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Application Bulletin 000-0517 REV. D

RD-4 Installation and Programming Instructions

I. Purpose:

- To instruct technicians in proper installation, wiring, and programming of the RD-4 Remote Display.

II. Scope:

- This procedure applies to the INCON Model RD-4, Remote Display used with the INCON model 1250B, 1250-LTC and 1511-LTC with the "-S" Serial RS-232 option.
- Only 1250's and 1511-LTC's with serial number 75000 and higher (late 2001) have the necessary software to drive the RD-4 display. Units built before that serial number, are not capable of driving the RD-4 display.

III. Associated Documents or Data:

- 000-1077 1250 Installation and Programming Manual
- 000-2072 1250-LTC Installation and Programming Manual
- 000-2068 1511-LTC Installation and Programming Manual
- 000-0281 Comm Port Adapter Application Bulletin

Description:

The RD-4 is a 4-digit slave display providing remote readout from programmable instruments with serial RS-232 output. The Remote Display features a large 3 color programmable display with the capability to change color if an alarm limit is exceeded. Power required is from 10 to 36 VDC. The unit is supplied with a Communications Port Adapter an AC adaptor with 12 VDC output.

Mounting:

The RD-4 can be panel mounted in a square cutout or surface mounted on the bracket included.

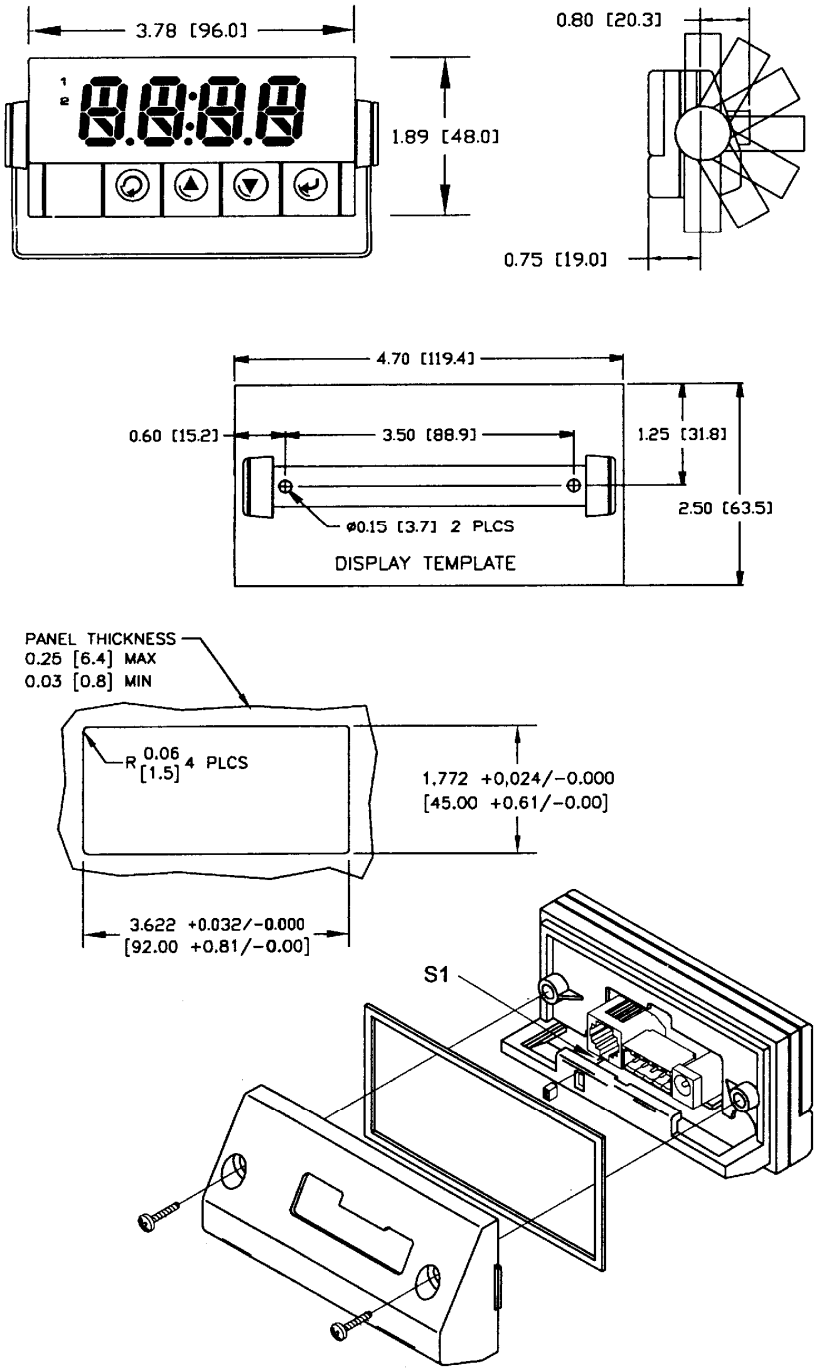

Figure 1 Mounting

Wiring:

1. Remove the terminal guard from the back of the instrument (2 Philips screws).
2. Insert the Comm Port Adapter firmly on to the instrument's gold-fingered card edge. (See Figure 1.)
3. Perform any other field wiring to the instrument's screw terminals before reinstalling the terminal guard.
4. Install the terminal guard.
5. Strip the insulation from each wire to be connected ¼ inch from the end.
6. Twist all wire strands tightly together and insert the wire fully into the connector opening. Make sure that there are no loose strands sticking out from the connector opening.

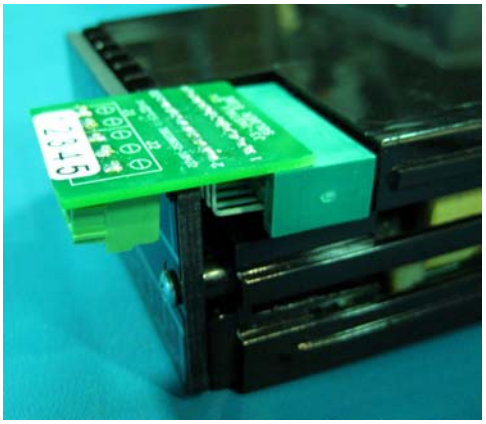

Figure 1

7. The Comm Port Adapter must be plugged onto the Comm Port on the back of the 1250/1511. Additional RD-4 remote displays can be wired in parallel to the COM and TX lines. Wiring may be done at the screw terminals or through the RJ-12 connector. Plug the AC power adaptor into the power jack.

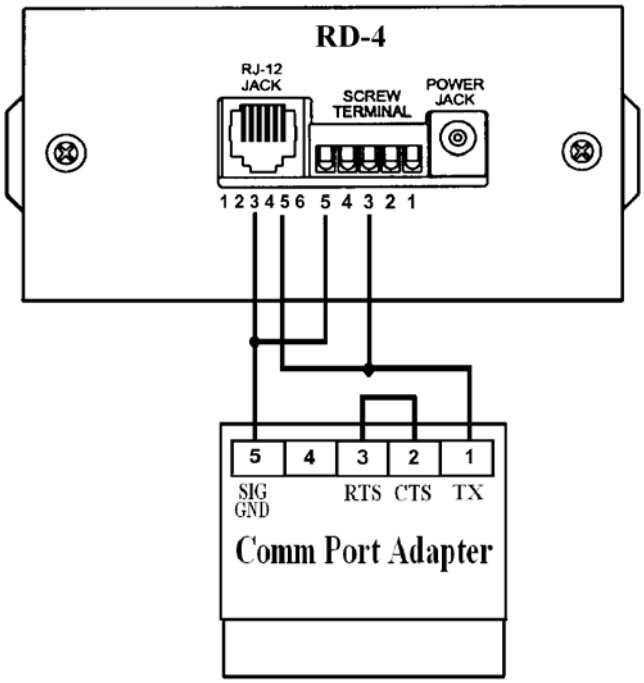

Figure 2. RD-4 Wiring

Programming:

The **1250 or 1511 Series Monitor** must be programmed to transmit the displayed value in the proper format to the remote display(s). To do this perform the following steps:

1. Enter the 1250/1511's programming mode. Scroll up to OP 51 / RS232 in the menu and enter. Change the value to "7" and enter.
2. Exit the programming mode by scrolling down to OP 0 / Run and pressing the ENTER key.

The **RD-4** must be programmed to accept the 1250/1511's serial communication. To set up the RD-4 for use with the 1250/1511, perform the following steps:

1. Power-up the RD-4. The display should read "VR 1.3".
2. Press the "↻" button. The display should read "ALR 1". You are now in the main menu.
3. Press the "↻" button until the display reads "NO.CR". Press the "↵" button to enter the menu item. Choose the desired color for normal display, Green, Red, or Amber using the "▼" or "▲" buttons. Press the "↵" button to select the chosen color. The display should flash "StOR" for several seconds as it stores the new parameter.
4. The display should read "ModE". Press the "↵" button to enter the menu item. Select "SLAV" from the menu. Press the "↵" button to select the slave mode. The display should flash "StOR" for several seconds as it stores the new parameter.
5. The display should read "bAUd". The default baud rate for both the 1250/1511 and the RD-4 is 9600. If you desire to change the baud rate, press the "↵" button to enter the menu item. Use the "▼" or "▲" buttons to choose the desired baud rate and press the "↵" button to select the chosen baud rate. The display should flash "StOR" for several seconds as it stores the new parameter.
6. The display should read "FORM". Press the "↵" button to enter the menu item. Choose "8N1" from the menu. Press the "↵" button to select 8 bits, no parity, 1 stop bit. The display should flash "StOR" for several seconds as it stores the new parameter.
7. The display should read "COMM". Press the "↵" button to enter the menu item. Choose "232" from the menu. Press the "↵" button to select RS-232 communication. The display should flash "StOR" for several seconds as it stores the new parameter.
8. The display should read "AddR". Press the "▼" or "▲" button to exit the programming menu. The display should read "VR 1.3".

If you desire to have the display color change when an upper or lower limit is reached perform the following steps. If not, skip to step #21.

9. Press the "↻" button. The display should read "ALR 1". Press the "↵" button to enter the menu item. Enable Alarm 1 by pressing the "▲" button. The display should read "ON". Press the "↵" button. The display should flash "StOR" for several seconds as it stores the new parameter.
10. The display should read "A1Md". Press the "↵" button to enter the menu item. Select "A1LO" from the menu. Press the "↵" button to cause the first alarm to turn on at the low limit. The display should flash "StOR" for several seconds as it stores the new parameter.
11. The display should read "LO-1". Press the "↵" button to enter the menu item. Scroll up or down using the "▼" or "▲" buttons to set the desired value for the low limit of the first alarm. Press the "↵" button to enter the value. (When the displayed value is below this limit the display will change to another color.) The display should flash "StOR" for several seconds as it stores the new parameter.
12. The display should read "HI-1". Press the "↻" button to skip this parameter.
13. The display should read "A1CR". Press the "↵" button to enter the menu item. Choose the desired display color for the low alarm. This color should be different from the normal display color. Press the "↵" button to select the chosen low alarm display color. The display should flash "StOR" for several seconds as it stores the new parameter.
14. The display should read "ALR 2". Press the "↵" button to enter the menu item. Enable Alarm 2 by pressing the "▲" button. The display should read "ON". The display should flash "StOR" for several seconds as it stores the new parameter.
15. The display should read "A2Md". Press the "↵" button to enter the menu item. Select "A2HI" from the menu. Press the "↵" button to cause the second alarm to turn on at the high limit. The display should flash "StOR" for several seconds as it stores the new parameter.
16. The display should read "LO-2". Press the "↻" button to skip this parameter.
17. The display should read "HI-2". Press the "↵" button to enter the menu item. Scroll up or down using the "▼" or "▲" buttons to set the desired value for the high limit of the second alarm. Press the "↵" button to enter the value. (When the displayed value is above this limit the display will change to another color.) The display should flash "StOR" for several seconds as it stores the new parameter.

18. The display should read “A2CR”. Press the “↵” button to enter the menu item. Choose the desired display color for the high alarm. This color should be different from the normal display color. It may be the same as the low alarm color or a third color, if desired. Press the “↵” button to select the chosen high alarm display color. The display should flash “StOR” for several seconds as it stores the new parameter.
19. The display should read “OUt”. Press the “↵” button to enter the menu item. The display should read “UNLA”. If not, press the “▲” button to choose “UNLA”. Press the “↵” button to select the unlatched alarm output mode. The display should flash “StOR” for several seconds as it stores the new parameter.
20. Exit the programming mode by pressing the “▼” or “▲” button. The display should read “VR 1.3”
21. Connect the RS-232 input to the 1250 serial cable, connect the serial cable to the 1250. (See Figure 2.) Cycle the power on the 1250 and the RD-4.
22. The value on the 1250’s display should appear on the RD-4’s display.