



Model CS1 Cotton Inserter



**Operator's Manual**

(Rev 3/99)

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Dear Customer,

Thank you for purchasing a Pharmafill Model CS1 Cotton Inserter. We at Deitz Company hope you will find that the Model CS1 meets or exceeds your expectations and requirements for an affordable, reliable and innovative addition to your packaging operation.

Pharmafill products are designed and manufactured by Deitz Company Inc., in Wall, NJ, USA. We have manufactured machinery for the bottle filling industry since 1966 and began directly marketing our Pharmafill line in 1993. We are a small (but growing) family-owned business that emphasizes quality, innovation and superior customer service.

If you have any questions or comments, please contact us by phone or visit our website. Chances are someone whose last name is Deitz will handle you inquiry personally.

Deitz Company, Inc.	Tel 732-681-0200
PO Box 1108	Fax 732-681-8468
1750 Route 34	E-mail <a href="mailto:help@deitzco.com">help@deitzco.com</a> or
Wall, NJ, USA 07719	<a href="mailto:help@pharmafill.com">help@pharmafill.com</a>

Yours truly,

The Deitz Company

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Model CS1 Cotton Inserter Features and Components

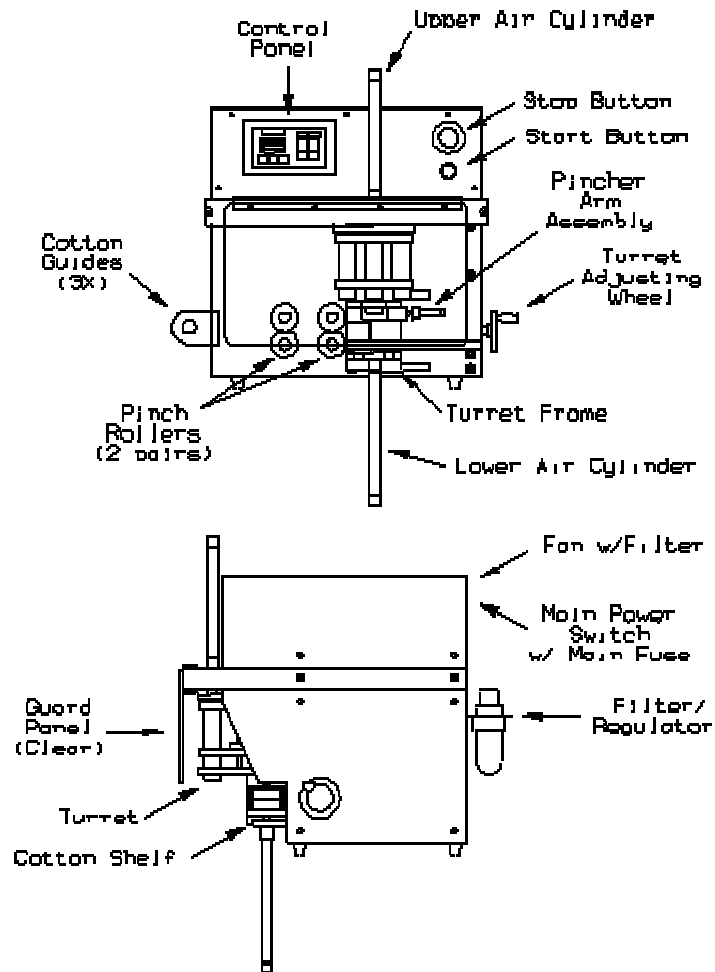


Figure 1: Model CS1 Features



**Pharmafill Model CS1 Cotton Inserter**  
**Operating Instructions**

**Section I Operator Panel**

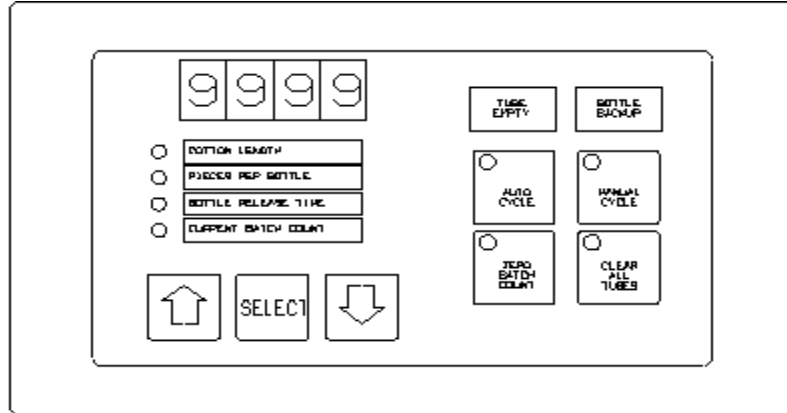


Figure 2: Model CS1 Operator Panel

### A. Display

The left side of the Operator Panel consists of a 4-digit display, a list of four values which may be displayed, and buttons to select and set these values:

<u>Value</u>	<u>Description</u>	<u>Range of Values</u>
<b>Cotton Length</b>	Straight length of cotton piece	2 to 9 inches
<b>Pieces Per Bottle</b>	Number of pieces of cotton per bottle	1 to 10 pieces
<b>Bottle Release Time</b>	Time to let filled bottle exit	0.1 to 5.0 sec
<b>Current Batch Count</b>	Number of bottles filled	0 to 9999 bottles

To set or view the display values:

1. Press **SELECT** until the red light turns on next to the value you wish to view or set. The value will be displayed.
2. Increase the value by pushing the up arrow. Decrease the value by pushing the down arrow. The new value will be displayed

Note: **Current Batch Count** can only be reset using the **Zero Batch Counter** pushbutton (see next section).

### B. Pushbuttons

The right side of the Operator Panel contains four pushbutton and two warning indicator lights. Each push button has a small light which turns on while the button is active. There is also an audible "beep" when a button is pressed.

The four buttons on the lower right side of the Operator Panel work as follows:

<u>Label</u>	<u>Value</u>	<u>Function</u>
<b>Auto Cycle</b>	On/Off	Automatically fills any bottle at Stop 1. Disables <b>Manual Cycle</b> and <b>Clear All Tubes</b> . Automatic operation will stop if <b>Tube Empty</b> lights (see below). Automatic operation will pause if the filled bottle does not leave the filling station and will resume once the station is cleared.

<b>Manual Cycle</b>	On while pushed	Starts one fill cycle with or without cotton or bottle. Hold down for continuous cycling.
<b>Zero Batch Counter</b>	On while pushed	Hold for 2 seconds to reset <b>Batch Count</b> to zero.
<b>Clear All Tubes</b>	On while pushed	Empties cotton from all tubes by running four consecutive fill cycles without feeding cotton. Remove bottle from filling station before using this function

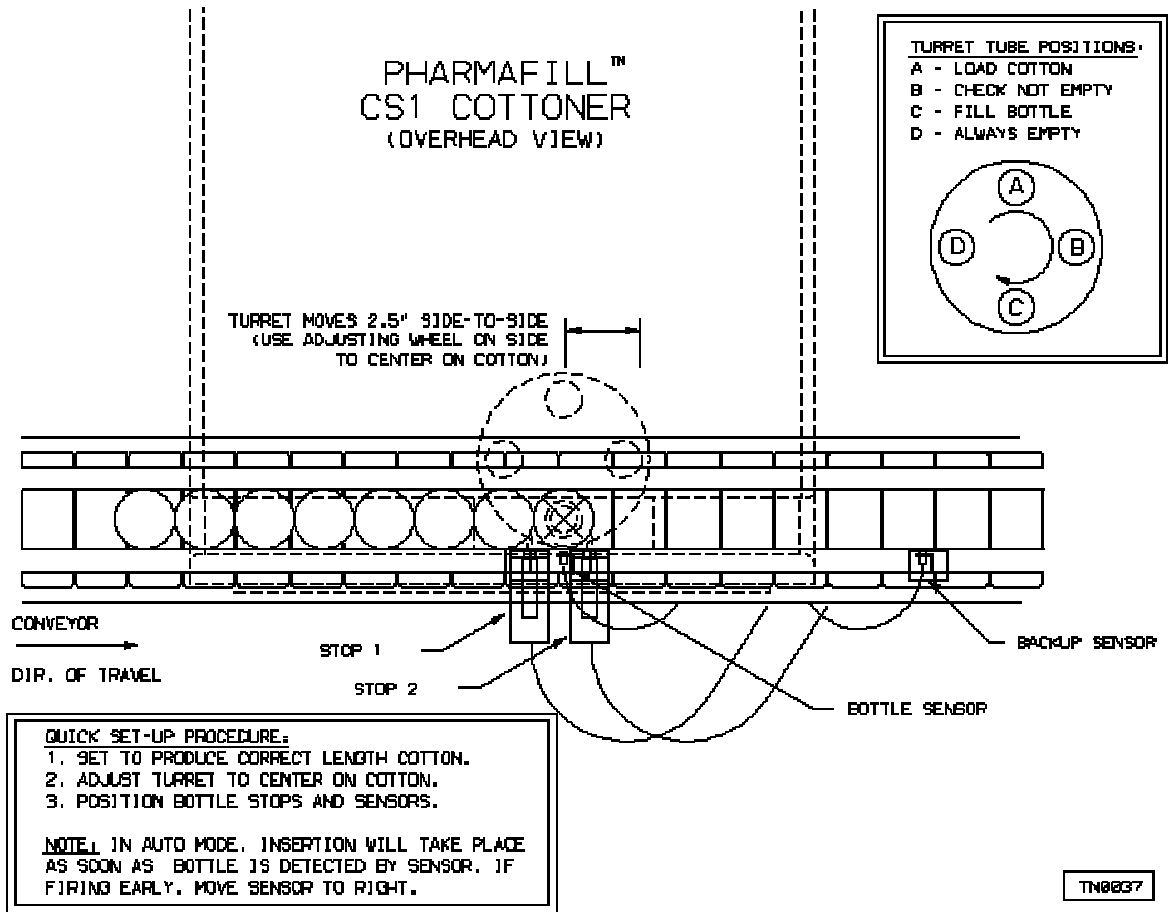
### **C. Indicator Lights**

The lighted indicators on the upper right side of the Operator Panel work as follows:

<u>Label</u>	<u>Cause</u>	<u>Reaction</u>	<u>Solution</u>
<b>Tube Empty</b>	Cotton not present in right-hand tube		Turn <b>Auto Cycle</b> off & find cause. Then press <b>Manual Cycle</b> to fill tube. Press <b>Auto Cycle</b> to resume automatic operation. Catch unfilled bottle & recycle
<b>Bottle Backup</b>	Bottles backed-up downstream on conveyor	Stops automatic operation	Clear backed-up bottles. Automatic operation resumes.

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Section II **Installation and Set-up**



## A. Installation

1. Connect electric (110 VAC 7A) and compressed air line. Adjust air pressure to **80** PSI.

## B. Set-up

1. Switch on Main Power (in back). Cooling fan will start running.

2. Set **Cotton Stop** fully to right end of Cotton Shelf.

3. Place clear **Guard Panel** in lowered position.

4. Press **Start** button. **Operator Panel** will light up. **Turret** finds home position.

5. Press **Clear All Tubes**. All four tubes will be cycled to remove any stray cotton pieces.

6. Using the **Operator Panel** (see section I), set values for:

a. **Cotton Length** in inches

b. **Pieces Per Bottle**

c. **Bottle Release Time** in seconds

7. Press and hold **Zero Batch Counter** for 2 seconds to reset.

8. Load cotton:

a. Raise **Guard Panel**.

b. Use one, two or three **Cotton Guide** loops as needed.

c. Raise upper roller of left set of **Pinch Rollers** by lifting end of roller.

d. Place cotton so end is between left set of rollers and lower roller to trap cotton.

e. Lower **Guard Panel**.

9. Press **Manual Cycle** once. The cotton will feed through the right set of rollers and a piece of random length will be produced.

10. Raise the **Guard Panel** and remove the first piece of cotton.

11. Press **Manual Cycle** again. The second piece produced is the exact length that will be repeated each time.

12. Raise the guard and adjust the **Cotton Stop** from right to left to just barely touch end of cotton piece.

## B.

13. Adjust the **Turret** left or right to center on the length of the cotton piece by turning the **Turret Adjusting Wheel** on the right side of machine (turn clockwise to move turret to right). Numbers on scale on front of **Cotton Shelf** show correct turret position relative to **Cotton Length** setting.



14. Press **Manual Cycle** twice. This will result in cotton loading into the front tube and the right-hand tube.

15. Start conveyor. Set conveyor speed. Place bottles on conveyor.

16. Adjust height of machine using handle on front of **Lift Platform**.

17. Adjust **Bottle Stop 2** (filling station). Adjust **Bottle Stop 1** (upstream bottle supply).

18. Adjust **Bottle Sensor** to detect the bottle at **Stop 1**. Adjust **Backup Sensor** to detect bottles backing up from the right or downstream direction (already filled with cotton).

19. Press **Auto Cycle** to begin automatic operation.



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C. **Specifications**

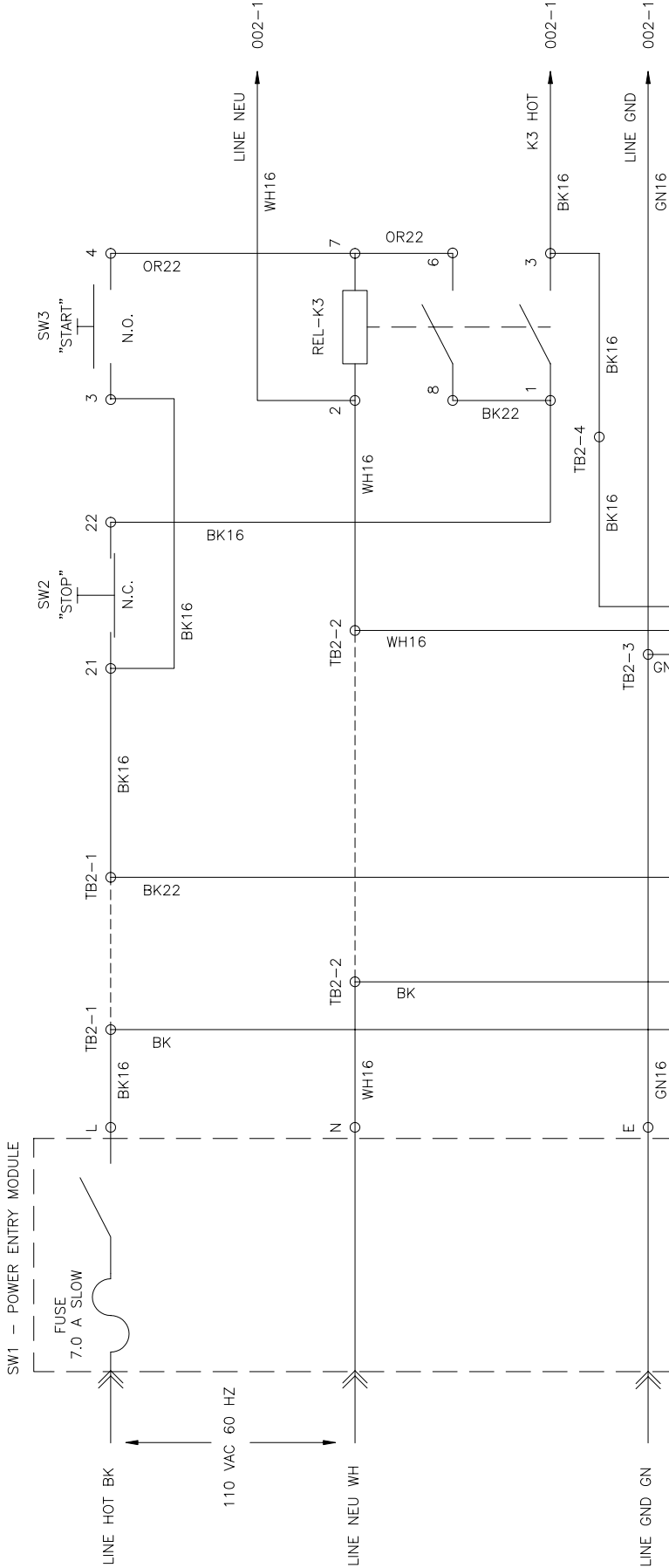
(Revised 3/99)

<b><u>Product size range</u></b>	Continuous coil, cotton or synthetic up to 20 gram, low density	
<b><u>Max. Continuous Speed</u></b>	<b><u>Length Setting</u></b>	<b><u>Rate per min</u></b>
	2	88
	3	84
	4	80
	5	76
	6	72
	7	68
	8	64
	9	60
<b><u>Electrical</u></b>		
Voltage	115 VAC 60 Hz	
Current	7A (inrush) 5A (continuous)	
Fuses		
Main	7A SloBlo (313)	
24 VDC Power Supply	5A SloBlo (313)	
5 VDC	1A (312)	
<b><u>Size (without Lift Platform)</u></b>	Inches: 26.5 W x 23 D x 24.5 H Centimeters: 68 W x 59 D x 63 H	

<b><u>Weight (without Lift Platform)</u></b>	150 lb. 68 Kg
<b><u>Size (with Lift Platform)</u></b>	Inches: 26.5 W x 23 D x 56 H (min.) x 68 H (max.) Centimeters: 68 W x 59 D x 143 H (min.) x 173 H (max.)
<b><u>Weight (with Lift Platform)</u></b>	250 lb. 114 Kg

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USE THIS SCHEMATIC FOR ALL MODEL CS1 TYPE AD0953 (UP TO SER. NO 176). THESE USE SUPERIOR ELECTRIC DRIVE/TRANSLATOR AND STEPPER MOTOR, PLUS PS1 AND PS2.

NUMBER	PAGE
SC1002	001

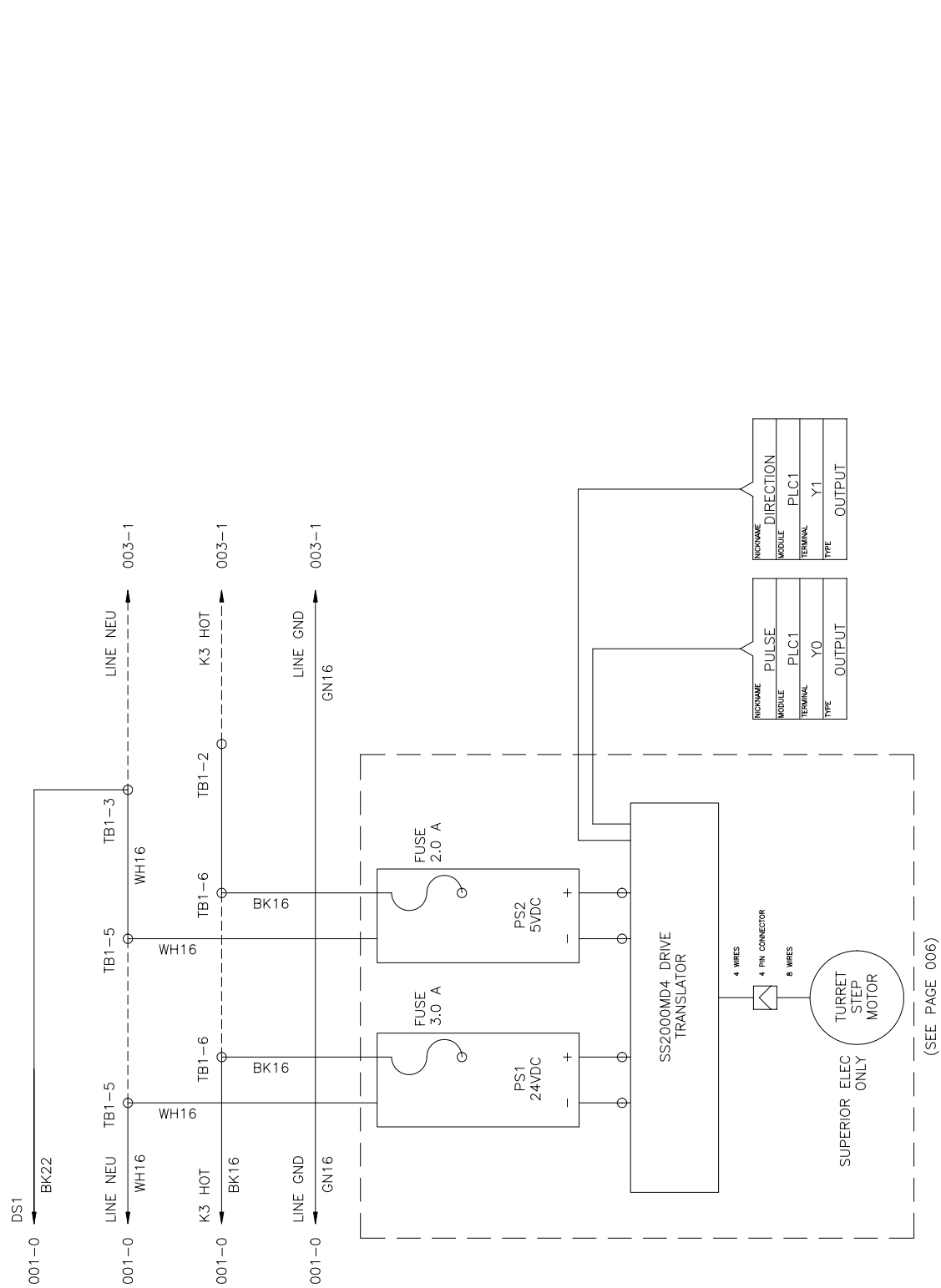
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**DEITZ COMPANY, INC.**  
**ROUTE 34, WALL, N.J.**

TECHNICAL DRAWING -- PRODUCT INFO

SECTION TITLE  
 MAIN POWER  
 CS1 COTTONER SCHEMATIC  
 UP TO SER. NO. 176

BY	DATE:
SJD2	12/02/02
SHEET	OF
001	007
NUMBER	REVISION
SC1002	-



RICKNAME	DIRECTION
MODULE	PLC1
TERMINAL	Y1
TYPE	OUTPUT

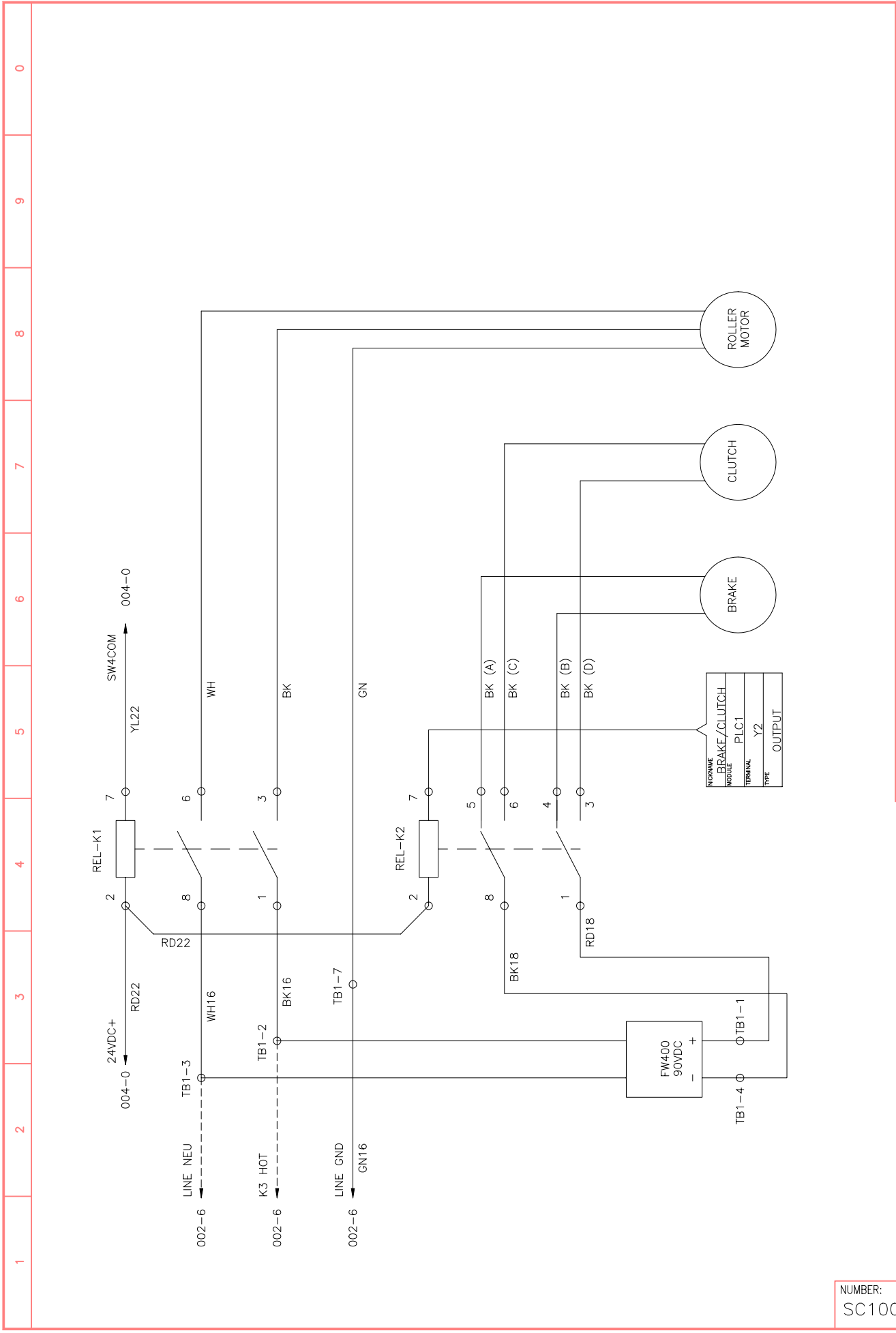
RICKNAME	PULSE
MODULE	PLC1
TERMINAL	Y0
TYPE	OUTPUT

NUMBER: SC1002 PAGE 002

NOTE	REV	DESCRIPTION	DATE
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SECTION	TURRET MOTOR	BY	SJD2	DATE	12/02/02
TITLE	CS1 COTTONER SCHEMATIC	SHEET	002	OF	007
	UP TO SER. NO. 176	NUMBER	SC1002	REVISION	-

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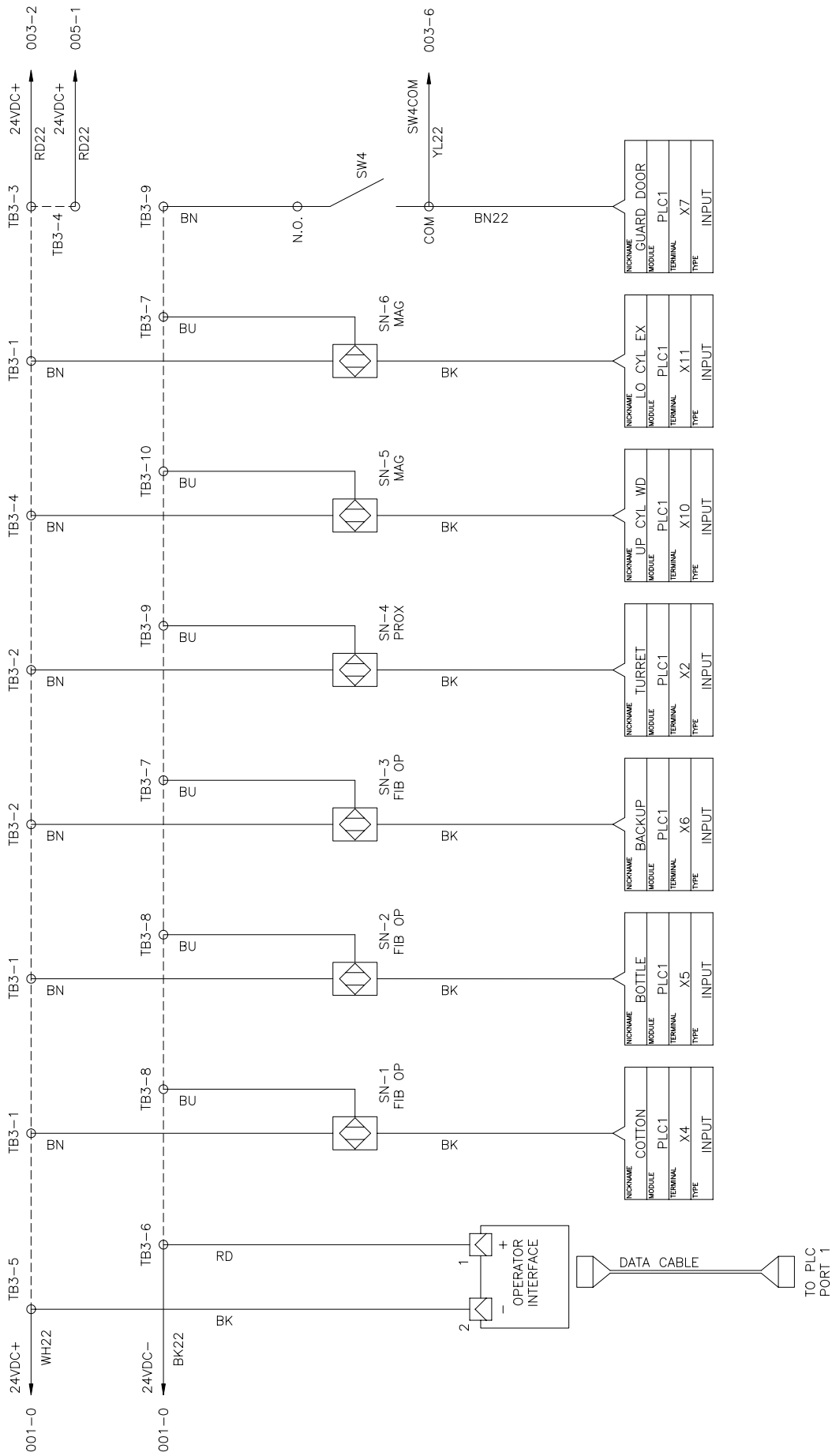


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 TECHNICAL DRAWING - PRODUCT INFO

SECTION BRAKE/CLUTCH, ROLLER MOTOR  
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 UP TO SER. NO. 176

BY SJD2 DATE: 12/02/02  
 SHEET 003 OF 007  
 NUMBER SC1002 REVISION -

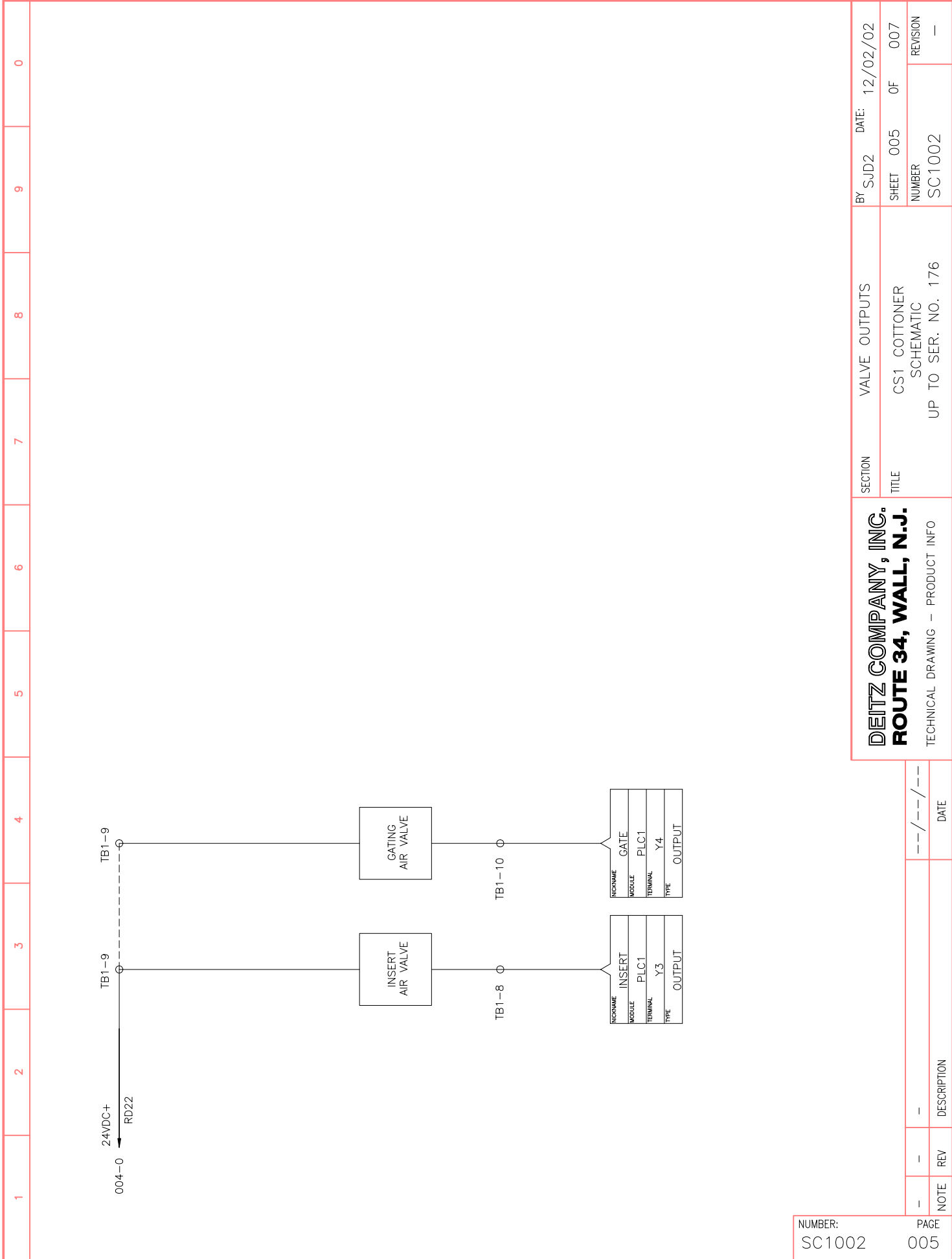


**DEITZ COMPANY, INC.**  
**ROUTE 34, WALL, N.J.**  
 TECHNICAL DRAWING - PRODUCT INFO

SECTION: INTERFACE, INPUTS  
 TITLE: CS1 COTTON SCHEMATIC  
 UP TO SER. NO. 176

BY: SJD2 DATE: 12/02/02  
 SHEET 004 OF 007  
 NUMBER SC1002 REVISION -

NOTE	REV	DESCRIPTION	DATE
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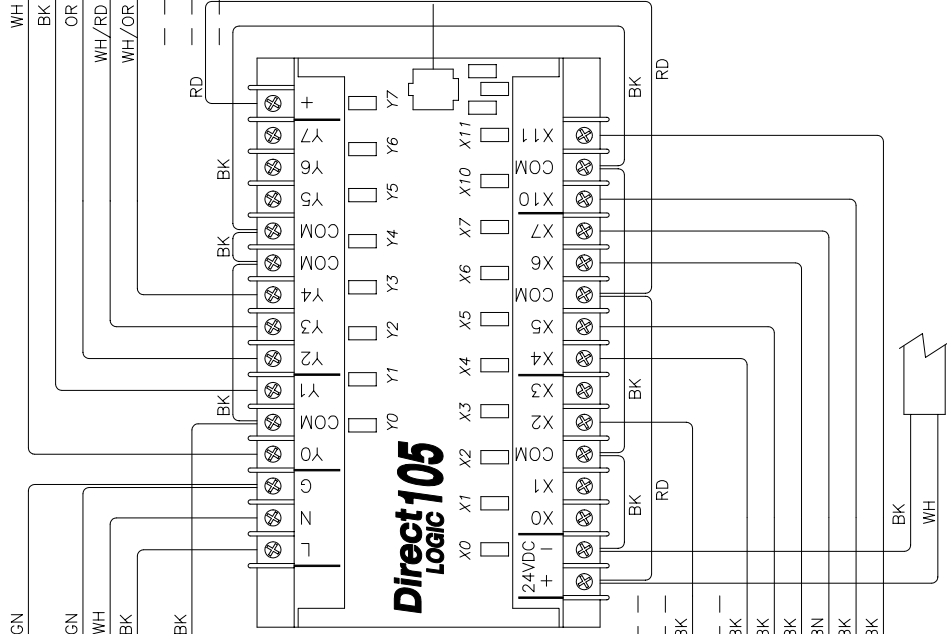
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**DEITZ COMPANY, INC.**  
**ROUTE 34, WALL, N.J.**  
 TECHNICAL DRAWING - PRODUCT INFO

SECTION	VALVE OUTPUTS	BY	SJD2	DATE:	12/02/02
TITLE	CS1 COTTONER SCHEMATIC UP TO SER. NO. 176	SHEET	005	OF	007
		NUMBER	SC1002	REVISION	-



- OUTPUTS**
- Y0 - START TURRET/PULSE
  - Y1 - READ CURR POSITION/DIR
  - Y2 - K2 CLUTCH/BRAKE RELAY
  - Y3 - V1 INSERT AIR VALVE
  - Y4 - V2 BOTTLE AIR VALVE
  - Y5 - (NOT USED)
  - Y6 - (NOT USED)
  - Y7 - (NOT USED)



- TO CHASSIS GROUND**
- GN
- CAUTION 115 VAC LINE IN**
- WH
  - BK
- TO 5VDC SUPPLY COM**
- BK

- INPUTS**
- X0 - PROFILE COMP (INTERNAL)
  - X1 - (NOT AVAILABLE)
  - X2 - SN4 TURRET (PROX)
  - X3 - (NOT USED)
  - X4 - SN1 COTTON (FIB-OP)
  - X5 - SN2 BOTTLE (FIB-OP)
  - X6 - SN3 BACKUP (FIB-OP)
  - X7 - SW4 GUARD (SWITCH)
  - X10 - SN5 UPPER CYL (MAG)
  - X11 - SN6 LOWER CYL (MAG)

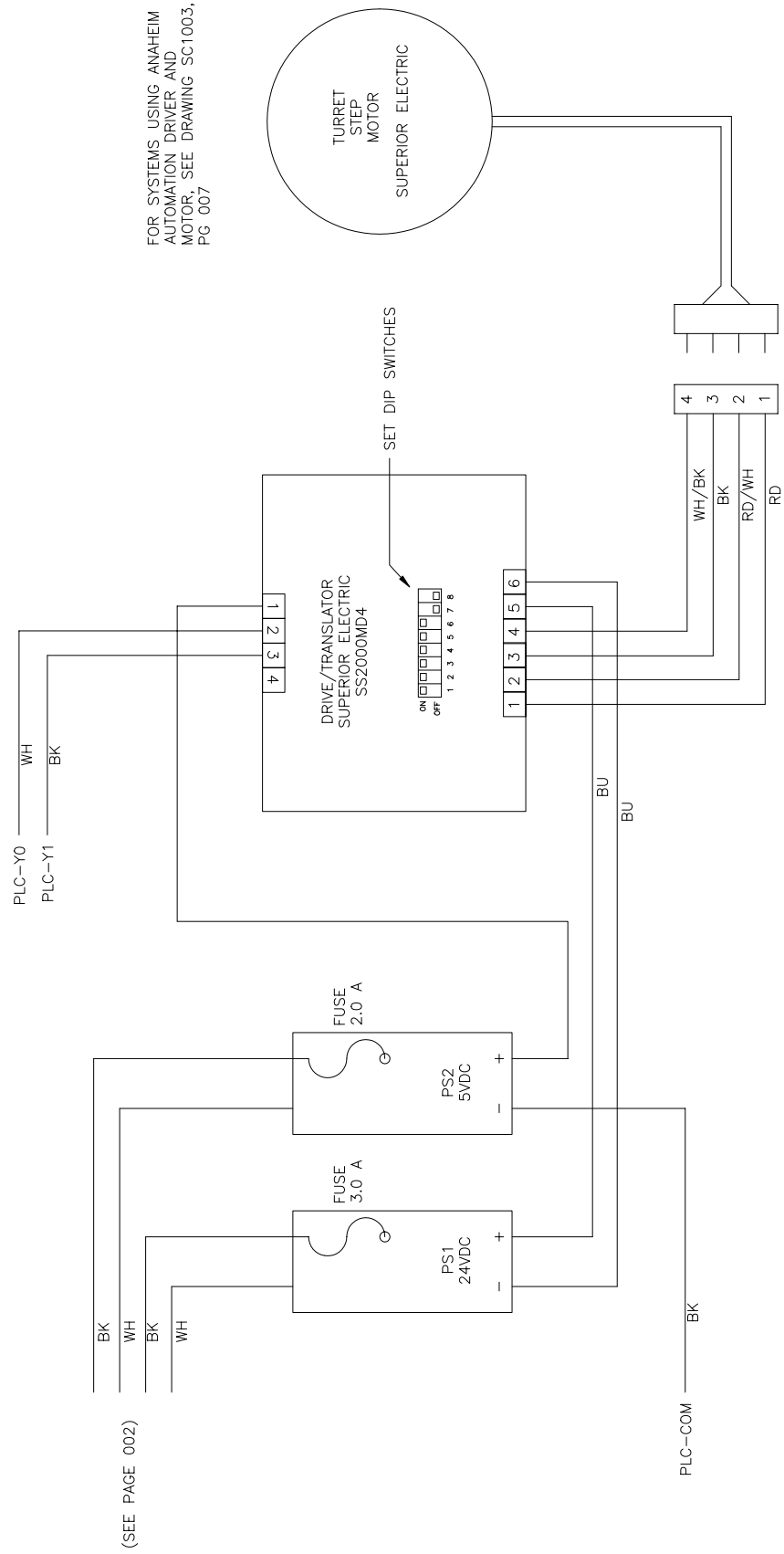
DATA LINE TO DISPLAY

TO TERM BLOCK & DISPLAY

ALSO SEE PAGE 005

<p><b>DEITZ COMPANY, INC.</b>  <b>ROUTE 34, WALL, N.J.</b></p>		<p>SECTION PLC DETAILS</p>	<p>BY SJD2 DATE: 12/02/02</p>
<p>TECHNICAL DRAWING - PRODUCT INFO</p>		<p>TITLE CS1 COTTONER SCHEMATIC</p>	<p>SHEET 006 OF 007</p>
		<p>UP TO SER. NO. 176</p>	<p>REVISION SC1002</p>

NOTE	REV	DESCRIPTION	DATE
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FOR SYSTEMS USING ANAHEIM  
AUTOMATION DRIVER AND  
MOTOR, SEE DRAWING SC1003,  
PG 007

(SEE PAGE 002)

NUMBER: SC1002 PAGE 007

**DEITZ COMPANY, INC.**  
**ROUTE 34, WALL, N.J.**

TECHNICAL DIAGRAM

SECTION	TURRET DRIVE DETAILS	BY	SJD2	DATE:	12/02/02
TITLE	CS1 COTTONER SCHEMATIC UP TO SER. NO. 176	SHEET	007	OF	007
		NUMBER	SC1002	REVISION	—

NOTE	REV	DESCRIPTION	DATE
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