KMD–5540-002 Carrier DataLink Interface
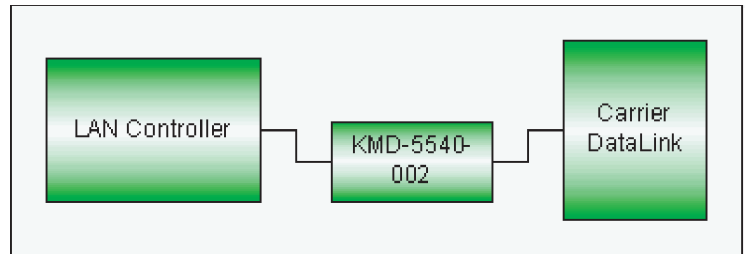
Issued 10 March 2006

Issue

Setup and configuration of the KMD–5540-002 Carrier DataLink Interface.

Instructions

This version of the KMD–5540 Series CommTalk is designed to serve as a communications interface between a KMD–5210 series LAN controller and a Carrier DataLink system device.
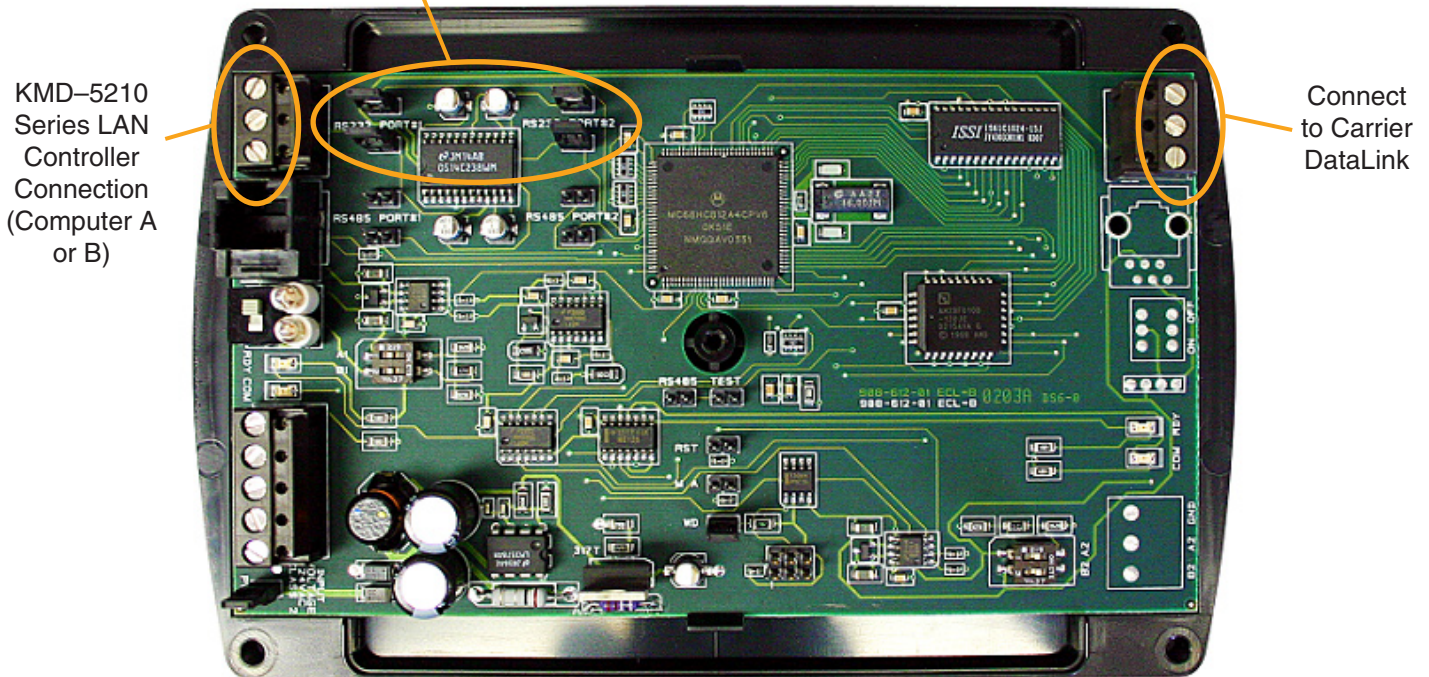
NOTE: The Carrier DataLink must be set at 9600 baud to communicate with the KMD–5540-002. Also, WinControl XL or WinControl XL Plus is required to configure the interface.

Jumper Configuration:

Ensure the board has the default configuration of EIA-232 (formerly RS-232) communication on COM1 (left side of the board) and COM2 (right side of the board). The internal jumpers should be installed in the locations shown below.
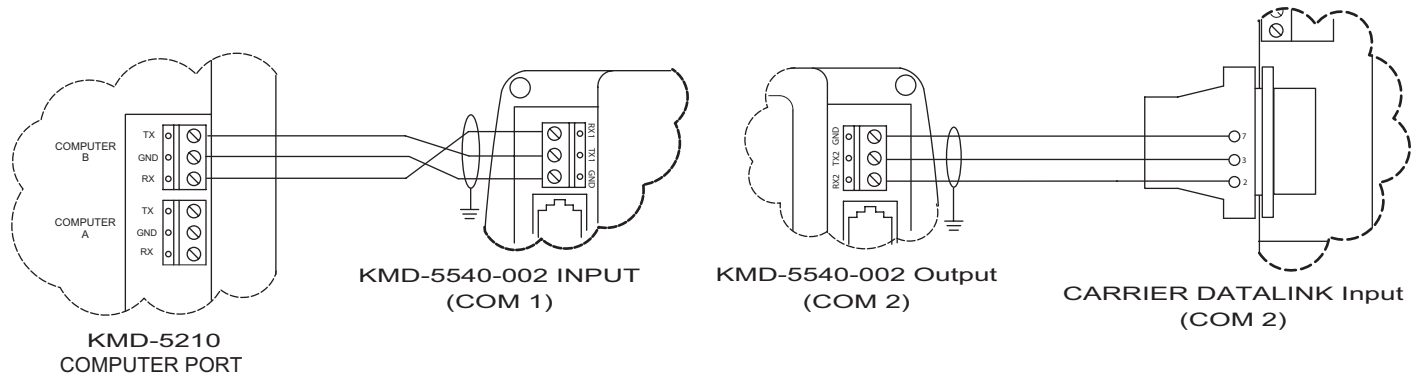
Jumpers Set (Default) for EIA-232 Communication

KMD–5210 Series LAN Controller Connection (Computer A or B)

Connect to Carrier DataLink

NOTE: *A slow, intermediate flash (approximately five second intervals) on the COM LED indicates requests by the KMD–5540-002 are not being answered. A rapid, constant flash indicates normal data exchange.*

Wiring:

As shown below, DataLink Terminal **3** connects to KMD–5540-002 (COM2) Terminal **TX2**, Terminal **2** connects to Terminal **RX2**, and Terminal **7** connects to **GND**.

KMD-5540-002 INPUT (COM 1)

KMD-5540-002 Output (COM 2)

CARRIER DATALINK Input (COM 2)

KMD-5210 COMPUTER PORT

NOTE: On the KMD–5210, the EIA-232 port B is assigned the same address as the modem port. When port B is in use (as show in the illustration above), the modem port cannot be used.

Carrier DataLink Register and Label Definitions in WinControl Variables:

1. With WinControl, you can program up to 256 of the LAN Controller's Variable *Descriptions* using the following format:

    a. **$$$$$$$$%%%%%%%%**

    b. The first 8 alphanumeric characters (**$$$$$$$$**) are used for the table name.

    c. The second 8 alphanumeric characters (**%%%%%%%%**) are used for the point name.

    d. '$$$$$$$$' and '%%%%%%%%' should be separated with a space (' ') if the main table name is less than 8 characters. No space is required if the main table name is 8 characters.

    > **NOTE:**   Once the device is operating, it will replace the last three characters in the description with a three-digit number to indicate success (000–255) or an error code (e.g., #1 … #14). This three-digit number or error code represents the status of the last attempt of reading or writing. Refer to Carrier documentation to interpret any error code.

2. Use the LAN Controller's 'read/write' format to program the Variable *Labels*:

    a. (RV###_) for reading Variables
    b. (WV##_) for writing Variables
    c. The first two numbers (##) are the device number as set up in DATALINK's configuration.

    > **NOTE:**   The device number must be padded with a zero (0) if it is less than 10. WinControl requires all descriptors to be unique. To fulfill this requirement, the user may enter in arbitrary characters after the underscore ('_').

NOTE: As before, once the device is operating, it will replace the last three characters in the description with a three-digit number to indicate success (000–255) or an error code (e.g., ##1 … #14). This three-digit number or error code is the status of the last attempt of reading or writing. Refer to Carrier documentation to interpret any error.

CAUTION: If changing an existing description or label of a point, turn off the device to prevent it from rewriting the original description/label. New points may be added without turning off the device.

3. For some of the newer Carrier chillers, certain read-only points can only be read using the RT (read table) command. Enter the 'RT' command as the first two characters of the *Description* field:

    a. RT##$$$$$$$$%%%%%%%%

    b. '##' is the device number as set up in the DataLink configuration.
       NOTE: The device number must be padded with a zero ('0') if it is less than 10.

    c. '$$$$$$$$' is the main table name (up to 8 alphanumeric characters).

    d. '%%%%%%%%' is the optional secondary table name (up to 8 alphanumeric characters.

    e. $$$$$$$$' and '%%%%%%%%' should be separated with a space (' ') if the main table name is less than 8 characters. No space is required if the main table name is 8 characters.

4. Program the chiller's *Label* field in the following manner:
    a. ********
    b. Where '********' is the point name (up to 8 alpha-numeric characters).
    c. This format does not allow for any error code feedback.

NOTE: Frequent errors will occur if Carrier software is running on the Carrier network. The Carrier documentation states this happens because of other activity on thenetwork. If such an error is encountered, the KMD–5540 will try to reread the point during the next pass.

NOTE: Whenever the value or the auto/manual status of a write-only point has changed, the device should detect this change and write the new information to the DATALINK. Otherwise information will not be written. If there is an error writing data to the DATALINK the device will try again on the next pass.

NOTE: This device does not support KMDigital inverted digital ranges.

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