



Niobrara SC910 Smart Cable

The Niobrara SC910 Smart Cable is a miniature RS-232/RS-422 converter cable. It is intended to be used to connect a personal computer RS-232 serial port to the RJ45 RS-485 port of a Modicon® Momentum™ PLC.

The RS-232 end of the SC910 cable consists of a 9-pin female D-subminiature connector with jackscrews. The RS-485 end of the cable terminates in a male RJ45 connector. The RS-232 end is configured to plug directly into a standard serial port of a personal computer. The RS-485 end is configured to match the pinout of a Momentum RS-485 port with a female RJ45 connector. The SC910 is powered by a 120 VAC adapter (included) that plugs in to the RS-232 backshell.

The SC910 may also be used to drive a 4-wire RS-485 multidrop network with the RS-232 device acting as the master. The SC910 incorporates internal biasing on its receive lines; thus external biasing networks are not required.

Installation:

1. Connect the RS-485 end of the SC910 to the RS-485 serial port of a Momentum PLC.
2. Connect the RS-232 (black backshell) end of the SC910 to the PC or other RS-232 device. If the device is COM1: or COM2: of the personal computer, ensure that the port settings are correct.
3. Connect the cord from the AC adapter to the 3.5mm power jack on the back of the RS-232 backshell and plug the adapter body into a 120VAC 50/60 Hz outlet. **NOTE:** The AC adapter is required in all applications.
4. Refer to the instructions for the software package you are using.

Cable Pinouts:

The RJ45 end of the cable is compatible with Momentum RS-485 ports. The pinout is as follows:

1	—————	RX- (data to PLC)
2	—————	RX+
3	—————	TX+ (data from PLC)
6	—————	TX-

No connection is made to pins 4 and 5.

The end of the cable with a black backshell and transformer connector is an RS-232 DCE interface. The pinout is as follows:

1	—————	DCD
2	—————	TXD (to computer)
3	—————	RXD (from computer)
5	—————	SG
6	—————	DSR
7	———	RTS
8	———	CTS

DSR and DCD are driven high by the SC910. The state of pins 4 (DTR) and 9 (RI) is ignored.

Notes:

The SC910 is a versatile RS-232/RS-485 adapter which can be modified for special applications. Call the factory for more information.

Common Problems:

The baud rate of the COM: port of the personal computer is not the same as the baud rate of the Momentum port.

The cable is not connected to the correct COM: port of the personal computer.

The device number being used in the software is not valid.

The output voltage of the RS-232 signals on some laptop personal computers is well below RS-232 standard levels. Charging the batteries or connecting the personal computer to AC power will sometimes help.

Attempting to use software inside the Windows® environment with improper COM: port settings. Correct the COM: port settings or try again outside Windows.