



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.

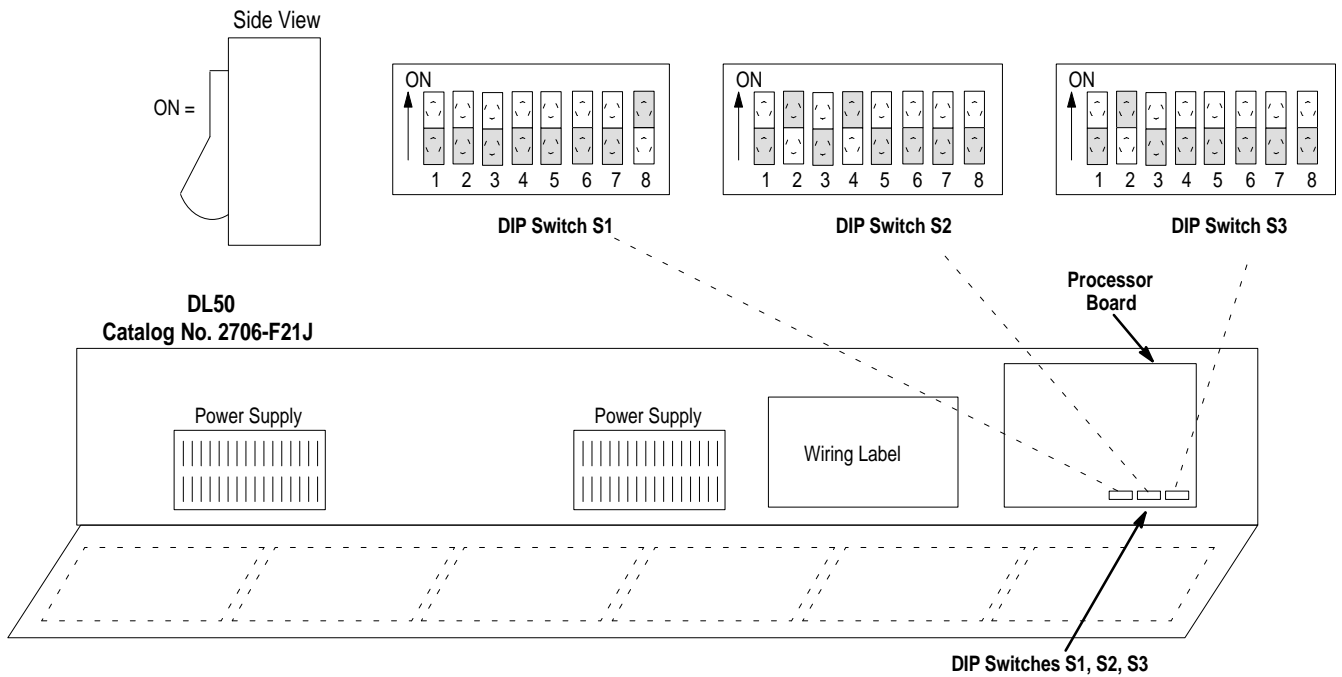
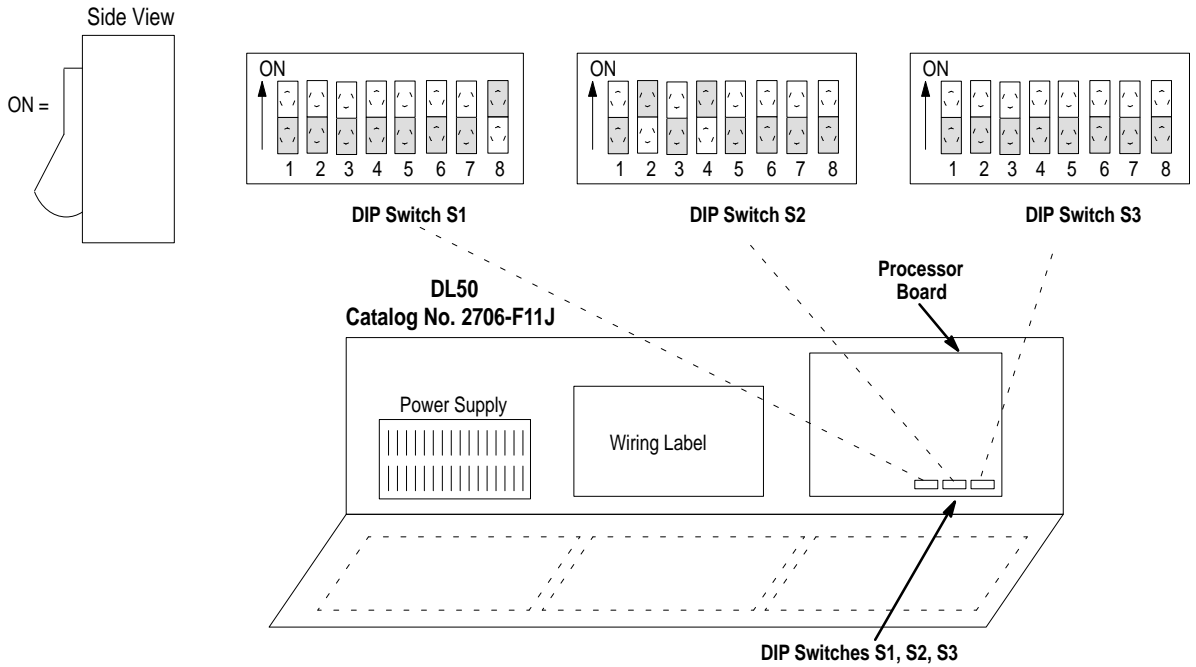
Publication Title	Publication Number
User Manual DL50 Series Dataliner Message Display	2706-ND004
PLC-5 Programming Documentation Set	6200-N8.001

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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:

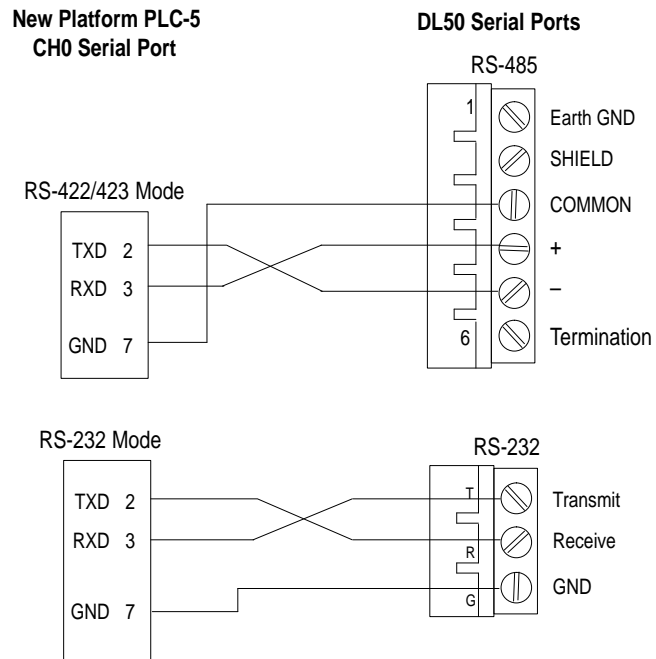


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Connecting DL50 to New Platform PLC-5

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 Not Used	Field 2 OVER TEMP 9 Bytes	Field 3 ^B Flash Msg	Field 4 ^A Slave Addr=1	Field 5 ^C Msg on Line 3	Field 6 ^M CR
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DL50

CONVEYOR JAM AT BAY1

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

AB PLCs

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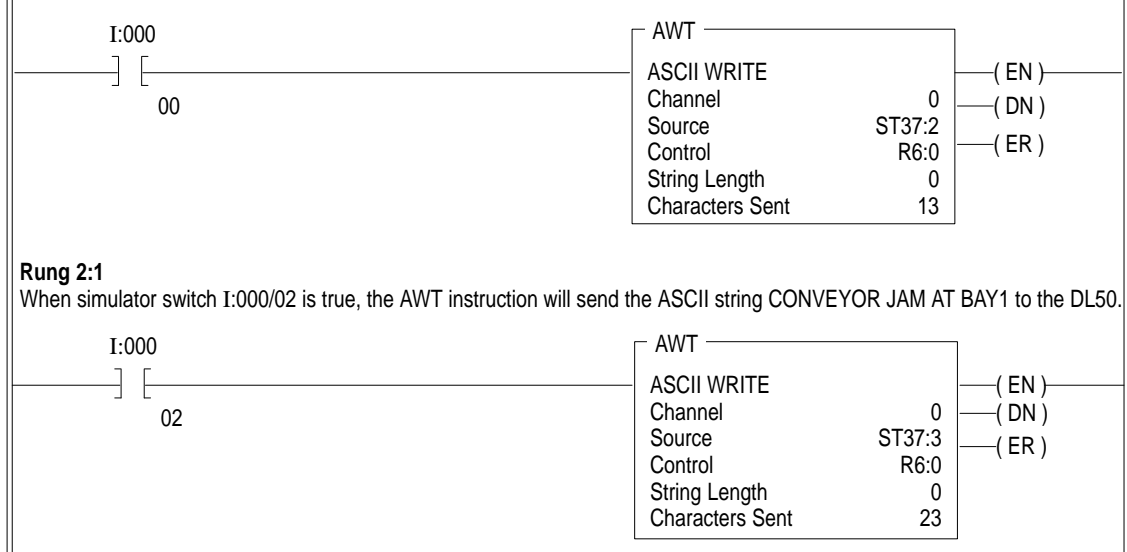
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Sample Ladder Logic Program

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

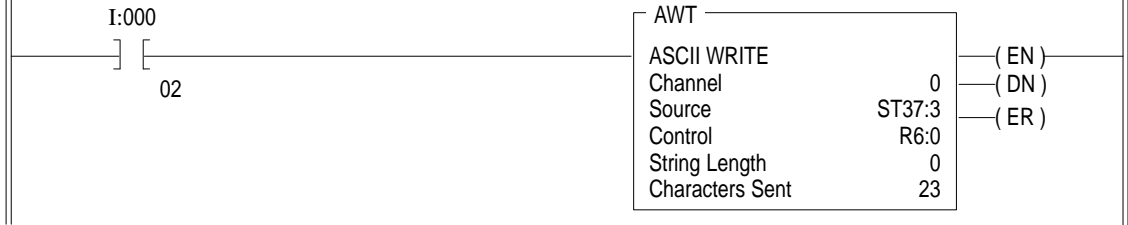
Rung 2:0

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



Rung 2:1

When simulator switch I:000/02 is true, the AWT instruction will send the ASCII string CONVEYOR JAM AT BAY1 to the DL50.



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Notes:

AB PLCs

