SCM Series

SCM-US48I
USB to Serial converter (converting signal USB to Serial)

Features
- 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 (Windows 98, 98SE, ME, 2000, Server 2003, XP, Vista, 7)
- User friendly features through compatibility with USB 1.1 and USB 2.0

SCM-38I
RS232C to RS485 converter (converting signal RS232C to RS485)

Features
- Built-in surge protection circuit
- The insulation type of signal line (Insulating RS232C and RS485)
- Create Tx-Enable signal automatically

SCM-US
USB to Serial converter (converting signal USB to Serial)

Features
- 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.

Comprehensive Device Management program (DAQMaster)

DAQMaster is the comprehensive device management program. Visit our website (www.autonics.com) and download DAQMaster.

< Computer specification for using software >

<table>
<thead>
<tr>
<th>Item</th>
<th>Minimum requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>IBM PC compatible computer with Intel Pentium III or above</td>
</tr>
<tr>
<td>Operations</td>
<td>Microsoft Windows 98/NT/XP/Vista/7/8/10</td>
</tr>
<tr>
<td>Memory</td>
<td>256MB+</td>
</tr>
<tr>
<td>Hard disk</td>
<td>1GB+ of available hard disk space</td>
</tr>
<tr>
<td>VGA</td>
<td>Resolution: 1024×768 or higher</td>
</tr>
<tr>
<td>Others</td>
<td>RS-232 serial port (9-pin), USB port</td>
</tr>
</tbody>
</table>
Specifications

**SCM-US48I / SCM-38I / SCM-US**

<table>
<thead>
<tr>
<th>Model</th>
<th>SCM-US48I</th>
<th>SCM-38I</th>
<th>SCM-US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>5VDC USB bus Power</td>
<td>12-24VDC ± 10%</td>
<td>5VDC USB bus Power(^1)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>Max. 1W</td>
<td>Max. 1.7W</td>
<td>Max. 1W</td>
</tr>
<tr>
<td>Max. com speed(^2)</td>
<td>1,200 to 115,200bps (Recommended: 9,600bps)</td>
<td>1.5m (not extension)</td>
<td>—</td>
</tr>
<tr>
<td>Communication type</td>
<td>Half duplex type</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Available com. distance</td>
<td>USB: Max. 1m ± 30%</td>
<td>RS485: Max. 1.2km</td>
<td>Max. 1.2km</td>
</tr>
<tr>
<td>Multi-drop</td>
<td>Max. 31 multi-drop</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Protocol(^2)</td>
<td>Data bit: 5 to 8 data bits</td>
<td>Stop bit: 1 or 2 stop bits</td>
<td>None/Odd/Even</td>
</tr>
<tr>
<td>Connection type</td>
<td>USB: B type connector RS485: 4-wire screw terminal (2wire communication type)</td>
<td>RS232: D-sub 9Pin</td>
<td>USB: A type connector (4 pole stereo phone plug)</td>
</tr>
<tr>
<td>Isolation type</td>
<td>Isolation</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Dielectric strength</td>
<td>● Between terminals and case: 200VAC 50/60Hz for 1 min.</td>
<td>● Between terminals and case: 200VAC 50/60Hz for 1 min.</td>
<td>—</td>
</tr>
<tr>
<td>Insulation resistance</td>
<td>Min. 100MΩ (at 500VDC megger)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Noise strength</td>
<td>±500V the square wave noise (pulse width: 1μs) by the noise simulator</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Vibration</td>
<td>Mechanical: 0.75mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 1 hour</td>
<td>Mechanical: 0.5mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 10 min.</td>
<td>—</td>
</tr>
<tr>
<td>Shock</td>
<td>Mechanical: 300m/s(^2) (approx. 30G) in each X, Y, Z direction for 3 times</td>
<td>Mechanical: 100m/s(^2) (approx. 10G) in each X, Y, Z direction for 3 times</td>
<td>—</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>Ambient: -10 to 55°C, storage: -20 to 60°C</td>
<td>Ambient humidity: 35 to 85%RH, storage: 35 to 85%RH</td>
<td>—</td>
</tr>
<tr>
<td>Approval</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Accessory</td>
<td>USB 2.0 AB type connector (length: 1m)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Unit weight</td>
<td>Approx. 34.5g</td>
<td>Approx. 46g</td>
<td>Approx. 41g</td>
</tr>
</tbody>
</table>

\(^1\): 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.

Environment resistance is rated at no freezing or condensation.

Installations

**SCM-US48I & SCM-38I**

![Diagram](image)

There is no Serial Port in SCM-US48I.
SCM Series

■ Dimensions

© SCM-US48I

※ USB 2.0 AB type cable is including the product and is also sold separately.
(model: USB AB CABLE)

※ LED indicator
1. O.P.R: Power
2. A.C.C: Rx/Tx data transmission

© SCM-38I

© SCM-US
Example Of Connections

SCM-US48I

SCM-38I

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.

SCM-US
SCM Series

**Driver Installation (SCM-US48I, SCM-US)**

© USB Driver Installation

1) Visit our website (www.autonics.com) to download USB Driver.

2) Unzip the downloaded 'SCM-US48I.zip', or 'SCM-US.zip' at any directory.

3) 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'.

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

5) When 'Browse Folder' window is displayed, select 'SCM-US\Driver' for SCM-US48I, SCM-US, and click 'Finish'. Click 'Next' to proceed with the USB Driver installation.

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

7) The following window will be displayed if the USB Driver is installed properly. Click the 'Finish' button.
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' 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' 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-US48I Driver (Autonics Corp)' or 'SCM-US Driver (Autonics Corp)' is found in 'Common Serial Bus Controller' category and 'Port (COM and LPT) is found in 'SCM-US48I Serial Port (COM □)' or 'SCM-US Serial Port (COM □)'.

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

### Proper Usage

- In case of connecting PC with SCM-US48I or SCM-US, when changing PC USB port and connecting this unit to another (changed) USB port, USB driver will be reinstalled. This is not a malfunction.
- When connecting SCM-US or SCM-US48I communication module, please connect PC first. Then, connect RS485 communication product afterward. When disconnecting the units, remove the unit in reverse order.
- Using the Twisted pair cable (AWG24), which is suitable to RS485 communication is recommended. If the Twisted pair cable is not used, be sure preserving identically the length of A (+) and B (-) cables.
- After connecting SCM-38I, SCM-US48I with RS485 communication DEVICE, be sure to attach the terminating resistor (100 to 120Ω).
- In case of connect PC with SCM-US48I, or SCM-US, No. of COM Port will be numbered in order. This is not a malfunction. (e.g. COM 14, COM 15, ..., COM 256)
- When connecting SCM-US48I or SCM-US with USB cable, check COM port number before communication. It may take some time for computer to detect the cable after the cable is connected. (This is not a malfunction.)
- When connecting PC with SCM-US48I or SCM-US, do not use the extension cable to extend USB cable length. It may cause a malfunctions.
- Be cautious when using SCM-US as non-isolated type.
- Only use Autonics products that are available for SCM-US.
- 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.
- This unit may be used in the following environments.
  - Indoor
  - Altitude: Under 2,000m
  - Pollution degree 2
  - Installation category II