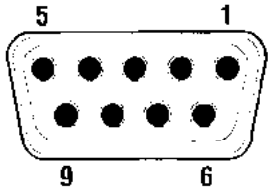
RS485

By adding multiple device addressing, RS485 permits up to 126 devices to communicate over the same serial network with the same distance and noise immunity specs that RS422 provides.



Contact	Use
1	GND
2	N/C
3	N/C
4	TX/RX +
5	TX/RX -
6	N/C
7	N/C
8	TX/RX +
9	TX/RX -
Shell	Protection Ground (Conductive Shell)

Note: 4 and 8 are tied together in the SmartLink cable, as well as 5 and 9. Therefore, only 3 connections are needed for RS485 - 1,4,5.

Protocol: Command/Response with Address

Addresses: Up to 124 devices, any single printable ASCII character

Comm. Signals: Transmit -Receive pair (+/-), Common, Shield

Parity: None

Baud: 1200, 2400, 4800, 9600, 19.2K

Stop Bits: 1

Data Format: ASCII

Input Levels: Mark=False=-R+>-by>200mV; Space=True=R+<R-by<200mV

Cable Distance: 4,000 Feet

Timing Format: Asynchronous

Duplex: Half, Multidrop

Use the "config:comm:RS485" command to configure the RS485 address. Any single printable ASCII character can be used. To send a command to an RS485 SmartLink™, append the address inside "()" before the command.

Examples:

:config:comm:RS485 9600 CR none A (This command can only be issued through the Local Port)

(A):meas? 1 (This command can be issued through the RS485 port.)

This will configure the SmartLink™ as address (A), then take a measurement from channel 1 on SmartLink (A).

Note: The ASCII space character ( ) is the broadcast message. All SmartLink™ instruments will execute the command sent to address ( ) but none will transmit a prompt back (to avoid collisions).

The (!) address is a special address. It functions like any other valid address but is the only address that will transmit back a response to the broadcast message. This means that it will execute and return a prompt to any command sent to the ( ) or (!) address.

Preliminary Specifications

Communications interfaces and architectures are evolving continuously. Contact factory for information on the following:

- HART
- DeviceNet
- ProfiBus
- Centronics
- 4-20mA/0-10V
- USB (Universal Serial Bus)
- Foundation Fieldbus H1