

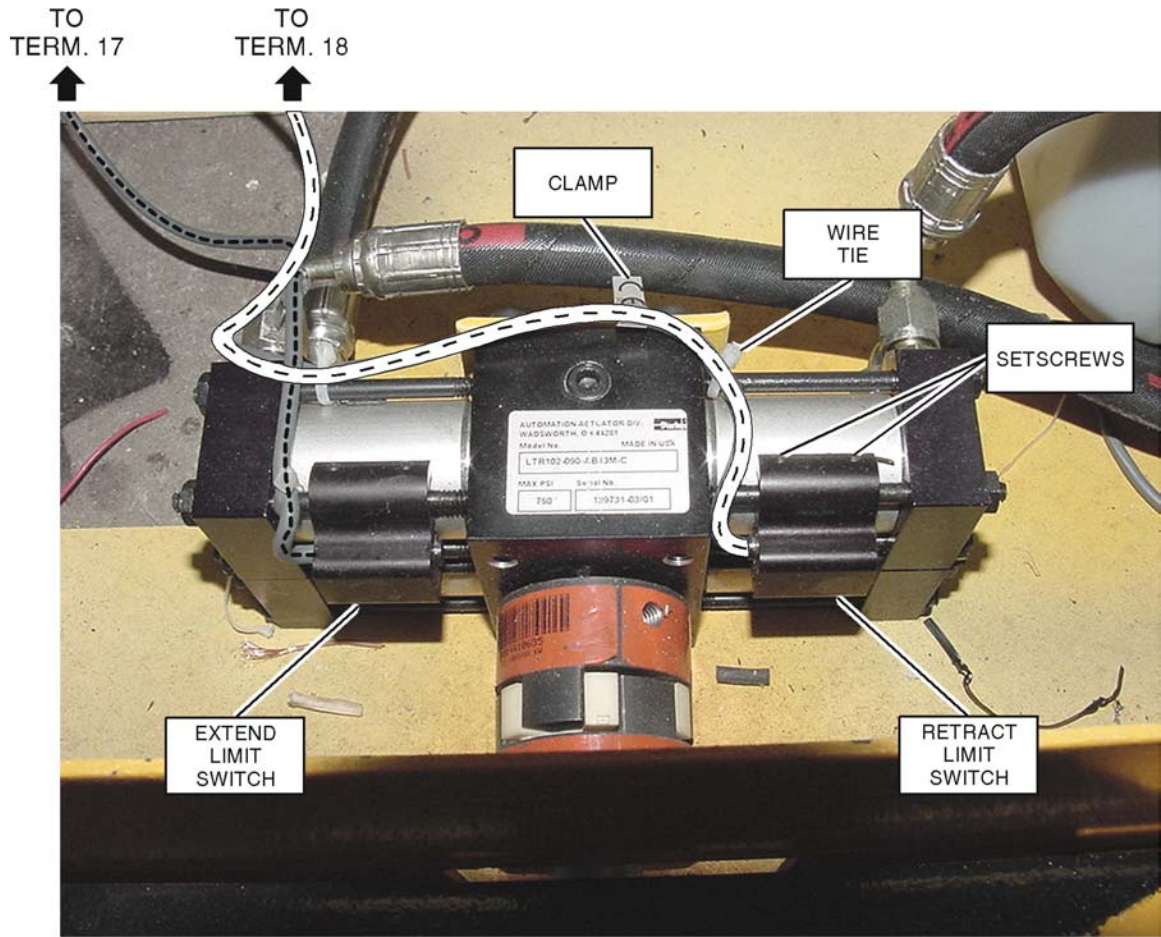
Figure 3-9. Right-Hand Port Connector Configuration

Extend and Retract Limit Switch Configuration (if required)

1. Remove electrical power to the Hydraulic Control Unit.

WARNING: DO NOT REMOVE OR INSTALL LIMIT SWITCHES WITH HYDRAULIC POWER APPLIED. SERIOUS PERSONAL INJURY CAN RESULT WHEN ROTARY ACTUATOR IS ACTIVATED.

2. Loosen 2 setscrews at the top of each limit switch just enough to allow the limit switch to be removed from the shaft (Figure 3-10).
3. Remove wire ties and clamps as necessary.
4. Reposition limit switches for left or right configuration as shown in Figure 3-10 and Figure 3-11. Position limit switches on shaft approximately as shown.
5. Tighten setscrews to hold limit switches in place.
6. Install wire ties and clamps.
7. Perform spike shaft travel adjustment procedure in Section 5, Maintenance.



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Figure 3-10. Left-Hand Limit Switch Configuration

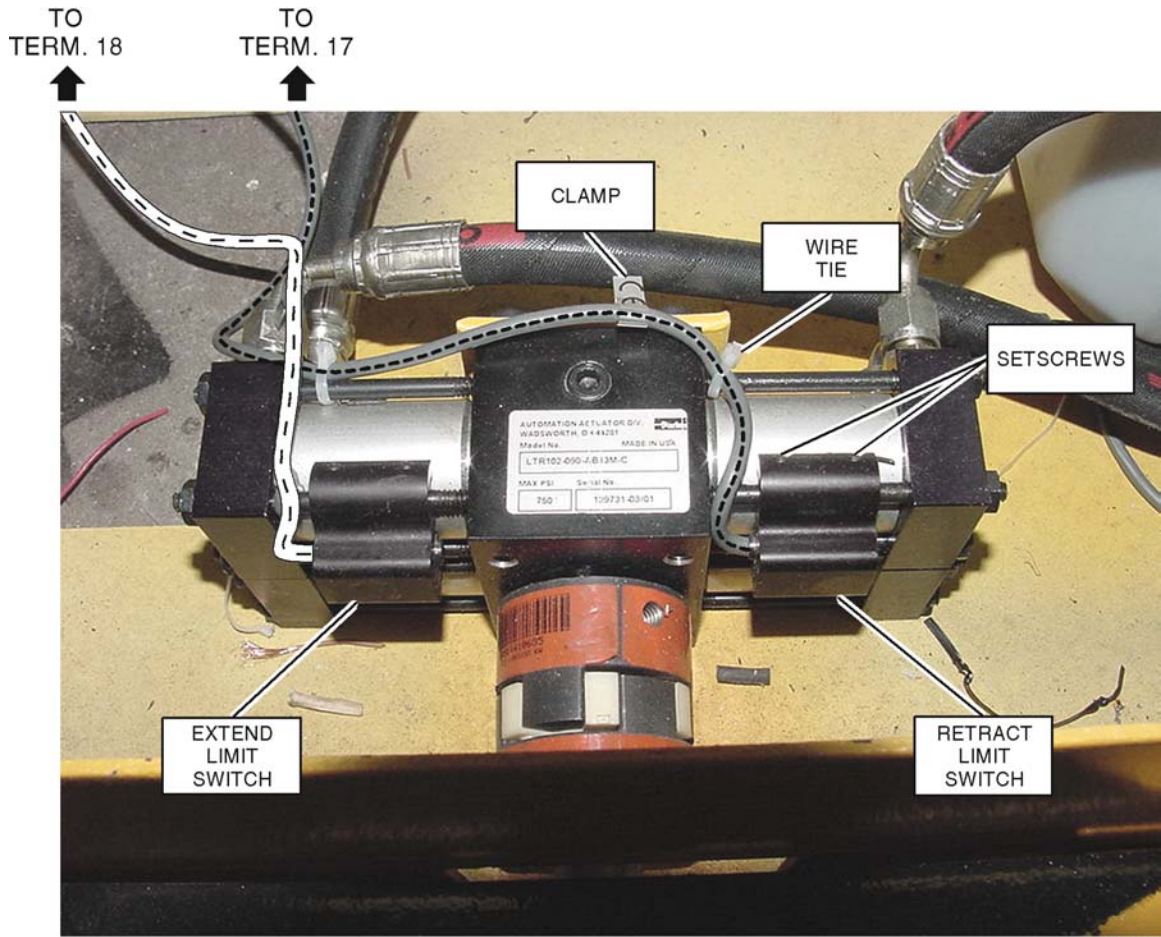


Figure 3-11. Right-Hand Limit Switch Configuration

CS72-HTC WIRING DIAGRAMS

Basic electrical wiring information for the CS72-HTC Hydraulic Traffic Control System is shown in Figure 3-12 and Figure 3-13.

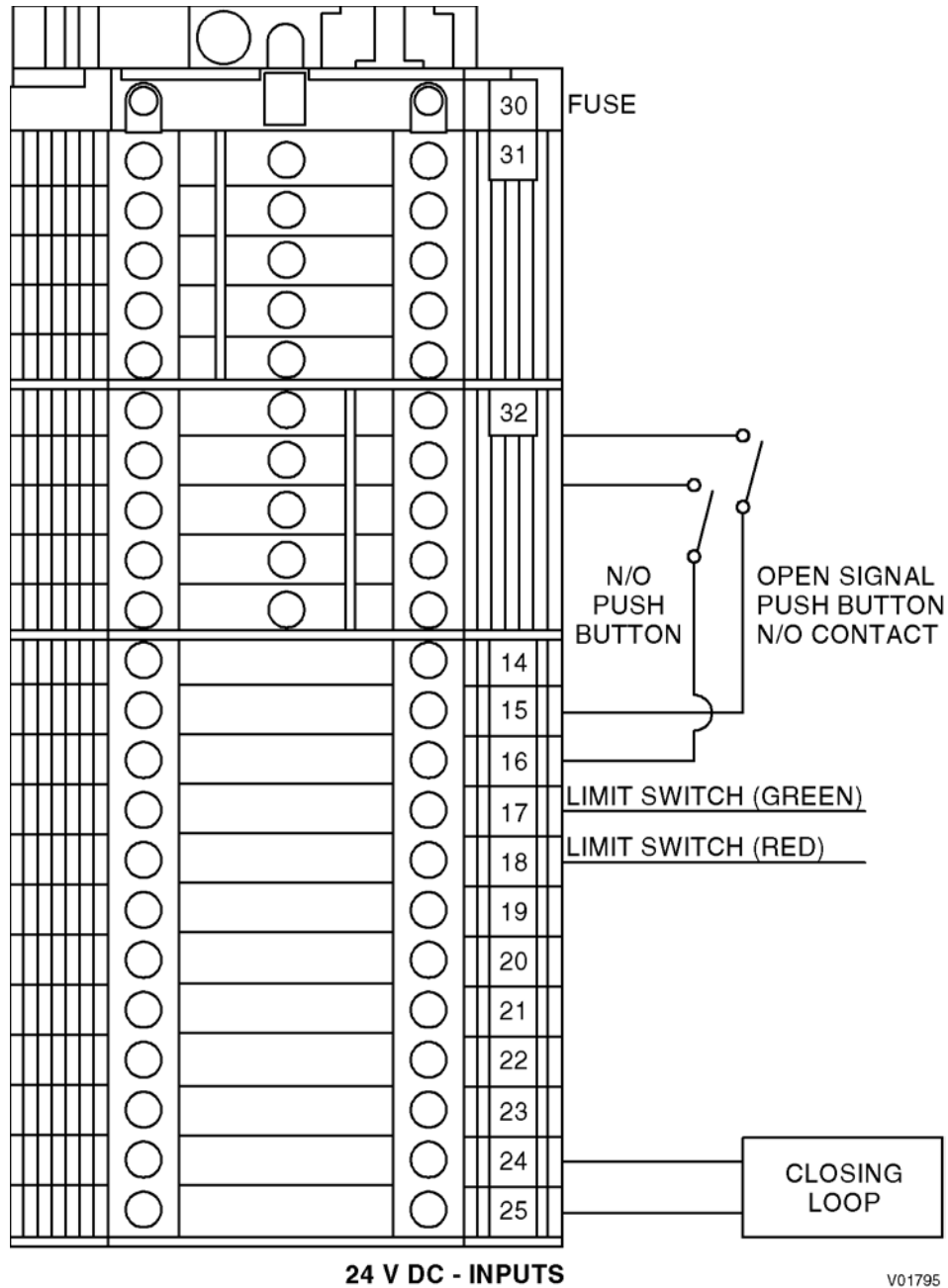


Figure 3-12. 24V DC Wiring Diagram

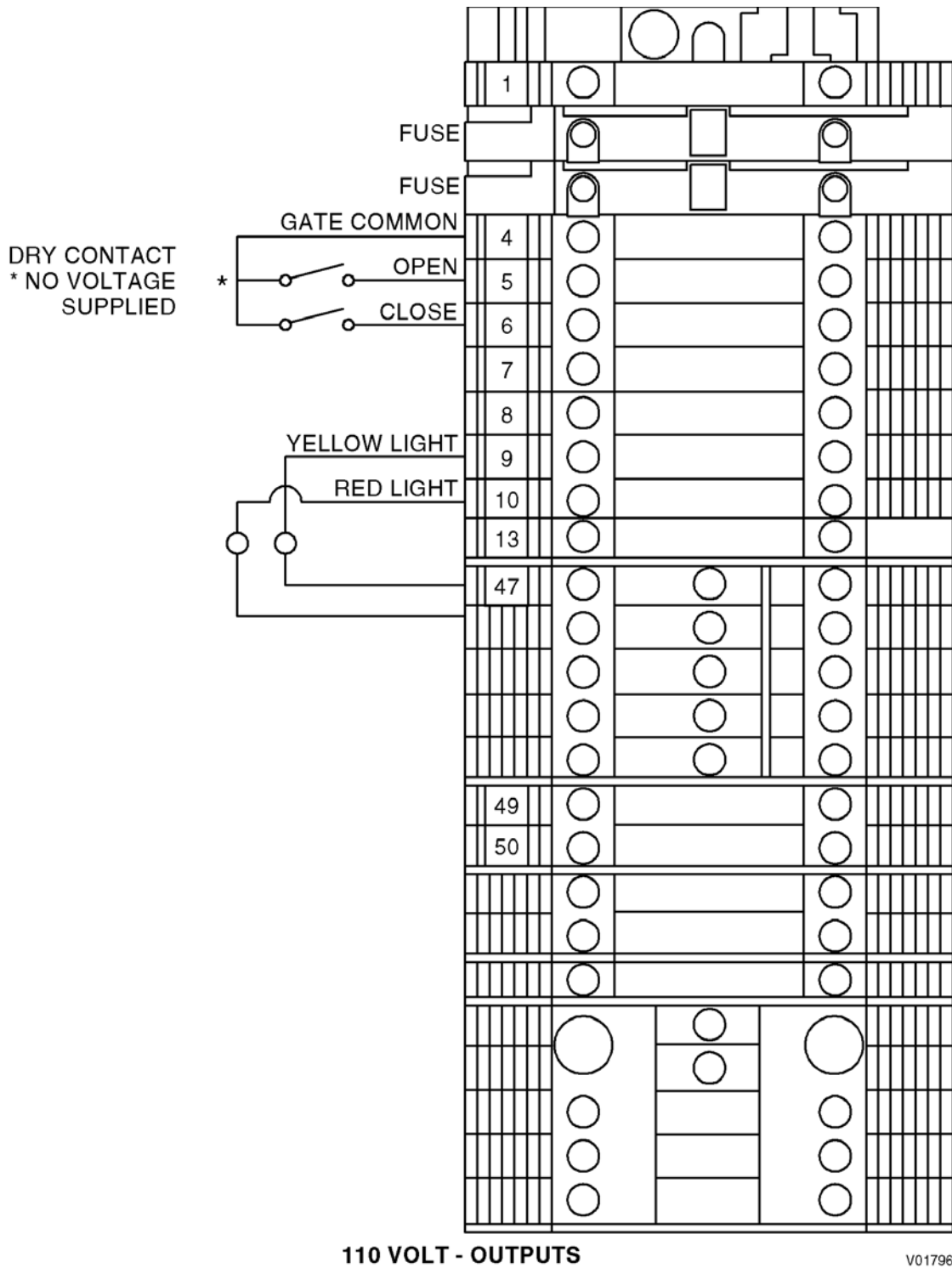


Figure 3-13. 110 V AC Wiring Diagram

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SECTION 4. HYDRAULIC CONTROL UNIT WIRING

Table 4-1. Gate Access Controller I/O

Terminal No.	PLC Address	Description	Voltage	Notes
L1	X	Main Power Terminal Block	110 V AC	
1	X	Switched Power Terminal Block	110 V AC	
2	X	PLC Fuse Block	110 V AC	Fuse size 1Amp
3	X	PLC Output Fuse Block	110 V AC	Fuse size 2Amp
47	X	Neutral	110 V AC	
49	X	Pump Neutral	110 V AC	Pump Terminal
50	X	Pump Power	110 V AC	

Table 4-2. Gate Access Controller Input 24V DC

Terminal No.	PLC Address	Description	Voltage	Notes
30	X	Fuse block F4 +24V DC fusing PLC power supply	+24V DC	Fuse size 200 mA
31	X	-24V DC PLC sensor power return	-24V DC	
32	X	Fused from F4 +24V DC fusing PLC sensor power supply	+24V DC	Fused @ 200 mA
15	I0.0	Open signal	Sinking 24V DC	
16	I0.1	Close signal	Sinking 24V DC	
17	I0.2	Limit switch extended signal (Down position)	Sinking 24V DC	
18	I0.3	Limit switch retracted signal (Up position)	Sinking 24V DC	
19	-	-	-	
20	-	-	-	
21	-	-	-	
22	-	-	-	
23	I0.4	-	-	

Table 4-3. Gate Access Controller Output

Terminal No.	PLC Address	Description	Voltage	Notes
4	3L	Gate arm controller signal common	N/A	No power from controller
5	Q 0.7	Gate arm controller signal – Open (Dry contact)	N/A	No power from controller
6	Q 1.0	Gate arm controller signal - Closed (Dry contact)	N/A	No power from controller
7	Q 0.0	Spike assembly extend solenoid (down/open)	120V AC	
8	Q 0.1	Spike assembly retract solenoid (up/close)	120V AC	
9	Q 0.3	Green/Yellow light	120V AC	
10	Q 0.4	Red light	120V AC	
11	-	-	-	
12	-	-	-	
13	Q 0.2	Pump contactor	120V AC	

Table 4-4. Terminal Board 1

From	To
30	PLC L+ (24V DC +)
31	PLC M (24V DC -)
22	PLC Q 1.5
21	PLC Q 1.4
20	PLC Q 1.0
19	PLC Q 0.7
23	PLC Q 0.4
18	PLC Q 0.3
17	PLC Q 0.2
16	PLC Q 0.1
15	PLC Q 0.0
-	PLC 1M (24V DC -)
32 jumper to 30	
23	SIRIUS 3R, 2-T1
14	Inductive Loop Detector 5
32	SIRIUS 3R, 1-L1

Table 4-5. Terminal Board 2

From	To
-	Siemens 1L loop 2L
-	7 0.0
Jumper 1 to 2	-
Jumper 3 to 4	-
1	SIRIUS 3R, 5L3
4	3L
5	Q 0.7
6	Q 1.0
7	Q 0.0
8	Q 0.1
9	Q 0.3
10	Q 0.4
13	Q 0.2
-	Q 0.2 to SIRIUS 3R, A1
N-PLC	Siemens N
N-CR-A2	SIRIUS 3R, A2
Terminal Ground	Siemens GRD
7 (GRN)	Solenoid Control Valve UP (120V Line Voltage)
8 (RED)	Solenoid Control Valve Down (120V Line Voltage)
47	Solenoid Control Valve UP (120V Neutral)
49 (White)	Hydraulic Motor (120V Line Voltage)
50 (Black)	SIRIUS 3R, 6-T3 (120V Neutral)
49	Jumper from input power source
50	Jumper from input power source

Table 4-6. Inductive Loop Vehicle Detector

1	TB2 (Grey/Black)
2	TB2 (WHT)
3	NC
4	TB2 (GRN)
5	TB1-14 (Orange)
6	NC
7	TB1-24 (Light Grey)
8	TB1-25 (Dark Grey)
9	TB1-32 (RED)
10	NC
11	NC

Table 4-7. SIRIUS 3R

(Relay)	
A1	Siemens PLC Q 0.2
A2	TB2-N-CR
1 L1	TB1-32
2 T1	TB1-23
5L3	TB2-1
6T3	TB2-50

Table 4-8. Manual Override Switch

Up	TB1-15
Center	TB1-32
Down	TB1-16



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Figure 4-1. Loop Detector Panel Indicators