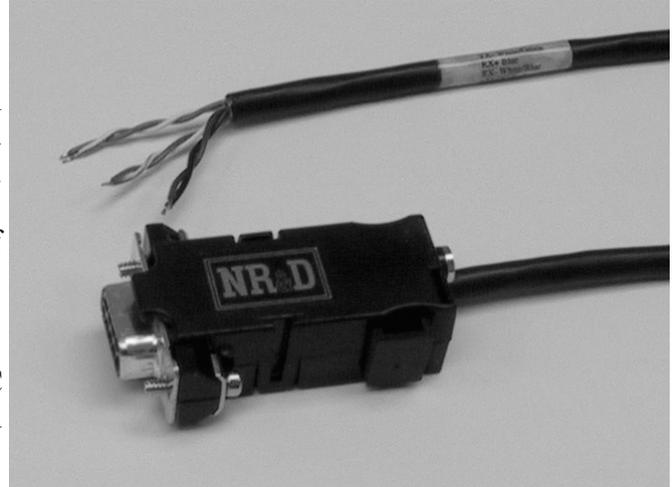


Niobrara SC902ST Smart Cable

The Niobrara SC902ST Smart Cable is a SY/MAX[®] compatible RS-422 cable with a miniature RS-232/RS-422 converter built into the 9-pin RS-232 end. The RS-422 end has 4 signal wires stripped and tinned, 2 power wires stripped and tinned, and a shield. It is intended to be used to connect the 9-pin RS-232 COM port of a personal computer to any RS-422 compatible port. It can also be used as a master of an RS-485 four-wire device. This makes it ideal for connecting to a PowerLogic circuit monitor.



The SC902ST can be powered by the included AC adapter or 5 VDC can be applied across the 5V and ground wires of the stripped and tinned RS-422 end. Since the SC902ST is not powered by the signal lines of the personal computer, it will work when other solutions fail, such as when the RS-232 signal power is too low, or the personal computer software does not turn on the DTR or RTS pin.

The RS-232 end is a female 9-pin connector with screws. The RS-422 end has 6 wires stripped and tinned. The SC902ST is normally 6 feet long but other lengths (up to 2,000 feet) are available. See price list for ordering information.

Installation:

1. Connect the stripped and tinned wire end of the SC902ST to the communication port on the RS-422 device or RS-485 (4-wire) slave device. Check the back of this sheet for the correct pinout.

2. Connect the female (black backshell) end of the SC902ST to COM1: or COM2: of the personal computer. If the computer is equipped with a 25-pin RS-232 port, use an **SD016** 9- to 25-pin adapter with the SC902ST.

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. Alternately, place 5VDC on the red wire and ground on the black wire of the RS-422 end.

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

Cable Pinouts:

The RS-422 stripped and tinned end of the cable is compatible with Square D SY/MAX RS-422 ports. The pinout is as follows:

White/blue	————	RXD- (data out of PLC)
Blue	————	RXD+
White/green	————	TXD- (data into PLC)
Green	————	TXD+
Red	————	+5 VDC
Black	————	GND

The red and black wires power the converter when driven to 5 volts DC. When the cable is powered by the AC adapter, the red and black wires will have 5 VDC between them. Do not use this to power external devices. If using the AC adapter, clip the red and black wires and tape each of them independently so they cannot short against each other, other wires, or the shield.

The female DE9 end of the cable 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 SC902. The state of pins 4 (DTR) and 9 (RI) is ignored.

Notes:

The SC902ST is a versatile RS-232/RS-422 adapter which can be modified for special applications. Call the factory for more information.

Connecting to a circuit monitor

Connect the wires to the circuit monitor in the manner shown in the table below:

White/blue	————	RXD- (data out of PLC)
Blue	————	RXD+
White/green	————	TXD- (data into PLC)
Green	————	TXD+

The cable must be powered by the included AC adapter when connected to a circuit monitor. When using the AC adapter, clip the red and black wires and tape each of them independently so they cannot short against each other, other wires, or the shield.

Common Problems:

The baud rate of the COM: port of the personal computer is not the same as the baud rate of the SY/MAX port.

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

The route 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.

For Local Support and Sales CALL:

