



## Using the DL50 Dataliner with New Platform PLC-5 Controllers

(Catalog No. 2706-F11J, -F21J)

### Application Note

#### Overview

This document shows how to operate the Allen-Bradley DL50 Dataliner Message Display (Catalog No. 2706-F11J, -F21J) with the new platform PLC-5 controllers (PLC-5/20, 5/30 5/40, 5/60) using the RS-232/RS-423 serial communication port. A sample ladder logic program sends two ASCII text strings from the serial port of a new platform PLC-5 to the DL50. You can use a simulator card in the local chassis to energize the AWT ladder instructions.

Separate sections show how to:

- Set DL50 DIP Switches
- Connect DL50 to new platform PLC-5 controller
- Configure Channel 0 port of new platform PLC-5 controller
- Enter two ASCII text strings using 6200 Series Programming Software
- Enter sample ladder logic program

#### Related Publications

Refer to the following documentation for additional information on the DL50 Dataliner Message Display and the new platform PLC-5 controllers.

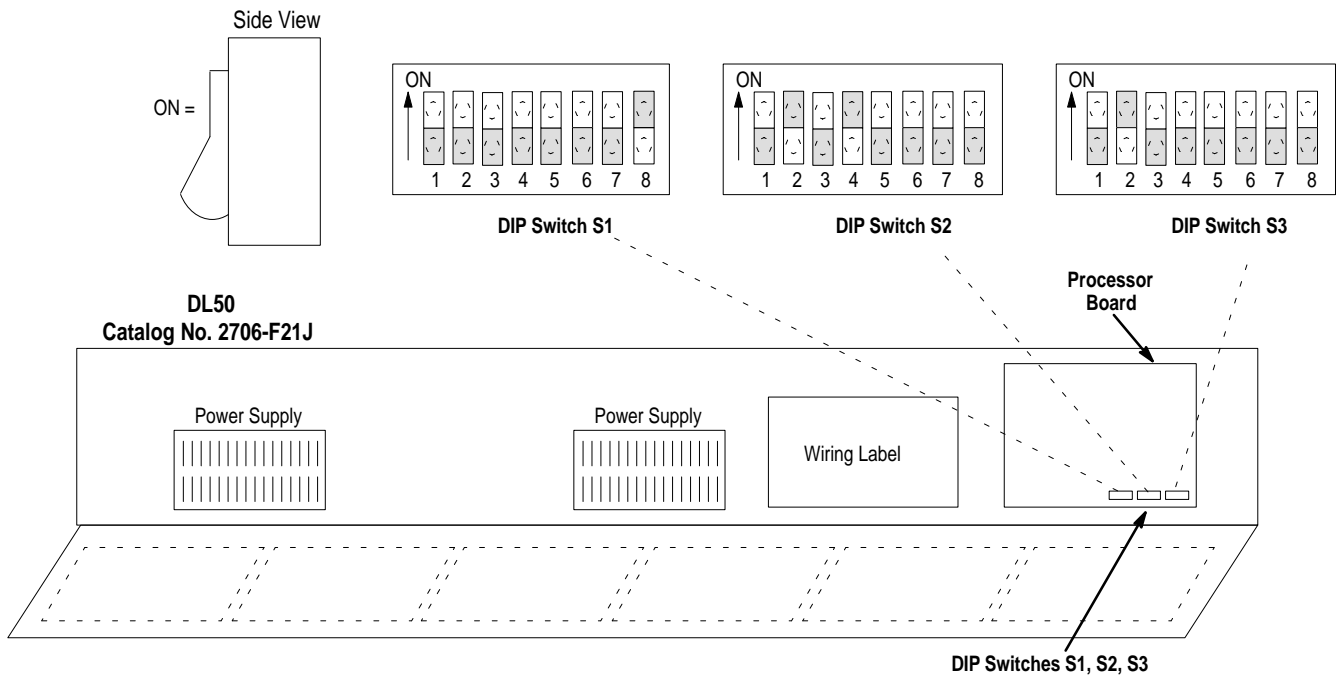
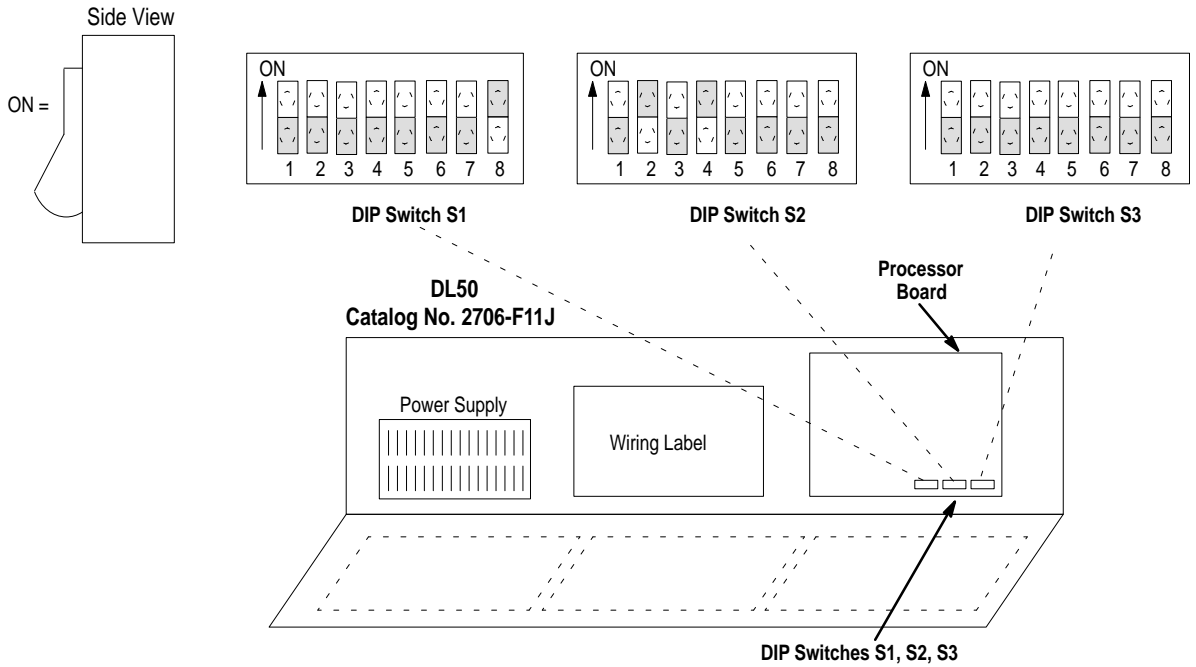
| Publication Title                                    | Publication Number |
|--|--------------------|
| User Manual<br>DL50 Series Dataliner Message Display | 2706-ND004         |
| PLC-5 Programming Documentation Set                  | 6200-N8.001        |

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### DL50 DIP Switch Settings

To enable communications between the DL50 Dataliner (Catalog No. 2706-F11J, -F21J) and the new platform PLC-5 controllers, set the DIP switches on the DL50 as follows:

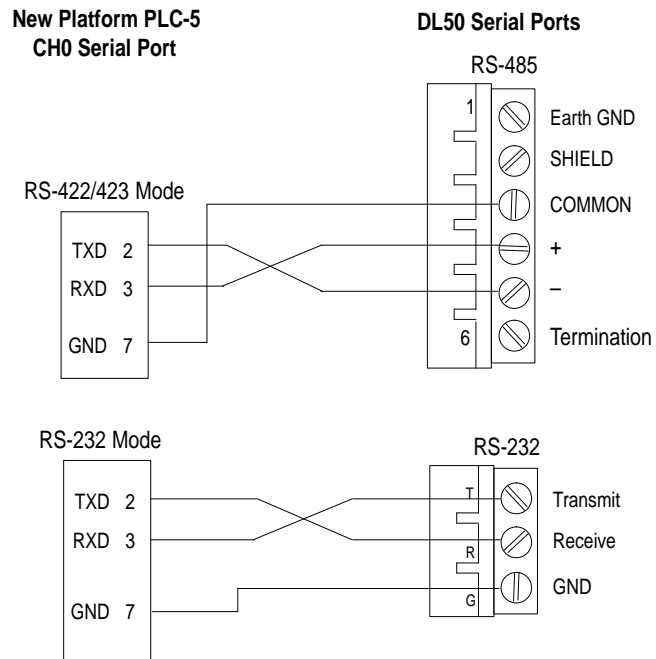


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## Connecting DL50 to New Platform PLC-5

This section shows how to wire the RS-485 and RS-232 serial ports of the DL50 to the Channel 0 port of a new platform PLC-5.



**Note:** You must set the PLC-5 processor for either RS-422/423 mode or RS-232 mode using the SW2 DIP switches on the processor.

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### Configuring Channel 0 Port of New Platform PLC-5

To configure the Channel 0 serial port of a new platform PLC-5, follow these steps:

1. Start the Allen-Bradley 6200 Series Programming Software.
2. Select *F1 Online Program*.
3. Select *F8 Monitor File*.
4. Select *F7 General Utility*.
5. Change the PLC-5 to Program Mode using the processor key switch.
6. Select *F4 Channel Overview*.
7. Use the  $\uparrow\downarrow$  arrow keys to select Ch 0.
8. Channel 0 must be set to USER. Select *F10 Select Option USER*.
9. Select *F1 Accept Edits*.
10. Select *F5 Channel Config* to bring up the *User Mode Channel 0 Configuration* screen.

Edit the configuration fields (using the F1 and F10 keys) so that the Channel 0 Configuration screen looks like this.

#### User Mode Channel 0 Configuration

|                       |                |                         |          |
|-----------------------|----------------|-------------------------|----------|
| Diag. File:           | 0              | XON/XOFF:               | DISABLED |
| Remote mode change:   | DISABLED       | System mode char.:      | S        |
| Mode attention char.: | \0x1b          | User mode char.:        | U        |
| Baud rate:            | 9600           | Parity:                 | NONE     |
| Stop bits:            | 1              | Bits per character:     | 8        |
| Control line:         | NO HANDSHAKING |                         |          |
| Echo/delete mode:     | CRT            | RTS send delay (20 ms): | 0        |
|                       |                | RTS off delay (20 ms):  | 0        |
| Termination 1:        | \0xd           | Append 1:               | \0xd     |
| Termination 2:        | \0xff          | Append 2:               | \0xa     |

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**Entering ASCII  
Text Strings**

The Channel 0 serial port of the new platform PLC-5 will send out the simplex ASCII text strings shown below. For a complete description of the text string packets, refer to the DL50 User Manual (Publication 2706-ND004).

DL50

OVER TEMP

|                     |                                 |                            |                               |                                |                     |
|---------------------|---------------------------------|----------------------------|-------------------------------|--------------------------------|---------------------|
| Field 1<br>Not Used | Field 2<br>OVER TEMP<br>9 Bytes | Field 3<br>^B<br>Flash Msg | Field 4<br>^A<br>Slave Addr=1 | Field 5<br>^C<br>Msg on Line 3 | Field 6<br>^M<br>CR |
|---------------------|---------------------------------|----------------------------|-------------------------------|--------------------------------|---------------------|

DL50

CONVEYOR JAM AT BAY1

|                     |   |                     |                               |                                |                     |
|---------------------|---|---------------------|-------------------------------|--------------------------------|---------------------|
| Field 1<br>Not Used | Field 2<br>CONVEYOR JAM AT BAY1<br>20 Bytes | Field 3<br>Not Used | Field 4<br>^A<br>Slave Addr=1 | Field 5<br>^A<br>Msg on Line 1 | Field 6<br>^M<br>CR |
|---------------------|---|---------------------|-------------------------------|--------------------------------|---------------------|

Use the Data Monitor of the 6200 Series Programming Software to enter the ASCII text strings.

**Note:** Control Codes are entered as hexadecimal numbers. For example, in Field 3 of the first string, control code ^B is entered as HEX 02.

*Do not enter spaces or delimiters between data fields.*

To enter the ASCII string OVER TEMP, you would type the following:

OVER TEMP\02\01\03\Control D [Enter]

Using the Data Monitor enter the following data for each text string.

| PLC5 Data Monitor |     |                            |
|-------------------|-----|----------------------------|
| Address           | LEN | String Text                |
| ST37L:2           | 13  | OVER TEMP^B^A^C^M          |
| ST37L:3           | 23  | CONVEYOR JAM AT BAY1^A^A^M |

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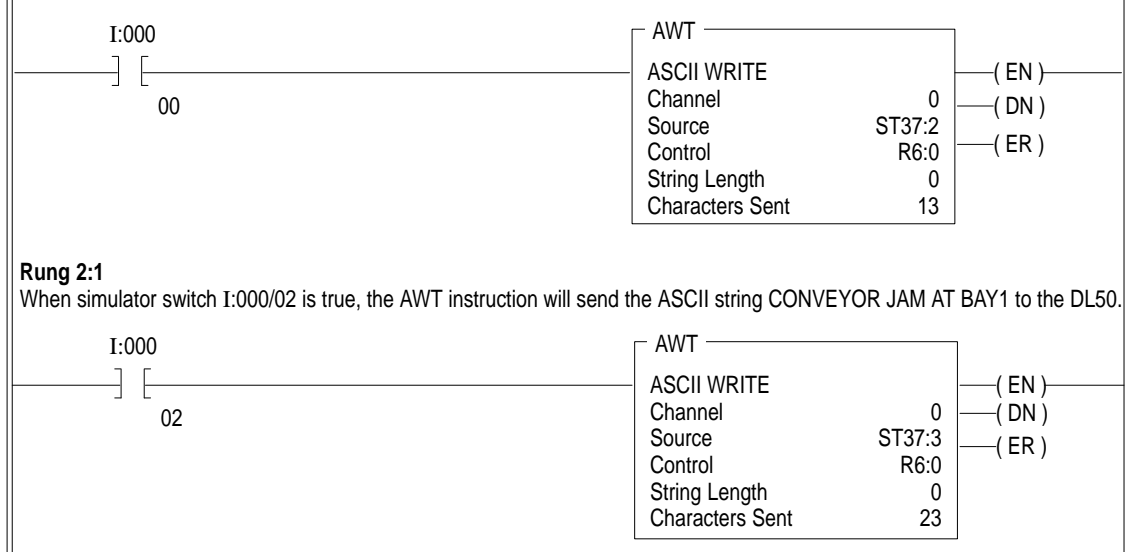
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## Sample Ladder Logic Program

Enter the following ladder logic program. You can use a simulator card in the local chassis to energize the AWT ladder instructions.

### Rung 2:0

When the simulator switch I:000/00 is true, the AWT instruction will send the ASCII string OVER TEMP to the DL50.



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**Notes:**

