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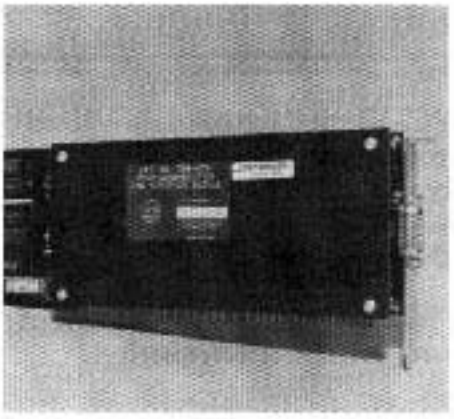
Find the *Rockwell / Allen-Bradley 1784-KTK1* at our website: *Click HERE*

ALLEN-BRADLEY

Allen-Bradley Peer Communication Link Interface Module

(Cat. No. 1784-KTK1)

Product Data



1784-PT5 Ordering Information

The 1784-KTK1 is a part of the 1784-PT5 Programming Terminal Interface package which contains the components necessary to complete the link between your IBM-PC/AT compatible computer and any PLC-5 family processor. The Allen-Bradley Company supplies the 1784-PT5 Programming Terminal Interface Package with with the following components:

- 1784-KTK1 Peer Communication Link Interface Module
- 1784-CP5 Communication Cable to PLC-5 processor
- 6201-DDA PLC-5 Programming Software for IBM-AT compatible computers (5-1/4 inch floppy disk) and the PLC-5 Programming Software User's Manual

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Compatibles

Allen-Bradley has verified the 6201-DDA software in the following IBM-AT compatibles:

- IBM-AT
- AT&T 6300
- Compaq Portable 286
- Compaq Portable II

Note: The 1784-T50 Industrial Terminal comes with the required 6226-DDB PLC-5 Industrial Terminal Support Software (3-1/2 inch floppy disk) and associated documentation.

Introduction and General Description

The Peer Communication Link (PCL) Interface Module allows an Allen-Bradley 1784-T50 terminal or an IBM-AT compatible computer to communicate directly with a single PLC-5 family controller or, if connected to a Peer Communication Link, to all controllers and terminals on the PCL.

The 1784-KTK1 board can reside in any available 16-bit slot of the 1784-T50 or an IBM-PC/AT compatible; it physically requires two slots.

Features and Benefits

- Single-cable connection to PLC-5
- Slot addressable, may be used with other option boards installed in your computer
- Ladder element intensification
- Requires no external power
- On-line programming
- Upload/download capability
- On-line data monitor
- Data change
- Processor mode change
- I/O forcing
- Test-edit mode

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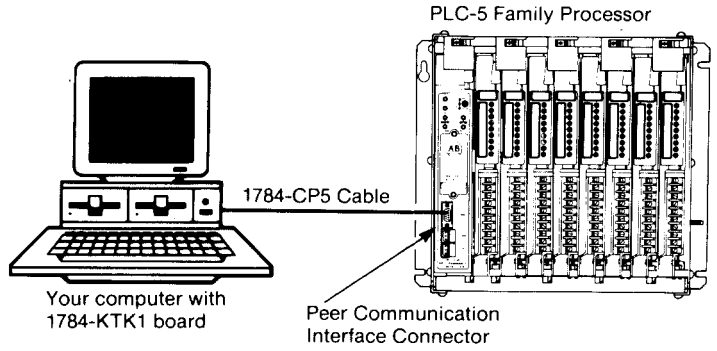
Operation

The 1784-PT5 package provides 1784-T50 Industrial Terminal emulation capabilities to users of IBM-AT compatible computers. The included 6201-DDA software duplicates the on-line functions available on the T50 Industrial Terminal. The 1784-KTK1 PCL Communication Interface module is installed in your computer to support the “handshaking” routines necessary for your computer and PLC-5 processor(s) to communicate with each other.

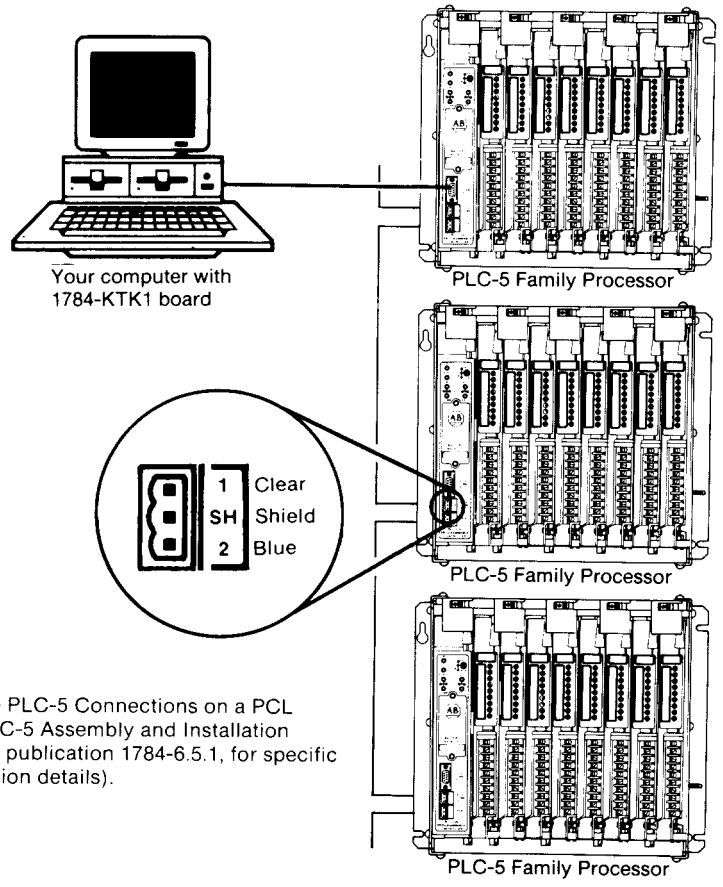
Connection from the 1784-KTK1 module to the Peer Communication Link requires only one cable that plugs directly in to a PLC-5 family processor. From this one connection you are linked to all other PLC-5’s on the PCL (Figure 1).

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Figure 1
1784-KTK1 Interface Module Placement on a PCL



Single PLC-5 Connection



Multiple PLC-5 Connections on a PCL
(See PLC-5 Assembly and Installation manual, publication 1784-6.5.1, for specific connection details).

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Menu screens provided by the 6201-DDA software (IBM-AT compatibles) or 6226-DDB software (1784-T50 Industrial Terminals) direct you through communication and addressing setups.

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Note: The use of other boards along with the 1784-KTK1 may result in expansion slot bus address conflicts. We suggest resetting the 1784-KTK1 to one of the noted addresses in Table 1.

Installation

You can install this module in any Allen-Bradley T50 Industrial Terminal or IBM-AT compatible computer; however, certain handling precautions must be observed to prevent damage to the board during installation.

Electrostatic Discharge

Electrostatic discharge can degrade performance or damage the module. If you observe the following precautions you can guard against electrostatic damage.

- Touch a grounded object to rid yourself of charge before handling the module.
- Do not touch the backplane connector or connector pins.
- If you set configuration plugs or switches or replace internal components, do not touch other circuit components inside the module. If available, use a static-safe work station.
- When not in use, keep the module in its static-shield bag.

Installation Procedures

To install the 1784-KTK1 board into your T50 Industrial Terminal, follow the instructions in the Industrial Terminal User's Manual (Pub. No. 1784-6.5.1).Software installation instructions are in the PLC-5 Programming Software User's manual (Pub. No. 6226-6.5.1)

To install the 1784-KTK1 board into your IBM-PC/AT compatible computer:

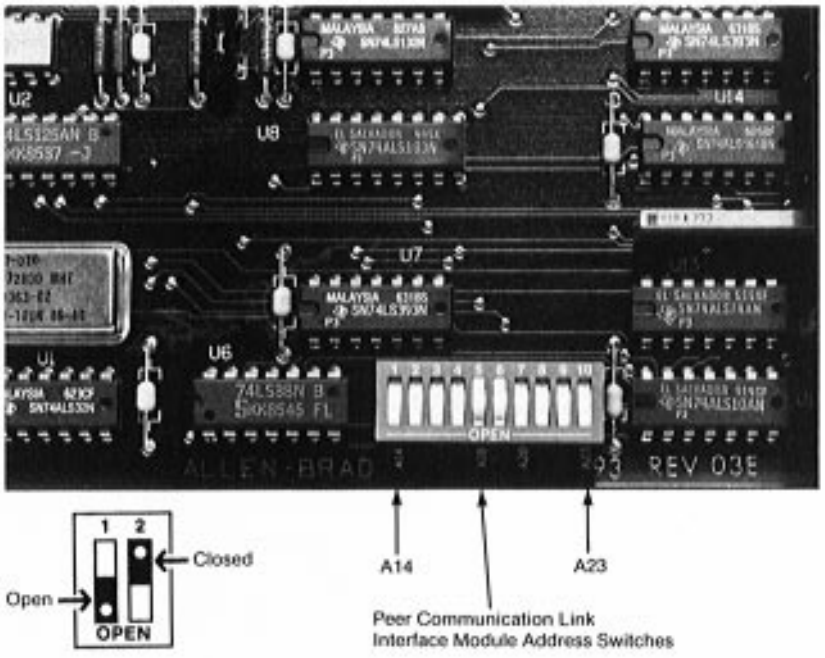
1. Turn the computer off and remove the ac line cord.
2. Next, verify that two adjacent backplane slots are available. The KTK1 PCL board requires only one slot for its connections, but it is two slots wide.
3. At the desired slot location remove the screw holding the option-retaining bracket and remove the bracket.
4. Determine what memory address the board should have and set the switchpack on the board. NOTE: most first-time installations will not require a switch change. Merely verify that the switches are set properly.

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a. Select a memory address. Only the addresses of Table 1 are acceptable — assuming that they do not conflict with an already installed board (enhanced color graphics adapter, for example). Likewise, use of addresses not in the table may result in a system crash.

b. Set switches A14 through A23 (figure 2) in accordance with the following table:

Figure 2
PCL Interface Board Address Switches for Setting the Base Address



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Table 1
1784-KTK1 Board Switch Settings

Memory Address (Hexadecimal)	PCL Board Switch Settings										Software Address (Binary)
M S B L S B	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	
A000:0000	closed	closed	closed	open	closed	open	closed	closed	closed	closed	0001010000
A4000:0000	open	closed	closed	open	closed	open	closed	closed	closed	closed	1001010000
A800:0000	closed	open	closed	open	closed	open	closed	closed	closed	closed	0101010000
AC00:0000	open	open	closed	open	closed	open	closed	closed	closed	closed	1101010000
B400:0000	open	closed	open	open	closed	open	closed	closed	closed	closed	1011010000
B800:0000	closed	open	open	open	closed	open	closed	closed	closed	closed	0111010000
[1] C000:0000	closed	closed	closed	closed	open	open	closed	closed	closed	closed	0000110000
[2] C400:0000	open	closed	closed	closed	open	open	closed	closed	closed	closed	1000110000
[2] C800:0000	closed	open	closed	closed	open	open	closed	closed	closed	closed	0100110000
[2] CC00:0000	open	open	closed	closed	open	open	closed	closed	closed	closed	1100110000
[2] D000:0000	closed	closed	open	closed	open	open	closed	closed	closed	closed	0010110000
[2] D400:0000	open	closed	open	closed	open	open	closed	closed	closed	closed	1010110000
[2] D800:0000	closed	open	open	closed	open	open	closed	closed	closed	closed	0110110000

Where: [1] = Factory-set address
[2] = preferred addresses when readdressing the 1784-KTK1 board (See NOTE on page 3.)



CAUTION: The PCL network cannot successfully establish communications unless the system configuration and the switchpack settings are the same.

Note: Holding the board with the switchpack at the bottom (figure 2), orients the switchpack in the same order as table 1.

Your computer is now ready to accept the PCL Interface Board.

5. With a hand on each end of the board, gently slide the board into the card-edge guides, then firmly seat the board into its connector. Reinstall the screw into the option retaining bracket.

6. Reinstall the top cover.

7. Connect the 1784-KTK1 board to the PLC-5 family processor with the 1784-CP5 cable.

8. Reconnect the ac line cord and turn the computer ON.

9. Install your Industrial Terminal Support Software:

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- For IBM-PC/AT compatibles, use the PLC-5/15 Industrial Terminal support Software User's Manual (Pub. No. 6226-6.5.1).

10. At the options screen, select function "F6 System Configuration."

11. At the System Configuration screen, do one of the following:

- If the software address is correct, press ESC to retain it and return to the main menu.

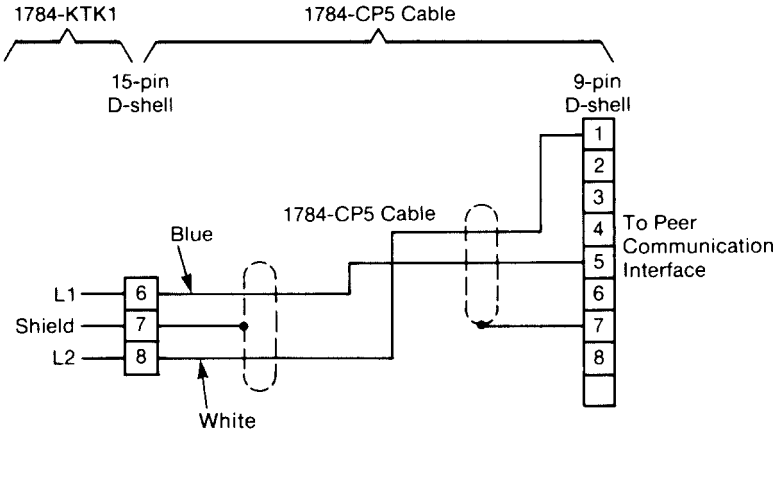
or

- If the software address is incorrect, press F1 (the cursor will appear in the lower right-hand corner of the screen), type the corrected software address exactly as it appears in table 1 and press RETURN.

Connections

Figure 3 shows the connections (pinouts) for the 1784-KTK1 D-shell connector and the 1784-CP5 cable.

Figure 3
1784-KTK1 And 1784-CP5 Connector Pinouts



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Related Publications

For users of IBM-PC/AT compatibles, the following manuals are available through your nearest Allen-Bradley Sales office.

- PLC-5/15 CMOS RAM Modules (Cat. No. 1785-MR, -MS) (Pub. No. 1785-2.2)
- PLC-5/15 Programmable Controller Processor Manual (Pub. No. 1785-6.8.1)
- PLC-5/15 Processor Assembly and Installation manual (Cat. No. 1785-6.6.1)

For 1784-T50 Industrial Terminal users, the manuals supplied with your terminal will assist you in the full application of this Interface board. In particular:

- Industrial Terminal User's Manual (Pub. No. 1784-6.5.1)
- PLC-5 Programming Software User's Manual for Cat. No.6226-DDB software (Pub. No. 6226-6.5.1). This publication is supplied with 6200 Series Software orders only. It is not available separately.

Specifications

Module Location
- 1784-T50 Industrial Terminal (any slot, 4 thru 8) or IBM AT compatible (AT slot)

Power Requirements
- +5V DC ± 5% @ 3.5 A (17.5 W)

Operating Temperature
- 0 to 55°C

Humidity
- .5 to 95% non-condensing

Connections
- 15-pin D-shell

Microprocessor
- 8-bit Motorola 68008
- Clock frequency: 8 MHz

Baud Rate
- 57,600; (PCL protocol)

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