NR&D

SCM1S

DB9 to Micro-1 Smart Cable

Description

The Niobrara SCM1S Smart Cable is a 6 foot DB9 to Micro-1 cable with a miniature RS-232 converter built into the DB9 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 SCM1S ideal for connecting a laptop personal computer to the Micro-1.

The SCM1S 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 SCM1S is functionally equivalent to the RIU20 RS-232 interface. A Niobrara MD422 can be used to connect the Micro-1 to an RS-422 device.

The SCM1S is normally 6 feet long but other lengths (up to 25 feet) are available. See the price list for ordering information. For distances longer than 25 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 DB9 end of the cable to COM1: or COM2: of the personal computer. A SD016 adapter to connect the cable to a 25 pin port is available from Niobrara R&D Corporation.

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

Cable Pinouts

The DB9 end of the cable is an RS-232 DCE interface. The pin-out is as follows:

Pin	Function
1	DCD
2	RXD
3	TXD
5	GND
6	DSR
7	RTS
8	CTS

Pin 6 (DSR) and pin 1 (DCD) are driven to +10V by the SCM1S. Pin 7 (RTS) is looped back to pin 8 (CTS).

Niobrara Research & Development Corporation
www.niobrara.com

Ordering Information

The SCM1S is available as:
- **SCM1S** 6 foot DB9 to Micro-1 Programming Cable
- **SCM1S-xx** Custom length SCM1S where xx is the length in feet. Maximum length is 25 feet.
- **SCM1SK** 6 foot DB9 to Micro-1 Smart Cable with SD016 9-pin male to 25-pin female adapter

Related Equipment

- **SCA2S** 6 foot DB9 to FA2J Smart Cable
- **SCA2SK** 6 foot DB9 to FA2J Smart Cable with SD016 25- to 9-pin adapter
- **SC50S** 6 foot DB9 to Model 50 Programming Cable
- **SC50SK** 6 foot DB9 to Model 50 Smart Cable with SD016 25- to 9-pin adapter
- **MD422S** Micro-1 to RS-422 (SY/MAX or Spectrum Operator Interface) converter cable with screw locks
- **SD016** RS-232 9-pin male to 25-pin female adapter

Troubleshooting

- Set the Interface SFW30 to RIU20-RS-232.

- Make sure the cable is connected to the same COM: port of the personal computer as SFW30.

- The baud rate of the PC port must be set to 9600.

- Make sure the PLC drop number found in ASSIGN mode is the same as the Route selected in UTIL mode.

- SFW30 programming software uses software timing loops, which frequently cause problems on faster computers. This is the problem if the ASSIGN mode returns the processor state and current drop number but a communication error occurs when attempting to go ONLINE. Contact the factory for assistance with this issue.

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

Specifications

Dimensions	Standard SCM1S length is 6 feet. DB9S to 4 position modular plug.
Operating Conditions	0 to 60 degrees C operating temperature; -40 to 80 degrees C storage. Humidity up to 90% noncondensing; pressure altitude -200 to +10,000 feet MSL.