

HELMS Data Interface

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This document describes how to connect a Milnor® CBW® tunnel washer to a chemical vendor controller with a HELMS data interface in the field.

1. Requirements

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The interface described in this document requires the following software and hardware:

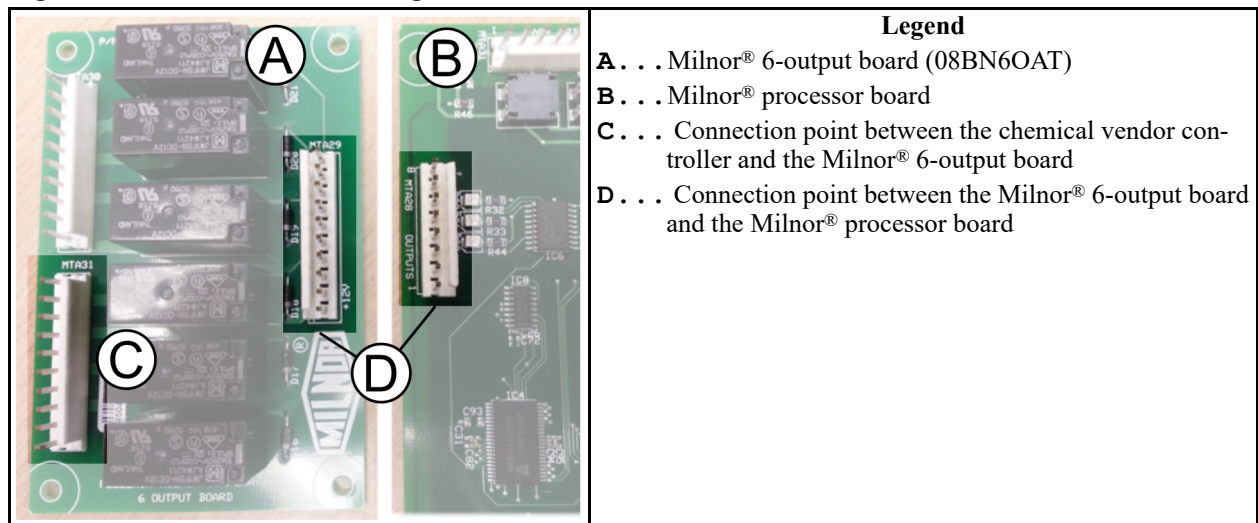
- Mentor® controller software must be version 3.2 or later
- Tunnel washer processor board software must be 25704 or later
- Milnor® 6-output board solid state (part number 08BN6OBT) must be present in the system

2. Wiring

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See schematic W9CBW3NBB in schematic manual ME76CBW3AE for diagrams of the HELMS interface wiring.

Figure 1. HELMS Interface Wiring



2.1. Connections Between Milnor® Processor Board and 6-output Board

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- Connect MTA28-4 on the processor board and MTA29-4 on the output board.
- Connect MTA28-5 on the processor board and MTA29-5 on the output board.
- Connect MTA28-7 on the processor board and MTA29-9 on the output board.
- Connect MTA28-8 on the processor board and MTA29-10 on the output board.

2.2. Connections Between Milnor® 6-output Board and a Chemical Vendor Controller

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- Connect MTA31-8 on the output board and the DATA terminal on the chemical vendor controller.
- Connect MTA31-5 on the output board and the CLOCK terminal on the chemical vendor controller.
- Connect MTA31-6 on the output board and the 24 volts DC terminal on the chemical vendor controller.
- Connect MTA31-9 on the output board and the 24 volts DC terminal on the chemical vendor controller.

3. Signals

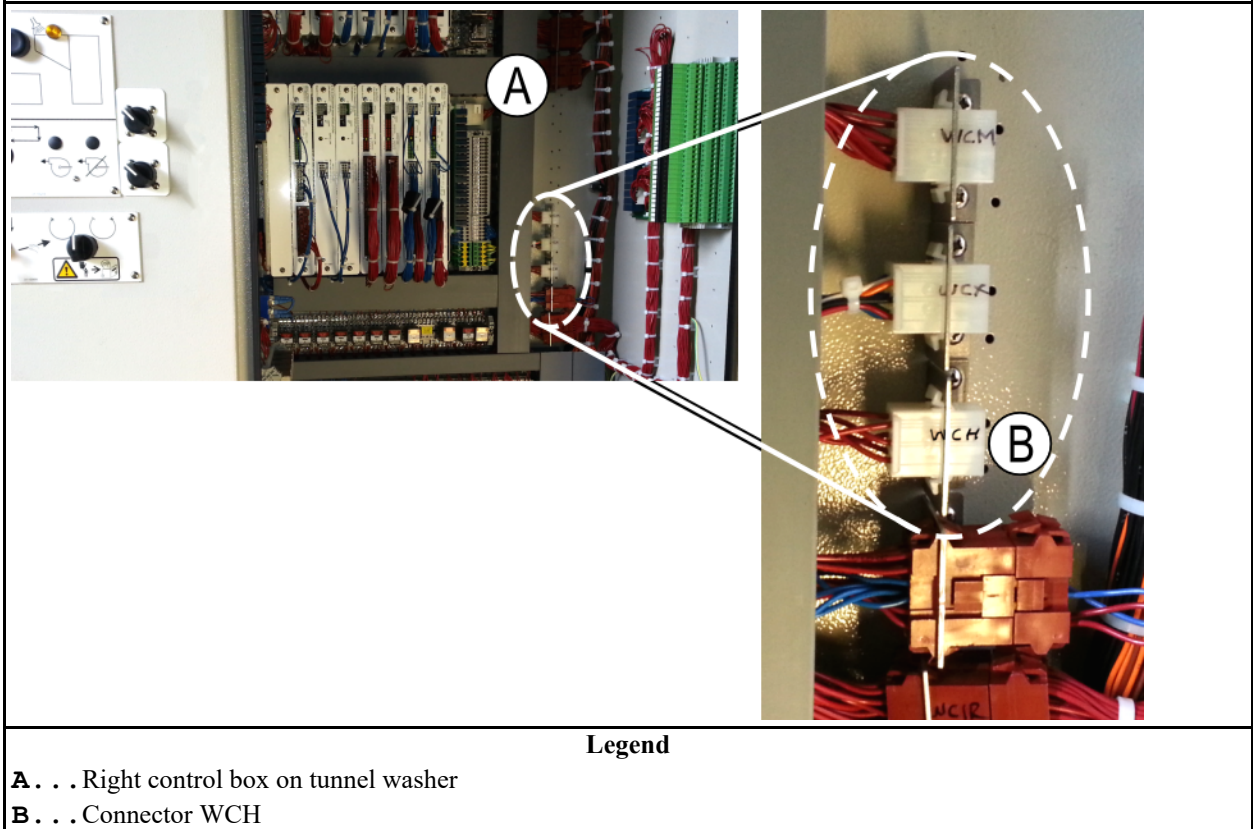
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This system requires six signals:

Run This signal originates at the Milnor® equipment. The source is a control bit programmed with op code 03. The init code, hold code, and on-time are ignored. This signal is ON when the tunnel washer is not in a hold condition.

Transfer This signal originates at the Milnor® equipment. The source is a control bit programmed with op code 00, init code H, and on-time of 10 seconds. This signal is ON for 10 seconds when the tunnel washer transfers.

Drop Bag This signal originates at the Milnor® equipment. The source is a relay connected to the START CONVEYOR output of the tunnel washer. The relay gives the Drop Bag signal to both the loading system and the chemical vendor controller. The START CONVEYOR output is MTA5-4 and MTA5-14 on the board at address 80. These pins are wired to terminals WCH-5 and WCH-6.

Figure 2. Location of WCH-5 and WCH-6

Clock This signal originates at the Milnor® equipment. The source is pin MTA31-5 on the Milnor® 6-output board. This is the clock pulse used to send data to the chemical vendor controller.

Data This signal originates at the Milnor® equipment. The source is pin MTA31-8 on the Milnor® 6-output board. This is the pulsed data output to the chemical vendor controller.

Tunnel to Hold This signal originates at the Milnor® equipment. The source is a control bit programmed with op code 03. The init code, hold code, and on-time are ignored. This signal is ON when the tunnel washer is not in a hold condition.

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