

2-2.3. Personality Module

The Link Controller Personality module provides two (J1 and J2) male DB9 connectors for the desired serial links (see [Figure 2-1](#)).

There are two Personality module groups for the Link Controller Module. Select the appropriate group for the desired serial link.

Group One Personality Module

Group One (**1C31169G01**) provides for an RS-232 serial link.

- J1 Port is an RS-232 Programming Port which is used to interface to a Personal Computer (used for keyboard input, CRT display, and file transfer functions).
- J2 Port is an RS-232 Applications Port (in **CE Mark certified systems**, the application port cable must be less than 10 meters (32.8 ft)).

Group Two Personality Module

Group Two (**1C31169G02**) provides for an RS-485/RS-422 four-wire full duplex serial link.

- J1 Port is an RS-232 Programming Port which is used to interface to a Personal Computer.
- J2 Port is an RS-485 Applications Port (also may be used as an RS-422 serial link).
 - The J2 Port transmitter has a software controlled tri-state enable input (TX-ENA). TX-ENA must be asserted (high or logic one) if the J2 Applications port is to transmit RS-485/RS-422 serial data. It is the responsibility of the Link Controller's application program to ensure that TX-ENA is asserted whenever serial data is transmitted from the J2 port.
 - The application program must use Bit 1 of the Applications port UART Modem Control register (MCR) to control the state of the UART's RTS/ output. MCR is an eight-bit register mapped to the LC processor I/O address 03FCH.

2-3. Module Specifications

Table 2-1. Link Controller Module Specifications

Description	Value
Number of serial ports	2
<p>Applications serial port</p> <p>(In CE Mark certified systems, the Link Controller must be used only in communication fault tolerant systems. That is, communication retries must be tolerated.)</p>	<p>Signals are galvanically isolated from logic common.</p> <p>This port may be interfaced via the Personality module's J2 male DB9 connector (refer to Table 2-2 or Table 2-3) OR via the Base unit terminal block (refer to Figure 2-2).</p> <p>(1C31169G01) RS-232 signal levels: Note that standard IBM PC/AT COM1 port pin assignments are present at the J2 DB9 connector OR (1C31169G02) RS-485/RS-422 signal levels: four wire link, RS-485/RS-422 transmitter/receiver. Resistor terminations are user selectable.</p>
Applications serial port baud rate	300, 600, 1200, 2400, 4800, 9600, or 19200
Applications serial port dielectric isolation: (Port to logic)	1000 V AC peak/DC
Programming serial port	<p>Signals are not galvanically isolated from logic common.</p> <p>RS-232 signal levels (TX/ and RX/)</p> <p>This port must be interfaced via the Personality module's J1 male DB9 connector (refer to Table 2-7)</p>
Programming serial port baud rate	<p>19200 baud (default)</p> <p>OR</p> <p>9600 baud (user selectable option)</p>
Processor	80C186EC 16-bit
Program RAM	640 Kbytes
Dual port RAM	4 Kwords (data interface between the I/O bus and the Link Controller module)
Module power	<p>3 W typical</p> <p>4 W maximum</p>
Operating temperature range	0 to 60°C (32°F to 140°F)
Storage temperature range	-40°C to 85°C (-40°F to 185 °F)
Humidity (non-condensing)	0 to 95%

Notes

1. Do not use unmarked terminal block locations.
2. Shield terminals (SH) are not connected in **CE Mark certified systems**.

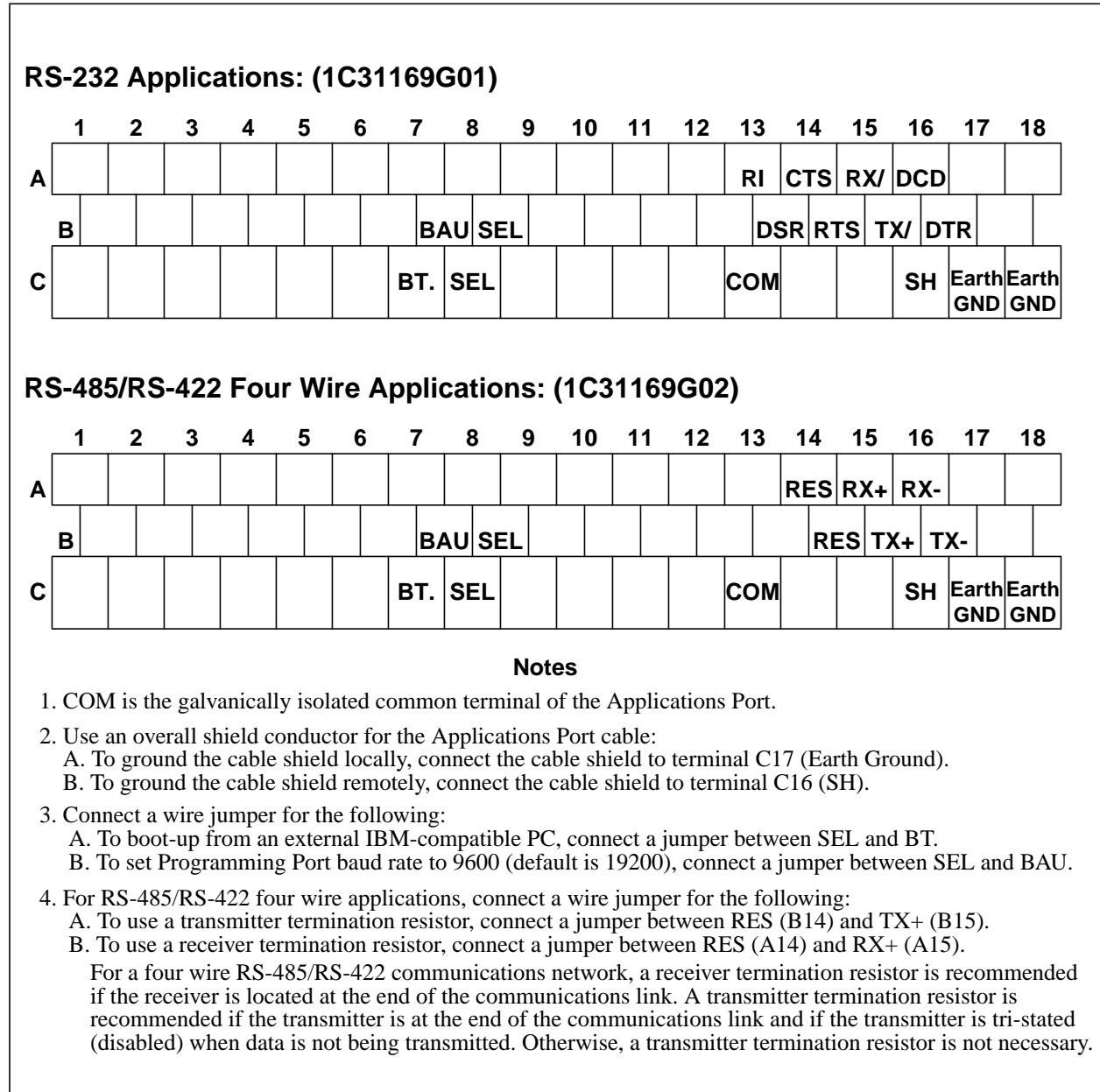


Figure 2-2. Terminal Block Connections for the Link Controller Personality Module

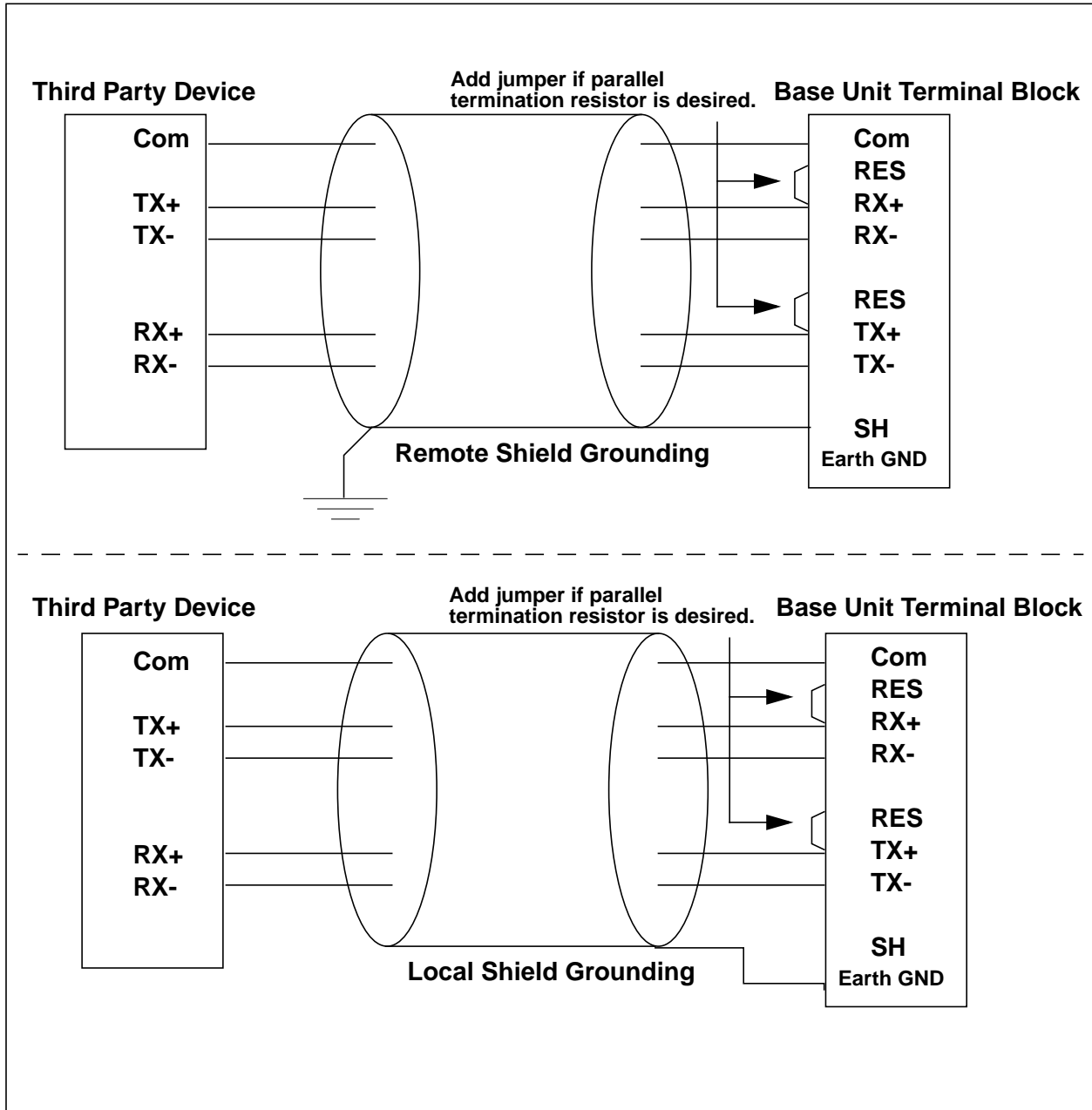


Figure 2-4. Terminal Block RS-485/RS-422 Four-Wire Serial Interface (1C31169G02) (Non-CE Mark)