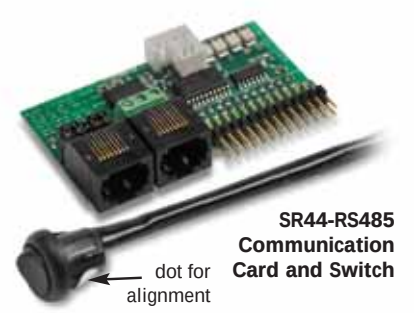
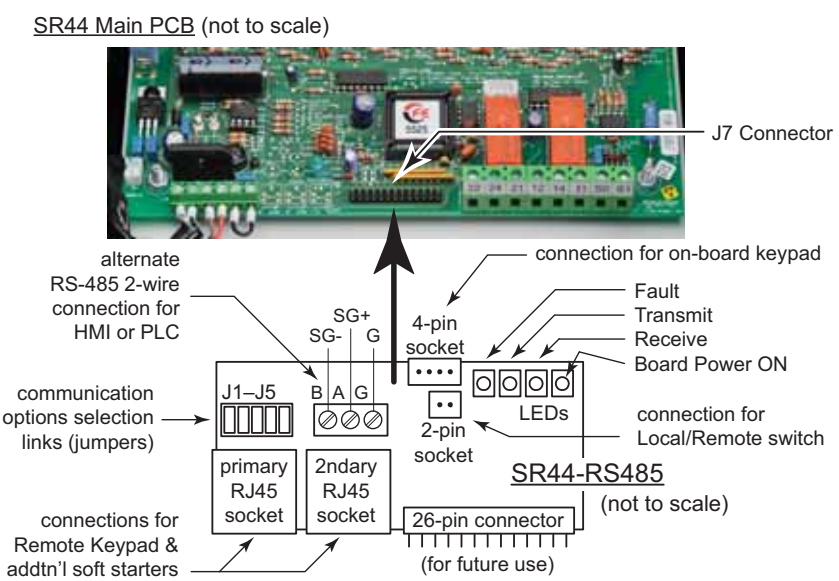
SR44 Optimizing Soft Starter Accessories Quick-start Guide: SR44-KPD Remote Keypad & SR44-RS485 Communication Card

Use of an SR44-KPD Remote Keypad accessory requires the installation of an SR44-RS485 Communication Card accessory in the SR44 Soft Starter.

SR44-KPD Remote Keypad





Installing SR44-RS485 Communication Card onto SR44 Main Circuit Board

Connecting the SR44-RS485 Communication Card

1) Isolate the SR44 from all electrical power sources.
2) Remove the front cover.
3) For size 2 soft starters (174A & higher), insert the Local/Remote extension cable through the starter and out the plugged hole in the bottom of the unit. Then connect the Local/Remote switch to the extension cable. For size 1 soft starters (146A & below), discard the extension cable.
4) Install the "Local/Remote" label and switch/cable assembly (supplied with SR44-RS485) in the plugged hole in the bottom left corner of the starter. Install the switch with the white dot facing the "Remote" side of the label.
5) Fit the SR44-RS485 communication card onto the J7 26-pin header (lower middle of main PCB), then disconnect the cover keypad cable from the main PCB board and connect it to the 4-pin socket on the SR44-RS485 comm card.
6) Install the "Local/Remote" cable onto the SR44-RS485 board in the 2-pin socket.

The starter can now communicate via serial communications when the "Local/Remote" switch is placed in "Remote". This setting disables the keypad on the cover of the starter.

Switching to "Local" will disable serial communication, and enable the keypad located on the cover of the starter.

Connecting the SR44-KPD Remote Keypad

7) The RJ45 cable that is supplied with the remote keypad has two ferrites installed on it to ensure EMC compliance. Plug the end with the thinner ferrite into the Communication Card primary RJ45 socket.
8) Secure the ferrite to the starter using a cable tie.
9) Set Communication Card jumpers J1–J5 as shown in Network Connections drawing shown on next page.
10) Mount the Keypad using the screws provided and plug the other end of the cable, with the larger ferrite, into the SR44-KPD Remote Keypad. (SR44-KPD mounting dimensions are shown on the reverse side of this page.) (Use RTV sealant at mounting holes "A" if NEMA 4X rating is required.) (Remote keypad is N-4X; soft starter is not.)

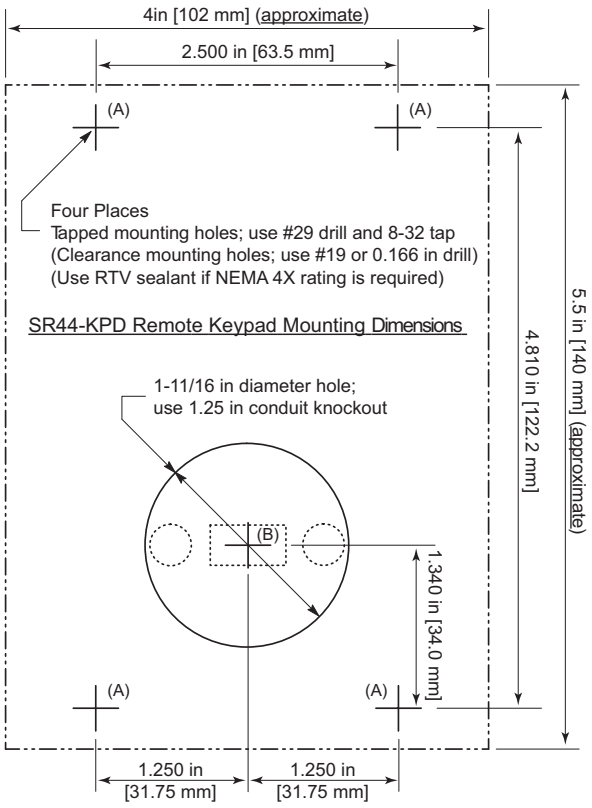
The starter can now be controlled by the Remote Keypad when the "Local/Remote" switch is placed in "Remote". This setting disables the keypad on the cover of the starter.

Switching to "Local" disables the Remote Keypad and serial communications, and enables the built-in Local Keypad.

IMPORTANT: Serial Communication, the Remote Keypad, and the soft starter's built-in Local Keypad are mutually exclusive. Only one function can control the starter at a time. Switching to "Local" will always disable remote control of the starter.

Refer to next page (reverse) for mounting dimensions of SR44-KPD Remote Keypad.

SR44-KPD Mounting Dimensions



Network and Control Basic Information

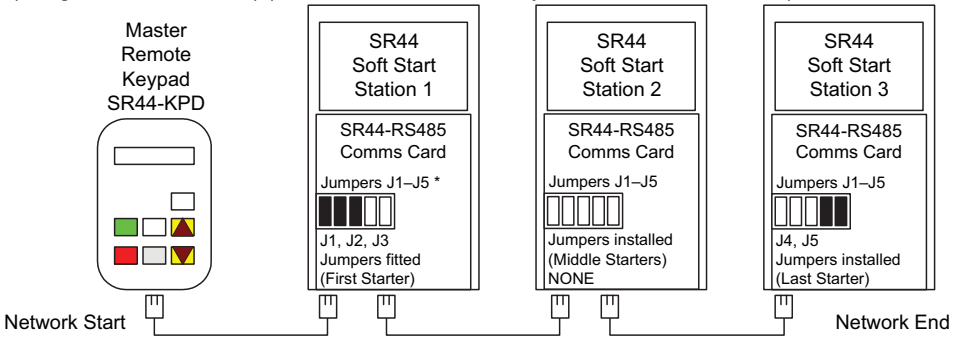
SR44 Soft Starters are controlled by a serial protocol based on the Modbus standard. The addition of an SR44-RS485 Communication Card allows this control to be switched between the integral keypad or an external isolated RS-485 device.

The SR44-RS485 Communication Card and SR44-KPD Remote Keypad have been designed to connect via a standard CAT5 RJ45 terminated Ethernet cable. Additionally, the SR44-RS485 is fitted with a secondary RJ45 connector, which allows multiple soft starters to be connected together. Alternatively, standard twisted pair shielded wiring may be used via the screw terminals.

- Maximum number of starters: 8
- Communication settings: 9600 baud, 8, n, 1
- Cable: RJ45 twisted-pair CAT5 Ethernet patch (3m [10 ft])
- Max network length: 25m [82 ft] for RJ45 connections; 1200m [3937 ft] for RS-485 screw-terminal connections
- The SR44-KPD can control only *one soft starter at a time*, and it displays which soft starter it is currently addressing. (When displaying status, pressing the UP arrow changes the keypad to the next available starter.)
- Separate the network cabling from any power and electric control wiring.
- An external Local/Remote switch is provided with the SR44-RS485 to switch between the internal keypad and an external/remote controlling device.
- The soft starter data is stored in 8-bit bytes that require decoding in the PLC. Refer to the SR44 User Manual for more information.

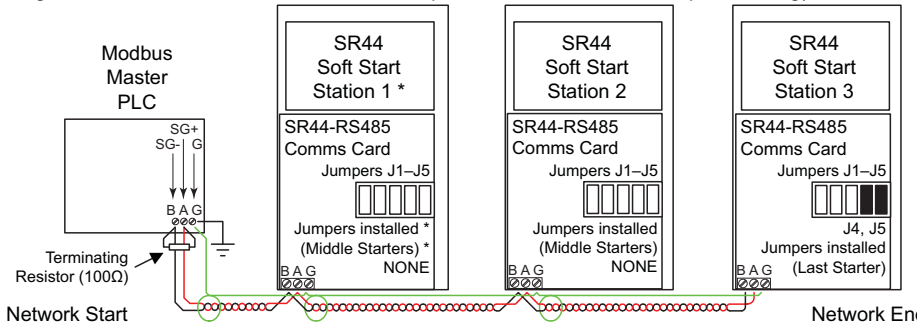
SR44-RS485 & SR44-KPD Network Connections

One SR44-KPD Remote Keypad Controlling Multiple SR44 Soft Starters
(using RJ45 connections) (SR44-KPD can control only *one soft starter at a time*)



* For SR44-KPD connected to only one SR44, install jumpers 1, 2, 4, 5.

One PLC Controlling Multiple SR44 Soft Starters via Serial Protocol
(using screw terminals and Belden 9841 or equivalent shielded, twisted-pair cabling)



* The 'Network Start' terminating resistor is installed at the PLC, and Station 1 is jumpered as a 'Middle Starter'.
* For RS-485 connection to only one SR44, install jumpers 4, 5.