SC50S

DB9 to Model 50 Smart Cable

Description

The Niobrara SC50S Smart Cable is a 6 foot DB9 to Model 50 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 programmable controller without needing an RIU, NLU, or SFI card.

The converter is powered by the Model 50, so no external power is required. This makes the SC50S ideal for connecting a laptop personal computer to the Model 50.

The SC50S can be used for communications between a personal computer and one Model 50 only. It cannot be used to communicate through the Model 50 network. However, it can of course be used to program individual Model 50's which will be interconnected in a network during operation. To connect a personal computer to a network of Model 50s, use the Square D® NLU and Niobrara's SC902 cable. Although the SC50S is externally identical to the SCA2S (for the IDEC FA2J) the two cables are not interchangeable, unless using the CLIP software when connecting to FA2J (communication mode should be 1:N).

The SC50S is normally 6 feet long but other lengths (up to 25ft) are available. See price list for ordering information. For distances greater than 25 feet (up to 2,000 feet) use a Niobrara ID422, a Niobrara SA9F gender changer, and a Niobrara SC902. An ID422 can be used with an SFI card for Model 50 programming.
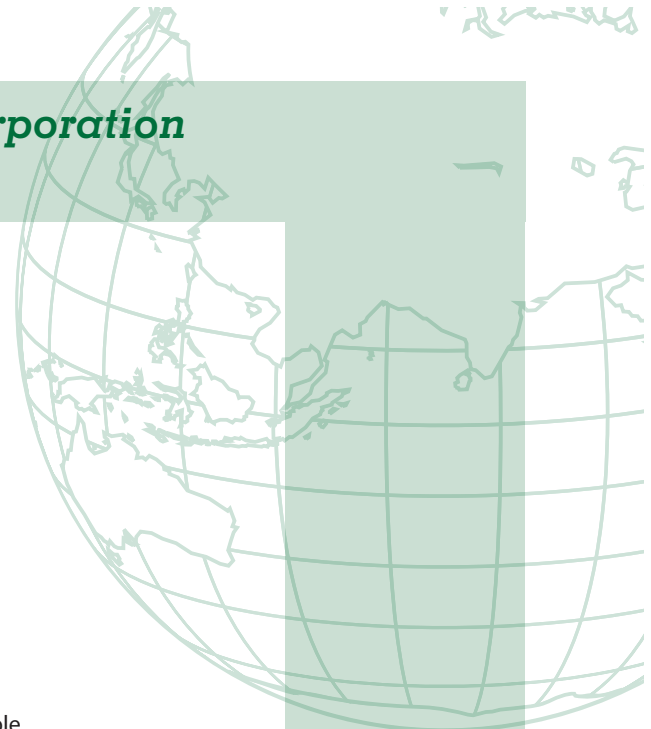
Installation

1. Connect the 8-pin plug to the programmer port of the Model 50 and lightly tighten the screws.

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 COM: 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 SC50S. Pin 7 (RTS) is looped back to pin 8 (CTS).

Niobrara Research & Development Corporation
www.niobrara.com

Ordering Information

The SC50S is available as:

- **SC50S**   6 foot DB9 to Model 50 Programming Cable
- **SC50S-xx**   Custom length SC50S where xx is the length in feet. Maximum length is 25 feet.
- **SC50SK**   6 foot DB9 to Model 50 Smart Cable with SD016 25- to 9-pin adapter

Related Equipment

- **SC50I**   Optically isolated Model 50 to 25-pin RS-232 Programming Cable
- **SC50IK**   Optically isolated Model 50 to 25-pin RS-232 Programming Cable, plus SD034B 25- to 9-pin adapter
- **SCA2S**   6 foot DB9 to FA2J Programming Cable
- **SCA2SK**   6 foot DB9 to FA2J Smart Cable with SD016 25- to 9-pin adapter
- **SCM1S**   6 foot DB9 to Micro-1 Programming Cable
- **SCM1SK**   6 foot DB9 to Micro-1 Smart Cable with SD016 9-pin male to 25-pin female adapter
- **ID422P**   Model 50 to RS-422 converter Cable with slide locks
- **ID422S**   Model 50 to RS-422 (SY/MAX or Spectrum Operator Interface) Converter Cable with screw locks

Troubleshooting

- Make sure the cable is connected to the same COM: port of the personal computer as SFW50.

- 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.

- SFW50 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®.

- Make sure the communication mode is set to 1:N if talking to FA2J using CLIP software.

Specifications

Dimensions	Standard SC50S length is 6 feet. DB9S to 8-pin connector.
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.