

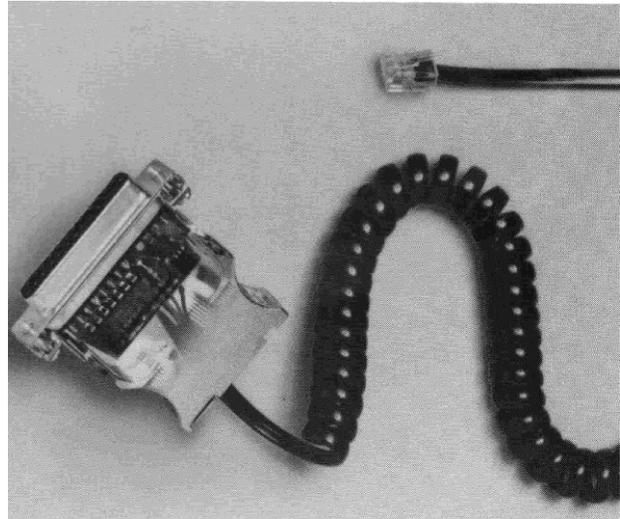


Niobrara SCM1R Smart Cable

The Niobrara SCM1R Smart Cable is a retractile, DB25 to Micro-I cable with a miniature RS-232 converter built into the DB25 connector end. It can be used to connect the RS-232 communications port of a personal computer directly to the program loader port of a Square D® or IDEC Micro-1 programmable controller.

The converter is powered by the program loader output of the Micro-1, so no external power is required. This makes the SCM1R ideal for connecting a laptop personal computer to the Micro-1.

The SCM1R can be used for communication between a personal computer and one Micro-1 only. It cannot be used to communicate through the Micro-1 network. However, it can of course be used to program individual Micro-1's, which will be interconnected in a network during operation. The SCM1R is functionally equivalent to the RIU20 RS-232 interface as well as Niobrara's **SCMIR**. A Niobrara MD422 can be used to connect the Micro-1 to an RS-422 device.



The SCM1R is normally 3 feet long but will extend to 10 feet. For distances up to 30 feet use a Niobrara **SCM1D**. For distances longer than 30 feet (up to 2,000 feet) use a Niobrara **MD422**, a Niobrara **SA9F** gender changer, and a Niobrara **SC902**.

Installation:

1. Connect the modular plug to the program loader port of the Micro-1.
2. Connect the DB25 end of the cable to COM1: or COM2: of the personal computer. An adapter (either an **SDO34** or an **SDO34B**) to connect the cable to a nine pin port is available from Niobrara R & D Corporation. In rare situations, a null modem may be required to reverse pins 2 and 3 between the SCM ID and the personal computer.

Warning! Never connect the SCM1R cable (or any other RS-232 device) to the parallel port of a personal computer. Doing so may damage the cable and/or the parallel port. The cable will not plug directly into a normal parallel printer port. If a gender changer is needed to plug the cable into the computer, you may be trying to use the wrong computer port.

3. Refer to the instructions for the software package you are using.

Cable Pinouts:

The **DB25** end of the cable is an RS-232 DCE interface. The pin-out is as follows:

2	—————	RXD (from computer)
3	—————	TXD- (to computer)
5	—————	CTS
6	—————	DSR
7	—————	GND
8	—————	DCD

Pins 6 (DSR) and 8 (DCD) are driven to +12 V by the SCM1D. Pin 4 (RTS) is looped back to pin 5 (CTS). The state of pin 20 (DTR) is ignored.

Common Problems:

- Set the Interface to RIU20-RS-232.
- The cable is not connected to the correct COM port of the personal computer.
- The baud rate of the PC port must be set to 9600.
- The drop number being used in the software is not valid. Make sure the PLC drop number found in ASSIGN mode is the same as the Route selected in UTIL mode.
- The personal computer being used is faster than 16MHz. The communication software may not work with any cabling solution if the computer is faster than 16MHz. If the ASSIGN mode returns the processor state and current drop number but a communication error occurs when attempting to go ONLINE, set the personal computer to a slower clock speed (Press the turbo button). Running the software within a DOS window inside of MS® Windows® may help this problem.

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

Notes:

For Local Support and Sales CALL:

