Description

See Figure 1 and refer to Table 1. The J-Box module provides the interface between the Rhino SD2/XD2 bulk unloader electrical components and the system controller. The J-Box module mounts to the Rhino XD2 Two-Hand Operation Control Module.

The J-Box module is designed for two-hand operation. The operator controls (1) enable ram movement. Both 2-HAND CONTROL push buttons must be pressed at the same time to enable the bulk unloader ram movement. Refer to the *Using the Ram Controls* section for a functional description of the operator controls.

The cables (2) provide the electrical interface between the J-Box, limit switches, proximity sensors, and control valves.

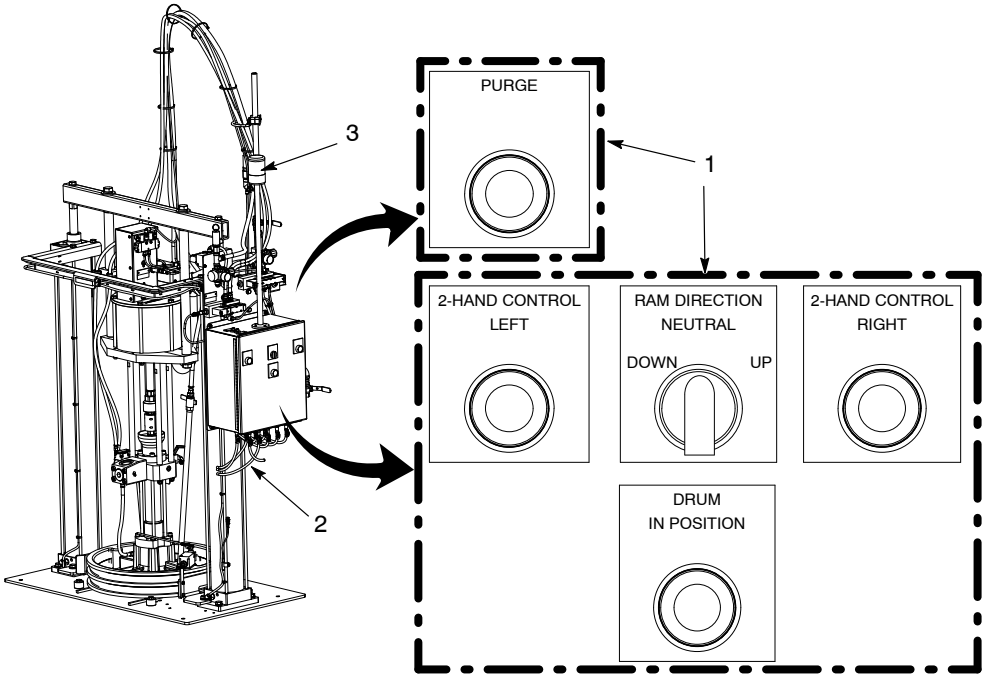

Figure 1 J-Box Module Components

Table 1 Operator Controls

Item	Description
PURGE	Momentary push button for purging material from the inactive pump during drum changes.
2-HAND CONTROL LEFT/RIGHT	Enables/disables ram movement.
RAM DIRECTION	Ram movement: • Ram Up raises the ram and follower plate. • Neutral stops ram movement and pneumatically locks the rams. • Ram Down lowers the ram and follower plate. **NOTE:** The Neutral position does not mechanically lock the ram. Air pressure remains in the ram cylinders. Small air leaks in the circuit can cause the ram to drift upward or downward. Never leave the bulk unloader in the Neutral position to perform maintenance, or when it is not in use for long periods of time. When performing maintenance, make sure that the ram and follower plate is on the bulk unloader base or secured using support blocks.
DRUM IN POSITION	Illuminates when a drum is positioned under the follower plate.

Installation

WARNING: Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

NOTE: Read and understand the *Safety* section in the Nordson *System Documentation* that shipped with the system before installing the Control Module.

1. Install the J-Box module (1) to the bulk unloader using the washers (2) and nuts (3). Tighten the nuts securely.
2. Connect the cables from the J-Box module (1) to the components on the bulk unloader as shown.

Operation

Refer to the *Rhino SD/XD Container Change for Two-Hand Controls with Blow-off Circuit* operator's card for operation procedures.

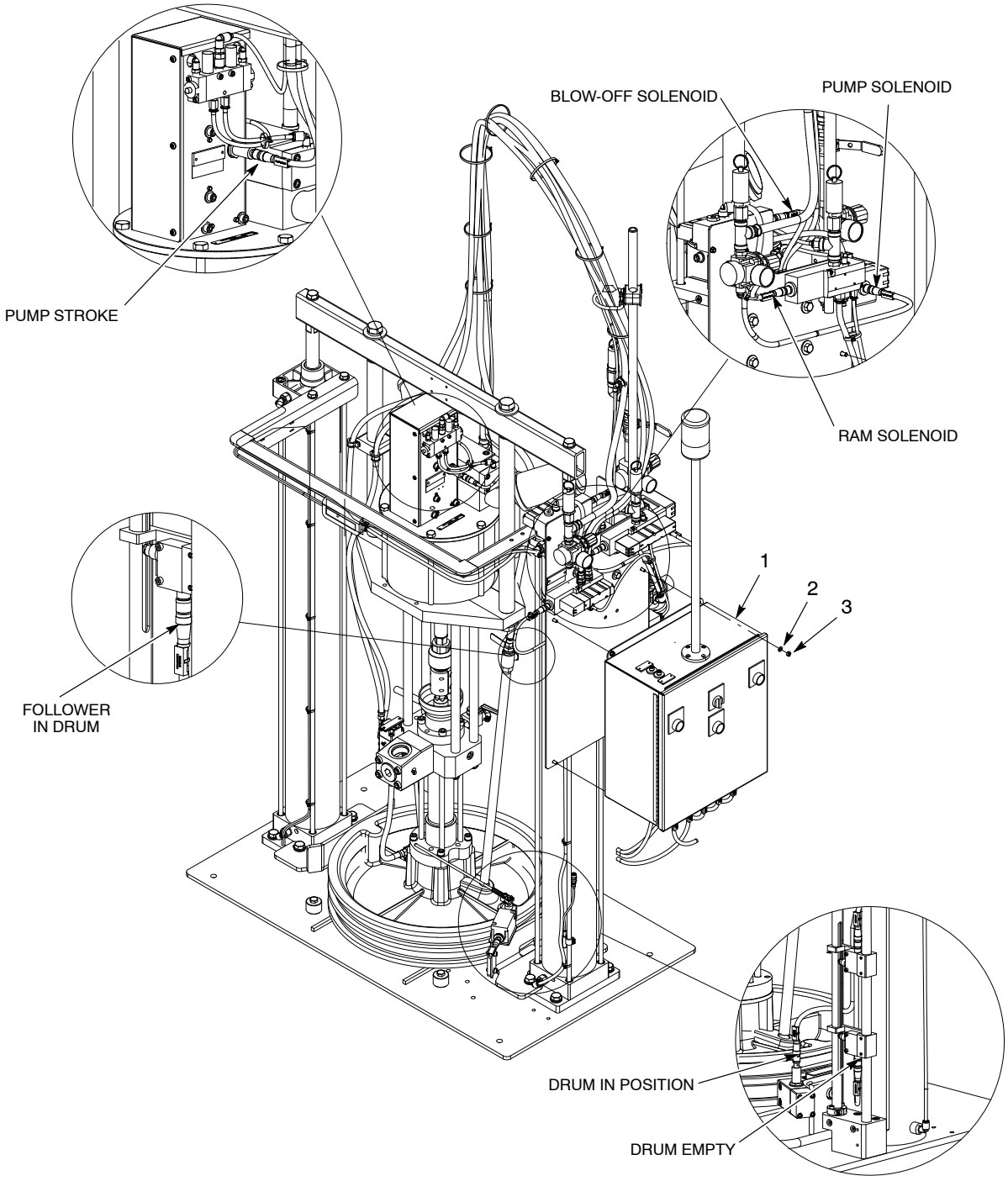

Figure 2 Installation

Parts

To order parts, call the Nordson Customer Service Center or your local Nordson representative.

Two-Hand J-Box Module

See Figure 3 and the following parts list.

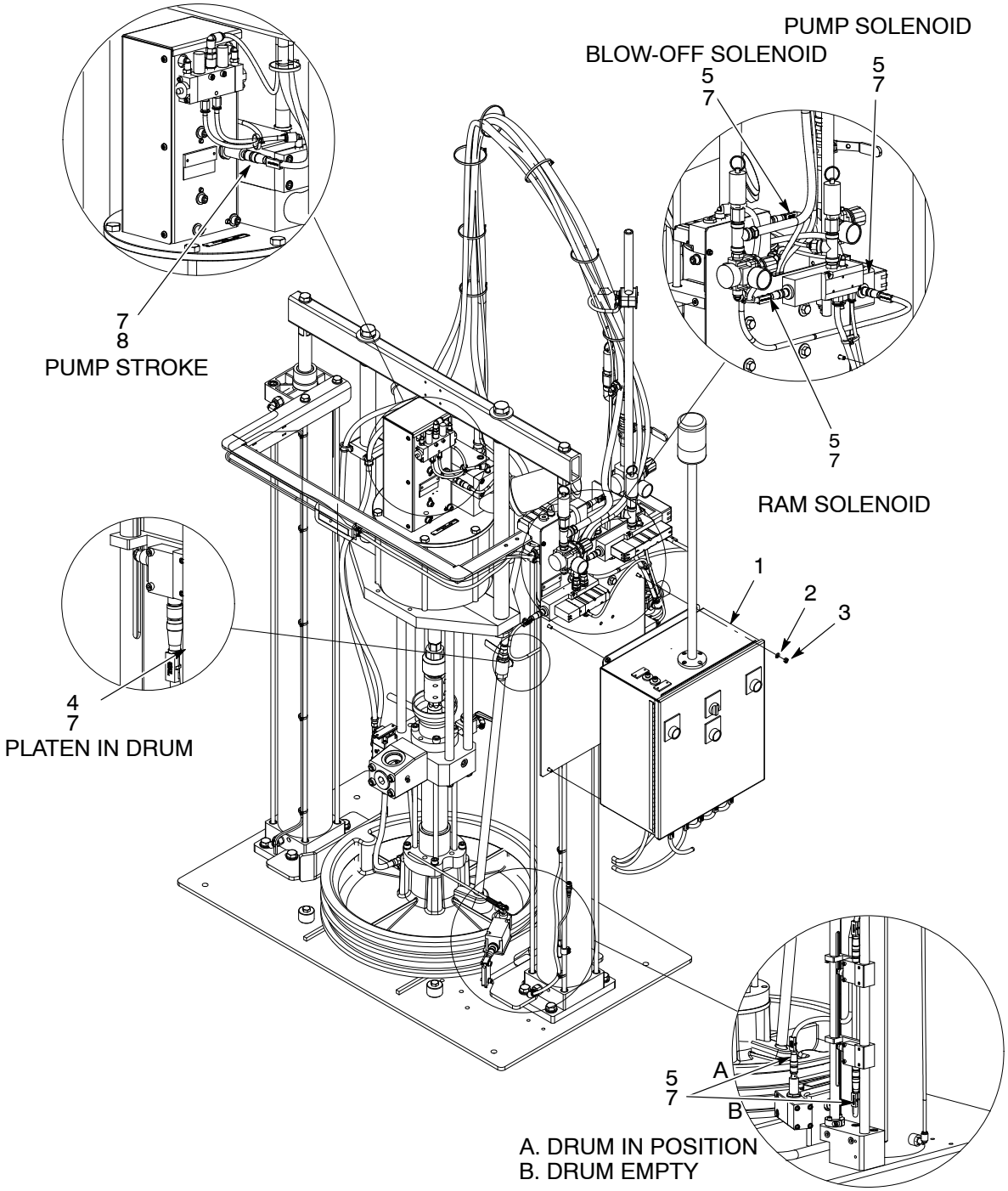

Figure 3 Two-Handle Control J-Box Module Parts

Item	Part	Description	Quanti ty	Note
—	1613457	MODULE, J-Box, Rhino two-hand	1	
1	------	• JUNCTION BOX, Rhino, 2-hand, LT, CE	1	
2	983409	• WASHER, lock, M, split, M6, steel, zinc	4	
3	984703	• NUT, hex, M6, steel, zinc	4	
4	1046023	• CABLE ASSEMBLY, 4 conductor, 1 m, male/fem, 18 AWG, 250V	4	
5	1044427	• CABLE ASSEMBLY, 4 conductor, 2 m, male/fem, 18 AWG, 250V	3	
6	324289	• STRAP, cable, 0.06-4.00, black	12	
7	------	• KIT, label, cable, J-box, Rhino, 2-hand, CE	1	
8	1045884	• CABLE, 4-pin Micro DC, 18 AWG, 4 m, male/female	1	
NS	939004	• STRAP, cable, 0.06-1.75, natural, 12260-4	12	

Schematic

See Figure 4-7 and refer to Table 2 for the DeviceNet Input/Output signal descriptions.

Table 2 DeviceNet Inputs/Outputs

Input	Description
Purge Button	Enables the inactive air motor on a crossover unloader system to be cycled for a drum change or material purge.
Drum Empty	Sends a signal to the system controller to disable the air motor when the follower plate reaches the bottom of the material a container.
Drum In Position	Sends a signal to the system J–Box that a drum is positioned below the follower.
Stroke Proximity	Monitors pump strokes, cycles, and runaway conditions.
Follower In Drum	Indicates that the follower is in the drum and enables downward ram movement.
Ram Up Switch	Enables upward ram movement.
Ram Down Switch	Enables downward ram movement.
2-Hand Control	Enables the ram movement circuit.
Output	**Description**
Air Motor	Receives signals from the system controller to the air motor.
Blowoff Solenoid	Receives signals from the system controller to control the flow of air underneath the follower plate when removing the material drum from the bulk unloader.
Ram Up and Down Solenoids	**Ram Up/Down Control Valve:** Receives signals from the system controller to control ram movement: • Ram Up raises the ram and follower plate. • Neutral stops ram movement and pneumatically locks the rams. • Ram Down lowers the ram and follower plate. **NOTE:** The Neutral position does not mechanically lock the ram. Air pressure remains in the ram cylinders. Small air leaks in the circuit can cause the ram to drift upward or downward. Never leave the bulk unloader in the Neutral position to perform maintenance, or when it is not in use for long periods of time. When performing maintenance, make sure that the ram and follower plate is on the bulk unloader base or secured using support blocks.

Wiring Diagrams

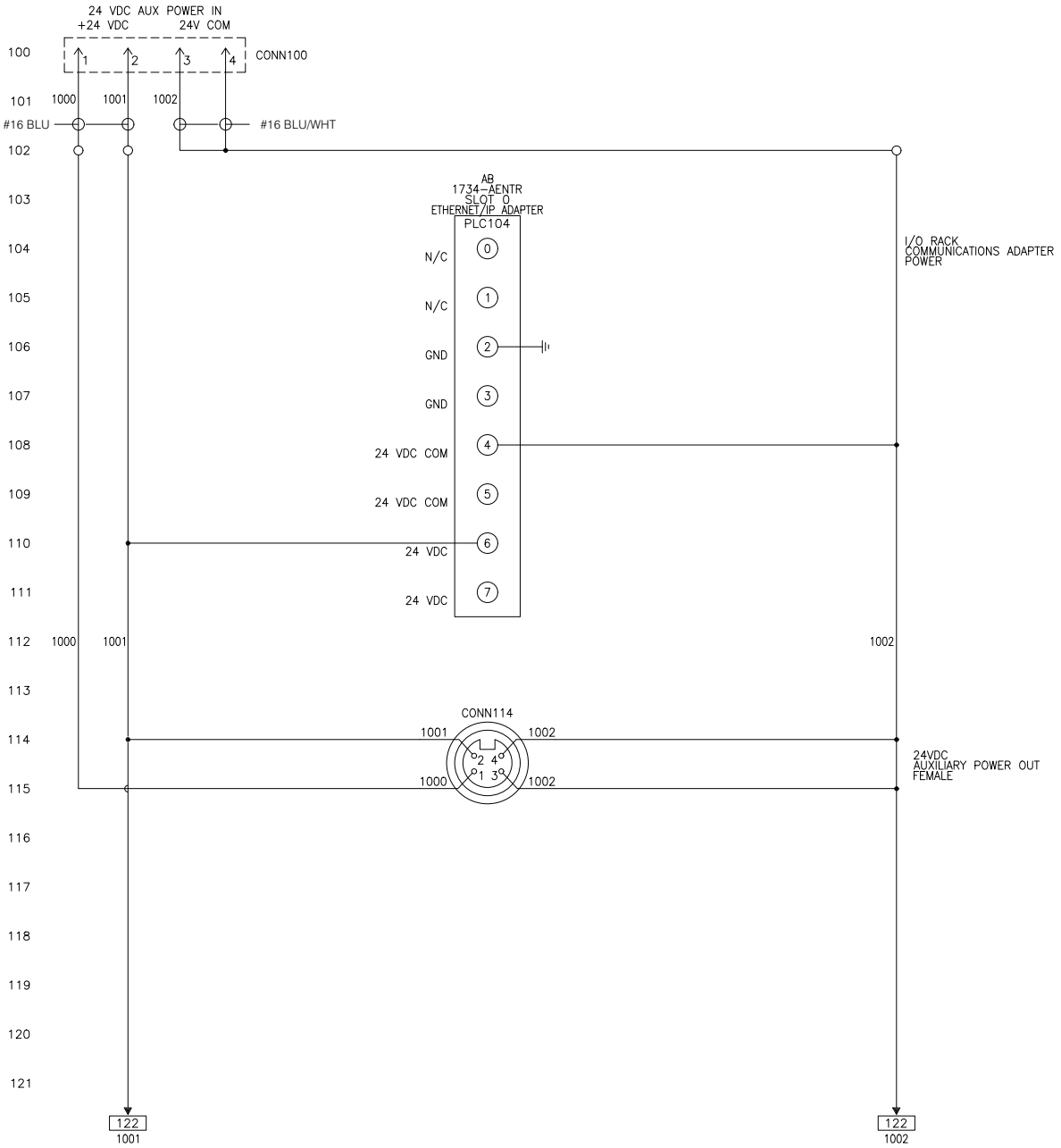

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Figure 4 Wiring Diagrams

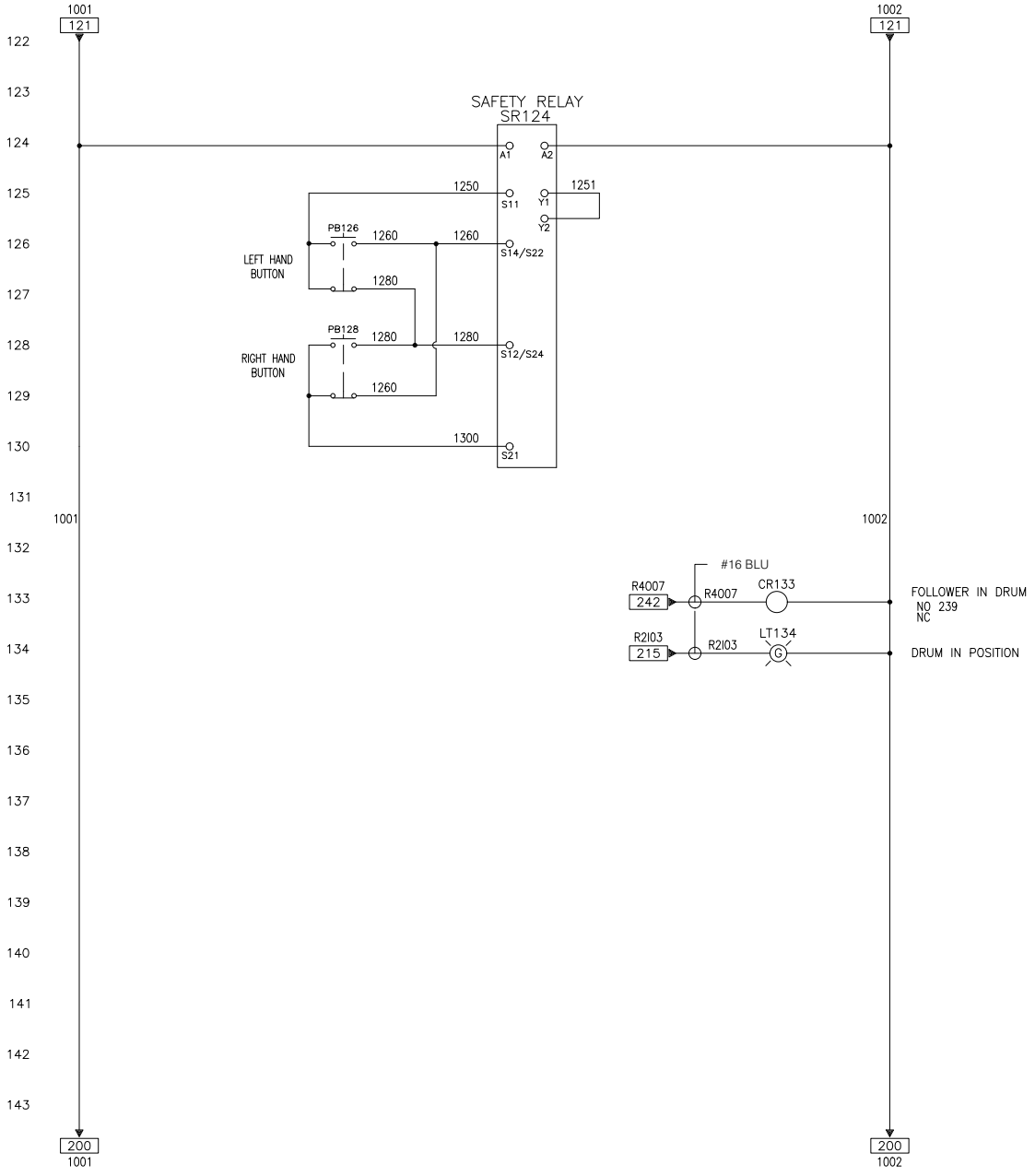

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Figure 5 Wiring Diagrams

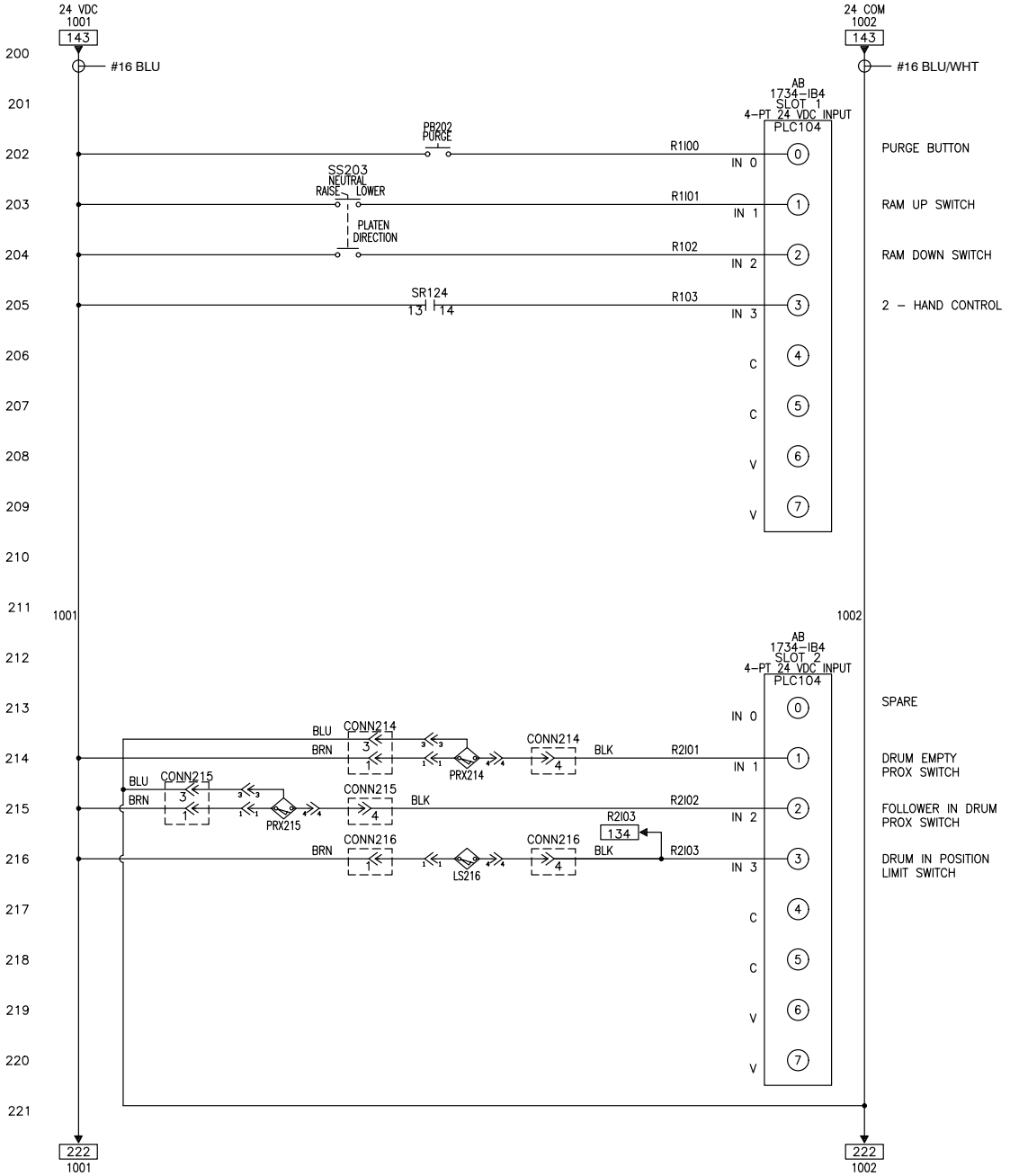

Figure 6 Wiring Diagrams

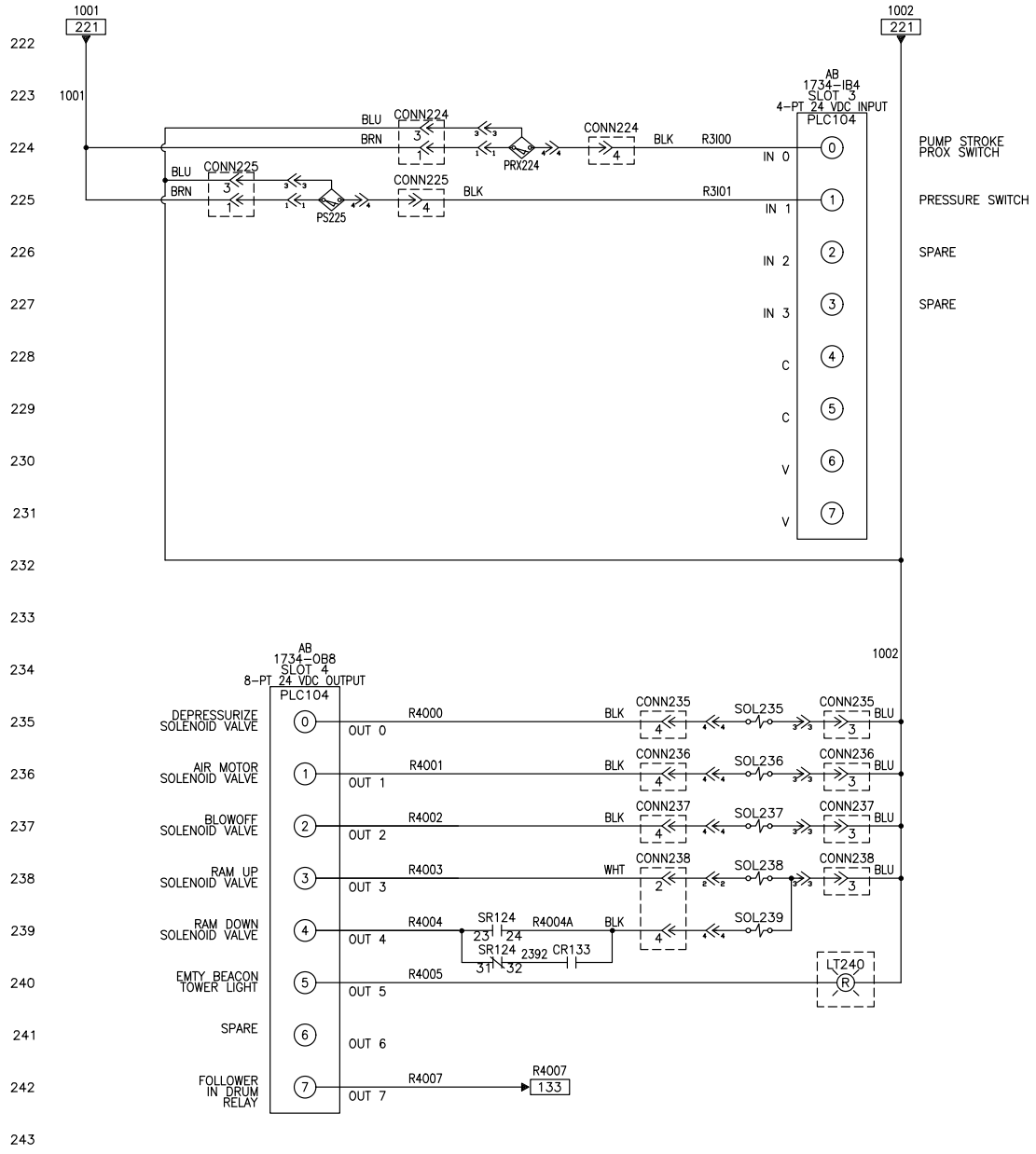

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Figure 7 Wiring Diagrams

Notes:

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