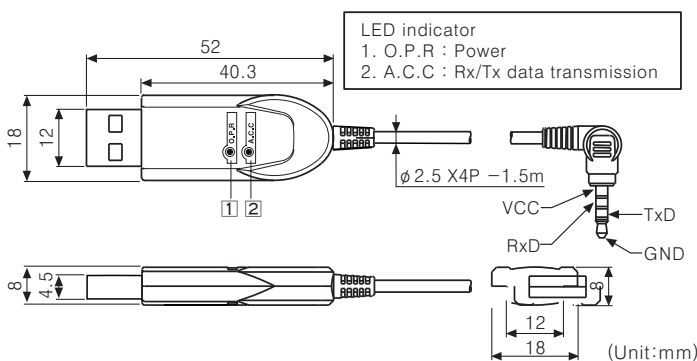
(※1) USB bus power is supplied from PC or USB host controller.

(※2) Protocol and communication speed are set by Hyper terminal, DAQMaster, ParaSet, Modbus Poll.

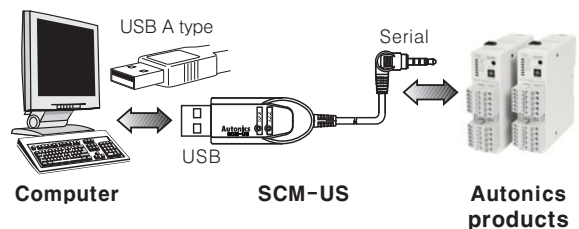
When communicating with Autonics products, set communication speed to 9,600bps.

※ There might be some differences in the specification above depending on PC environment.

### Dimensions



### Connection and installation



## Communication converter(USB to RS485 converter)

### Features

**NEW**

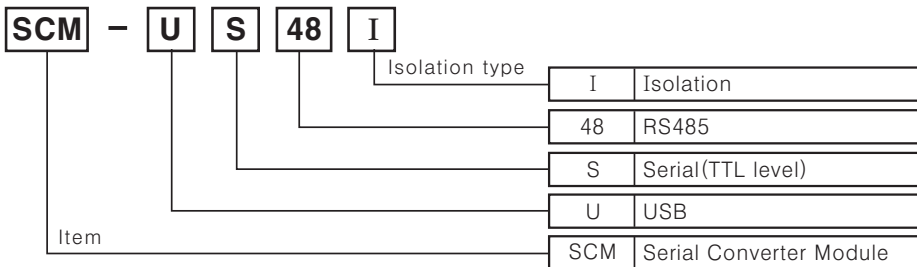
- Available to transmit signals to max. 1.2km by converting USB signal to RS485 signal
- Realizing electrical insulation(2500V RMS) between USB port and RS485 port through RS485 transceiver.
- Improved stability and durability with built-in protection circuit
- Easy connections between devices with bus power supplied from USB host controller without external power supply.
- Offering USB 2.0 A/B type cable with built-in ferrite core for noise reduction
- Various operating systems supported (Window 98, 98SE, ME, 2000, Server 2003, XP, Vista, Windows 7)
- User friendly features through compatibility with USB 1.1 and USB 2.0



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



### Ordering information



### Specifications

Model		<b>SCM-US48I</b>
Power supply		(※1) 5VDC USB bus power
Allowable voltage range		90 to 110% of rated voltage
Power consumption		Max. 1W
Maximum communication speed		(※2) 1,200 to 115,200bps (Recommended : 9,600bps)
Communication type		Half duplex type
Available communication distance		USB: Max. 1m±30%, RS485: Max. 1.2km
Multi-drop		Max. 31 multi-drop
Protocol (※2)	Data bit	5 to 8 data bits
	Stop bit	1 or 2 stop bits
	Parity bit	No/Odd/Even parity bit
Connection type	USB	B type connector
	RS485	4 wire screw terminal(2 wire communication type)
Insulation resistance		Min. 100MΩ (at 500VDC megger)
Dielectric strength		Between terminals and case : 2500VAC 50/60Hz for 1 min. Between USB and RS485 : 2500VAC 50/60Hz for 1 min.
Noise strength		±500V the square wave noise(pulse width : 1μs) by the noise simulator
Vibration	Mechanical	0.75mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 1 hour
	Malfunction	0.5mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 10 minutes
Shock	Mechanical	300m/s <sup>2</sup> (Approx. 30G) 3 times at X, Y, Z direction
	Malfunction	100m/s <sup>2</sup> (Approx. 10G) 3 times at X, Y, Z direction
Ambient temperature		-10 to 55°C (at non-freezing status)
Storage temperature		-20 to 60°C (at non-freezing status)
Ambient humidity		35 to 85%RH
Approval		<b>CE</b>
Unit weight		Approx. 34.5g

(※1) USB bus power is supplied from PC or USB host controller.

(※2) Protocol and communication speed are set by Hyper terminal, DAQMaster, ParaSet, Modbus Poll.  
When communicating with Autonics products, set communication speed to 9,600bps.

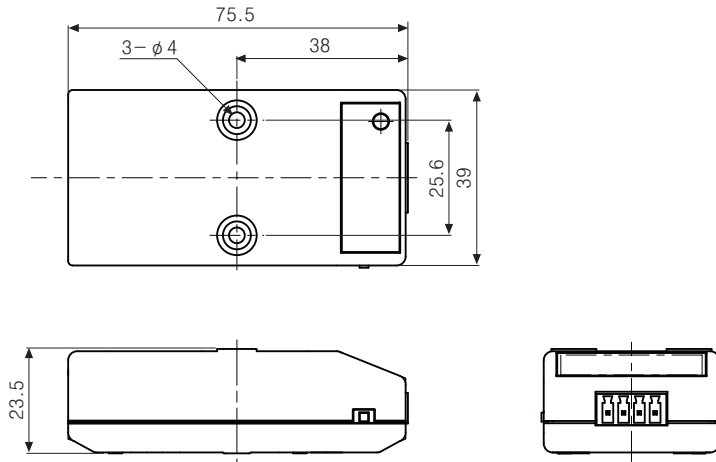
※ There might be some differences in the specification above depending on PC environment.

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

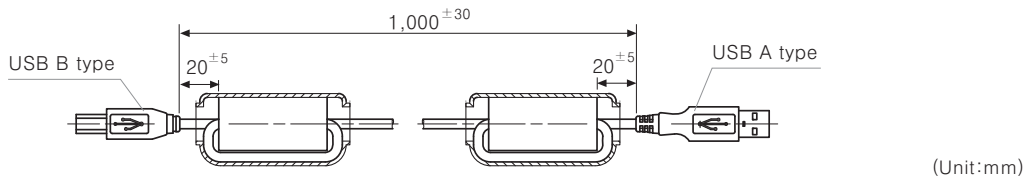
# SCM-US48I

## ■ Dimensions

※USB cable is enclosed and also sold separately. (Model : USB AB cable)



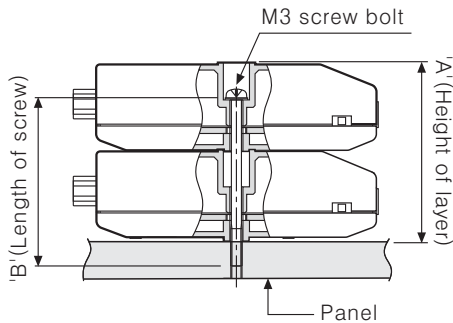
●USB 2.0 AB Type Cable



(Unit:mm)

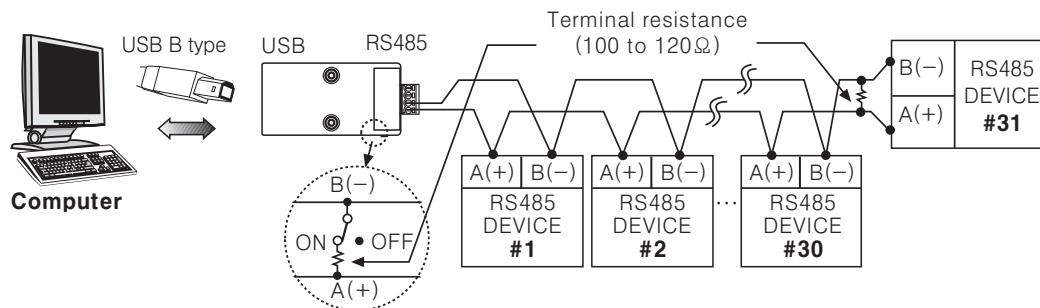
## ■ Panel mounting

※ Side view of the multilayer



Number of layers (N)	"A" size (23N+0.5)	"B" size (23N-3)
1	23.5mm	20mm
2	46.5mm	43mm
3	69.5mm	66mm
4	92.5mm	89mm

## ■ Connection and installation



# SCM-US/SCM-US-48I Common Features

## ■ Installation

### ○ USB driver installation

1) Visit our website (<http://www.autonics.com>).

2) Download USB Driver by type in keyword in the search box or choose Model, series and Material at Support → download center.

#### -Search by keyword

① Enter 'SCM-US' or 'SCM-US48I' in the search box.

② Download 'SCM-US USB Driver' or 'SCM-US48I USB Driver'.

#### -Search by category

① Select Temperature Controller at '1 Step : Product list'.

② Select 'SCM-US' or 'SCM-US48I' at '2 Step : Series list'.

③ If select software at the document lists, SCM-US USB Driver or SCM-US48I USB Driver will be displayed.

④ Download suitable Driver.

3) Unzip download 'SCM-US.zip' or 'SCM-US48I.zip' at any directory.

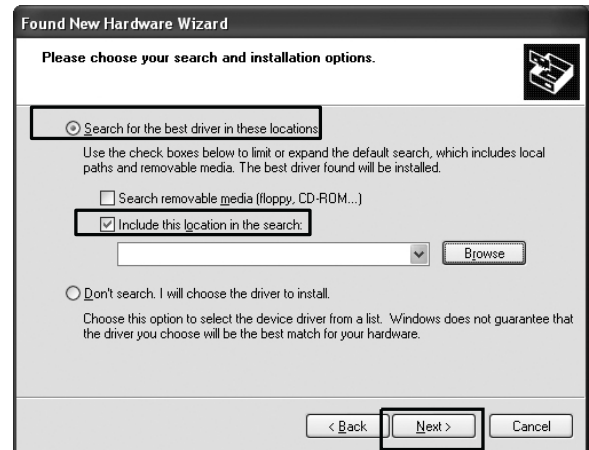
4) When connecting product with USB port, 'Found New Hardware Wizard' will appear automatically. 'Do you want to search software by connecting 'Window Update'?. Click 'No' button and the following window will be displayed to proceed Driver installation.

Select 'Install from a list or specific location (Advanced) (S)' and click 'Next(N)'.



5) Select 'Search for best driver in these locations' and 'include this location in the search' continuously. Click the 'Browse' button.

6) When 'Browse Folder' window is displayed, select 'SCM-US\Driver' and click 'Finish'. Click 'Next' to proceed with the USB Driver installation.



7) Hardware installation message will appear while Found New Hardware Wizard is running. Click 'Continue Anyway' to proceed with installation.



8) The following window will be displayed if the USB Driver is installed properly. Click the 'Finish' button.

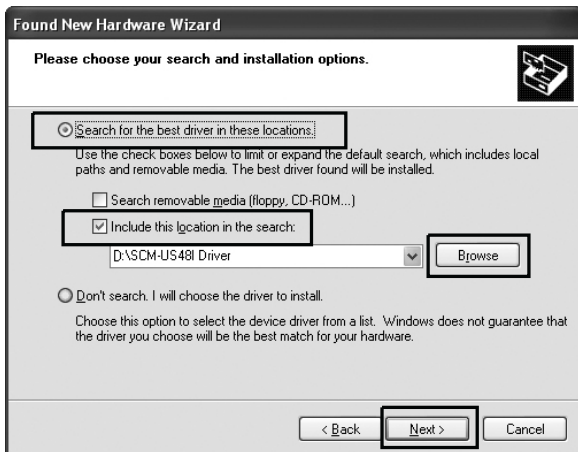


(A)	Photo electric sensor
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(Q)	Stepping motor & Driver & Controller
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# SCM-US/SCM-US-48I Common Features

## Serial Port Driver Installation

- 1) After installing USB Driver, Serial Port (COM port), 'Found New Hardware Wizard' will appear (Serial Port Driver installation follows the same procedures described in installing USB Driver).
- 2) After selecting 'Install from a list or specific location (advance)', click 'Next(N)' button. The following window will be displayed for 'Search and installation options'
- 3) Because a driver location was selected when installing USB driver, click 'Next(N)' button.

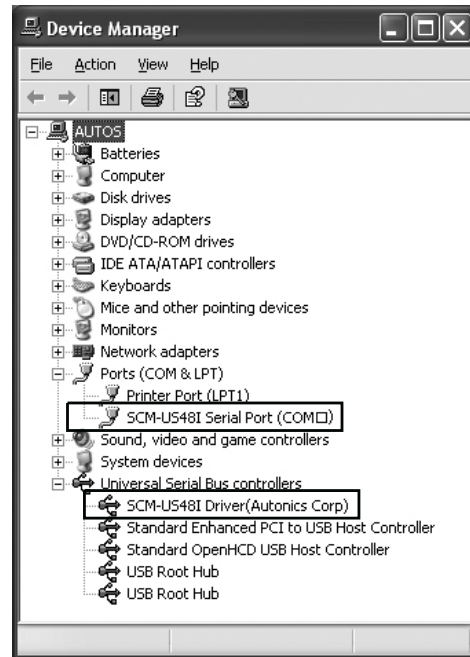


- 4) Hardware installation message will appear while Found New Hardware Wizard is running. Click 'Continue Anyway' to proceed with installation.
- 5) 'Completing the Found New Hardware wizard' will be displayed if the Serial Port Driver is installed properly. Click the 'Finish' button.



※ Verify that drivers were installed properly with the windows Device Manager after finishing USB Driver and Serial Port Driver installation.

Open the folder [My computer], open the system folder (click right), click the hardware tab, and click the Device Manager Button. Then, make sure that 'SCM-US Driver (Autonics Corp)' or 'SCM-US48I Driver (Autonics Corp)' is found in 'Common Serial Bus Controller' category and 'Port (COM and LPT)' is found in 'SCM-US Serial Port (COM X)' or 'SCM-US48I Serial Port (COM X)'.



※ This Driver Installation shows the procedure for Window XP. There might be some differences in the specification above depending on OS.

# SCM-US/SCM-US-48I Common Features

## ■ Proper usage

- SCM-US is non-isolated type model. Improper usage of unit may result in damage.
- When changing PC USB port and connecting this unit to another (changed) USB port, USB driver will be reinstalled. This is not a malfunction.
- It is recommend to use twist pair line (AWG24) communication cable for RS485 communication. If do not use this, A(+) and B(-) cables length should be the same.
- When connecting SCM-US communication module, please connect PC and SCM-US first. Then, connect Autonics products afterward. When disconnecting the units, remove the unit in reverse order.
- All protocols (Start bit, Stop bit, Data bit, Baud-rate) can be set by provided S/W.
- While detecting USB Driver, VCP Driver is installed after USB Driver is installed. This is not a malfunction.
- After connects RS485 communication output product, terminal resistance (100 to 120Ω) must be attached on end of communication cable.
- In case of multiple connections of unit, No. of COM Port will be numbered in order. This is not a malfunction. (e.g., COM14, COM15, COM16)
- When connecting USB cable, check COM port number before communication. It may take some time for the computer to detect the cable after the cable is connected. This is not a malfunction.
- Do not extend the USB portion of this cable with an extension cable. It may cause cable malfunction.
- This unit is specifically designed to connect to Autonics products which support SCM-US. Do not apply this unit to other products not supported.
- Observe the rated voltage.
- To avoid malfunctions due to noise, do not place the unit close to a high-voltage power line.
- Proper application environment (Avoid following environments for unit to be used.)
  - Where severe vibration or shock exists
  - Where close to a strong alkali or strong acid
  - Where direct rays of light exist
  - Where near facilities generating strong magnetic forces or electric noise.
- Storage
 

Keep the unit -20 to 60°C, 35 to 85%RH with avoiding direct rays of light. It is recommended to keep the unit package as it is.
- Installation environment
  - It shall be used indoor
  - Altitude max. 2000m
  - Pollution degree 2
  - Installation category I

(A)	Photo electric sensor
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