WINTRISS ®

User Manual

Wintriss® MultiPAC Types 4 and 5

Minster® Lubrication Monitor and Speed Control
A SmartPAC® Module
1126400
Rev. A   October 2010

Tech Support Hotline   800-586-8324   8-5 EST

WINTRISS ®

Thank you for purchasing a Wintriss Product. We appreciate your business and want to do whatever we can to ensure your satisfaction. Wintriss products are built to stay on the job day after day, and are backed by an ironclad guarantee, international standards approvals, and unbeatable support. Whenever you need assistance or service, we back all our products with excellent spare parts inventories, training programs, and prompt repair service. We would like to share with you a list of service options–probably the largest number of service options offered in the industry.

- **Technical Assistance**

  We offer a toll-free line for technical assistance. Call our Wintriss Technical Support Hotline at 1-800-586-TECH (8324) should you have any questions about your equipment. Our technical staff is ready to assist you Monday through Friday, 8 a.m. to 5 p.m. EST. In many cases our experienced technical staff can resolve your inquiry right over the phone.

- **Return Authorization**

  Please call our "800" number for a return authorization (RMA) number to return a product for repair. Returned goods must arrive freight prepaid. In order to process your return quickly, we ask that you provide us with the following pertinent information when you call: purchase order number, shipping address, contact name and telephone number, and product type. The assigned RMA number should appear on all packages returned to Wintriss Controls Group to ensure prompt service.

  At the time of requesting an RMA, you will be quoted a flat-rate repair price for the product you are returning. We ask that you either fax us a PO for that amount or enclose the PO with the returned item. This will enable us to ship the item back to you as soon as the repair has been completed. If the item cannot be repaired or there are additional charges, you will be contacted for approval.

  Please be sure to carefully pack all returned items and ship to our Acton, MA location.

- **Expedited Repair Program**

  Rush service providing 48 hour turnaround is available for most products upon request. An Expedite Fee will be applied to our standard repair rate.

- **Board Exchange Program**

  If your needs are urgent, you can take advantage of out Board Exchange (EX) program. Call our "800" number between 8 a.m. to 5 p.m. EST and we will send a replacement to you overnight. A fee does apply to this service. Contact Wintriss Technical Support at 800-586-8324 for details.

- **Service Center**

  Our Service Center for product service is located at our headquarters in Acton, MA. If your equipment requires repair, please contact us at 800-586-8324 to obtain a return authorization number.

  Nationwide field service is also available. Contact the Wintriss Technical Support group at 800-586-8324.

- **Product Training**

  We also offer both product training and maintenance/troubleshooting courses at our Acton, MA and Chicago-area facilities. On-site training is available from the factory or through your local Wintriss representative.

- **Restocking Charge**

  Returned goods are subject to a 20% restocking charge if returned for credit. The minimum charge is $50, not to exceed $250 per item.

Whatever the product, we are committed to satisfying you with innovative engineering, quality construction, reliable performance, and ongoing, helpful support. Call us whenever you need assistance.

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How to Use the Manual

This is the installation and instruction manual for MultiPAC Types 4 and 5 modules for SmartPAC and SmartPAC 2. It has information about how to install and use MultiPAC Types 4 and 5. Also refer to your SmartPAC and SmartPAC 2 user manuals.

Error! Reference source not found. gives you an overview of MultiPAC Types 4 and 5, including specifications.

Error! Reference source not found. gives instructions for mounting and wiring your MultiPAC unit.

Chapter 3 – Type 4 System Check Out shows you how to perform system check-out on a MultiPAC Type 4 unit to make sure you have installed it correctly.

Error! Reference source not found. shows you have to program the MultiPAC speed control feature.

Error! Reference source not found. shows you fault messages or other types of messages you will see on your SmartPAC display when MultiPAC sends a stop command to the press or when there is an equipment or software problem. Entries explain what the messages mean and how to correct the problem.

Important Highlighted Information

Important danger, warning, caution and notice information is highlighted throughout the manual as follows:

⚠ DANGER

A DANGER symbol indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.

⚠ WARNING

A WARNING symbol indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

CAUTION

A CAUTION symbol indicates a potentially hazardous situation, which, if not avoided, may result in property damage.

NOTICE

A NOTICE symbol indicates important information that must be remembered and aids in job performance.

Warranty

Wintriss Controls warrants that Wintriss electronic controls are free from defects in material and workmanship under normal use and service for a period of one year (two years for Shadow light curtains) from date of shipment. All software products (LETS and SBR), electro-mechanical assemblies, and sensors are warranted to be free from defects in material and workmanship under normal use and service for a period of 90 days from date of shipment. Wintriss's obligations under this warranty are limited to repairing or replacing, at its discretion and at its factory or facility, any products which shall, within the applicable period after shipment, be returned to Wintriss Controls freight prepaid, and which are, after examination, disclosed to the satisfaction of Wintriss to be defective. This warranty shall not apply to any equipment which has been subjected to improper installation, misuse, misapplication, negligence, accident, or unauthorized modification. The provisions of this warranty do not extend the original warranty of any product which has either been repaired or replaced by Wintriss Controls. No other warranty is expressed or implied. Wintriss accepts no liability for damages, including any anticipated or lost profits, incidental damages, consequential damages, costs, time charges, or other losses incurred in connection with the purchase, installation, repair or operation of our products, or any part thereof.

Please note:

It is solely the user's responsibility to properly install and maintain Wintriss controls and equipment. Wintriss Controls manufactures its products to meet stringent specifications and cannot assume responsibility for consequences arising from their misuse.

Chapter 1   Introduction to Wintriss MultiPAC Type 4 & 5

Description: MultiPAC Type 4 and 5 is a SmartPAC option that was specifically designed to replace existing Minster MonitorFlow Lube systems (i.e., warning lamp indicator panel and printed circuit board). Stamping houses and original equipment rebuilders (OER's) now have a solution for updating older non-working or outdated lube controls. MultiPAC allows the user to monitor existing flow switches by displaying lubrication flow status on the SmartPAC screen. Type 5 is the same as Type 4, but adds the ability to control the speed of the press.

Operation MultiPAC Type 4 is very easy to operate. There are no programming or complicated user interfaces to worry about. Lubrication flow can be viewed in the SmartPAC Initialization or Run screen with the touch of a single button.   Installation is relatively easy with a minimal amount of wiring to existing equipment. A total of eight (8) lube lines and a sump return line are monitored by existing flow switches (9 total) located on existing lubrication feed lines that lead to specific bearing points. If lubrication is not sensed at any of these flow switches, a lube fault message is generated and displayed on SmartPAC. If a lube fault occurs a stop command is sent by MultiPAC and the press is Top Stopped.

Operation MultiPAC Type5 works the same way as Type 4, but adds the ability to control speed on Minster presses. *Consult Wintriss Factory about whether or not your specific application can be retrofitted with this feature.*

Settings you can make on MultiPAC

All settings are made using the keys on the SmartPAC keyboard. Here are settings you can make:

Type 4

- MultiPAC Type 4 is a <u>lubrication monitor only</u>. No settings can be made. Viewing and troubleshooting is done in SmartPAC's Initialization or Run Screens.

Type5

- **Adds Speed Control.** Type 5 has all the features of Type4; it can also automatically control the speed of an existing variable speed drive of the main motor of your press. Each tool can have its own speed for each mode of operation and be stored permanently in SmartPAC's memory for fast and easy job setup. Settings for Min. and Max. run speed is programmed in the SmartPAC's Initialization Menu.

Modes of Operations

Type 4

- **Lubrication Flow** can be monitored in SmartPAC. Flow switch status can be viewed in either the Initialization or Run Screen. To view lube flow in the Initialization screen depress the 1 and clear key simultaneously on SmartPAC while in Main (1st) program screen. Then select LUBE CONTROL INTIALIZATION, press enter and depress the F6 key next to MONITOR FLOW SWITCHES. To view lube flow in the Main (1st) Run screen, select MONITOR FLOW and press enter. It's that simple!

Type 5

- **Press Speeds are adjusted in either the Program or Run modes of your SmartPAC.**

High and low speed limits for the press are set in the initialization screen (consult Minster press manual for high and low speed limits for your particular model press). Speed per tool can be programmed and stored in the program menu. Speed adjustments can be made in the run screen. If you are planning on using this feature, you will have to make hard wire connections to your motor control. (Consult your Press and Control manuals or call Wintriss Tech. Support for more information).

Specifications

MultiPAC	Type 4	Type 5
Power Requirements	24 VDC	Same
Current Requirements	.5 amp max @ 24 VDC (12/12)	Same (16/12)
Digital Inputs	12	16
Digital Input Voltage	24 VDC sink, optically isolated	Same
Digital Outputs	12	12
Digital Output Type	Form A relay	Same
Digital Output Rating	7 amps/output (6 commons/board)	Same
Digital Output Volt	Up to 250VAC or 30VDC	Same
Memory Type	EPROM	Same
Analog In	N/A	0-10VDC
Analog Out	N/A	0-10VDC
Operating Temperature	0-60C (32-140F) 90% relative humidity non-condensing	Same
PC Board Dimensions Type 4 (WxHxD)	6.50" (16.51 cm) x 4.75" (12.07 cm) x 4" (10.16cm)	
PC Board Dimensions Type 5 (WxHxD)	7" (17.78 cm) x 5" (12.70 cm) x 4" (10.16 cm)	

MultiPAC Power Supply	24 VDC 1/A
Supply Voltage	90-260VAC
Output Voltage	24 VDC ± 3%
Output Current/Power	1A
Status Indication	Green LED, Power OK
Operating Temperature	0°-55° C
Dimensions (WxHxD)	1.75" (4.45cm) x 3.06" (7.77cm) x 3.94" (10.01cm)
Mounting Hints	Normal position: horizontal onto Din rail. Spacing to other modules: left side min. 0.394" (1 cm), vertical distances min. 1.969" (5 cm)

Chapter 2   Installing Wintriss MultiPAC

This chapter describes how to install MultiPAC. It covers:

• Installation guidelines and overview

• Preparation for mounting MultiPAC in your control console

• Preparation for mounting MultiPAC using the optional enclosure

• Connecting AC power and stop circuits

• Power-up prechecks and turning power on

• Installing the power supply

• Final checkout

⚠ WARNING

ELECTRIC SHOCK

• Disconnect main power before installation.

• Turn off all power to the machine and equipment used with the machine

• Ensure that installation is performed by qualified personnel.

Failure to comply with these instructions could result in death or serious injury.

Before you start

If you plan to install MultiPAC yourself, read this installation chapter carefully before you start. Find out what is required and plan your steps before taking any action. MultiPAC is not hard to install. But like anything else, when you are working with something new, the best way to proceed is to learn all you can about it first before cutting wires, drilling holes, and running conduit.

You will need to use your SmartPAC's keyboard and display during installation and speed control programming (Type 5 only). Therefore, before you start installation, you should have a good basic knowledge of how to use SmartPAC's keyboard and displays in order to make settings. This will speed things along. If you run into any problems installing MultiPAC, call Wintriss Tech Support at the telephone number on the cover of this manual.

Installation Guidelines

These guidelines cover major points that are important for proper MultiPAC operation. By following these guidelines, you will eliminate problems that could occur later. The points below are addressed again in the installation procedures.

•   Never run wires for 120V and for lower voltages (such as 24V, 60V) inside the same conduit. Run flexible, liquid-tight conduit for high voltage lines (120V power) to the AC Input of your Power Supply (see fig. 2-4).

•   Good grounds at MultiPAC are important. Make sure MultiPAC is properly grounded. Refer to Figure 2-10 for instructions on how to ground the comms cable that runs between SmartPAC and MultiPAC.

•   The ground wire from MultiPAC should be connected to the main ground point of the machine. This may be in the area where the control transformer is grounded. Finding a good place for a ground is sometimes difficult, but it should be close to where the machine receives its ground.

Overview of the installation

Figure 2-1 on the next page shows MultiPAC installed in a console. Study the drawing to get a general idea of what you will receive and what you will need to do. Of course, where you put the components will probably be different for your installation. Your exact wiring scheme may also be different (where you connect AC power, stop circuits, etc.) However, in general, this is what your installation should look like when done.

The drawing also shows how to properly run your wiring based upon the previous guidelines. If you have top stop and emergency stop circuits that are 24V or other voltage besides 120V; you must run the 24V wires separately. You must also run separately the communications wires that connect MultiPAC to SmartPAC.

Installing MultiPAC Type 4 & 5

Contents of MultiPAC Kits

Type 4 (P/N 9673504)	Type 5 (P/N 9673505)
PC Board (12 inputs, 12 outputs)	**PC Board (16 inputs, 12 outputs with expansion board)**
Power Supply	**Same**
Comms Cable 30' (100' optional)	**Same**

Mounting MultiPAC

Find and appropriate place in your console to locate MultiPAC PC Board and Power Supply. Figure 2-1 shows and example of where MultiPAC might be installed. If there is no room available in your console or you are not using a console with your press, you will have to locate MultiPAC in a separate (NEMA 12) or similar enclosure.
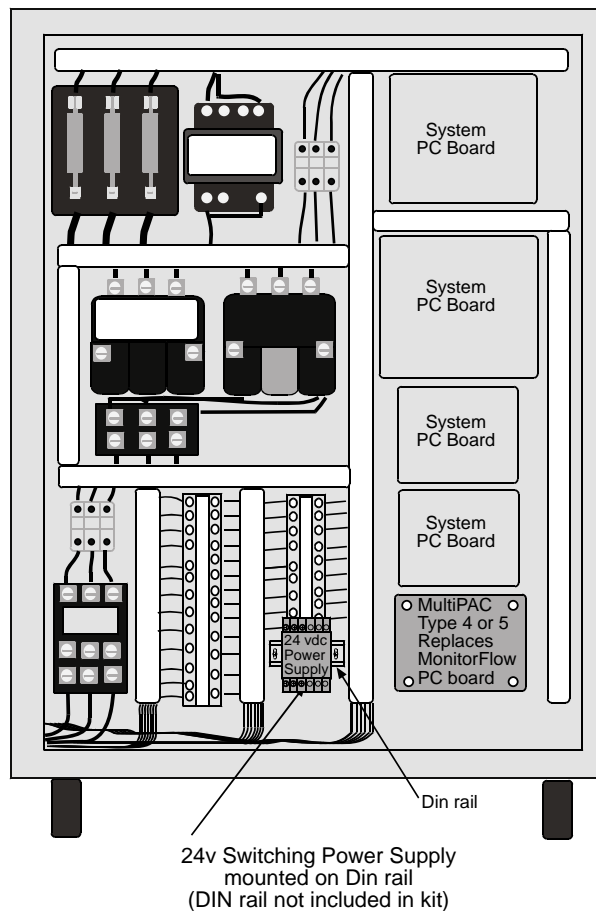
Figure 2-1. Example of MultiPAC installation in a typical console

PC Board Mounting Dimensions
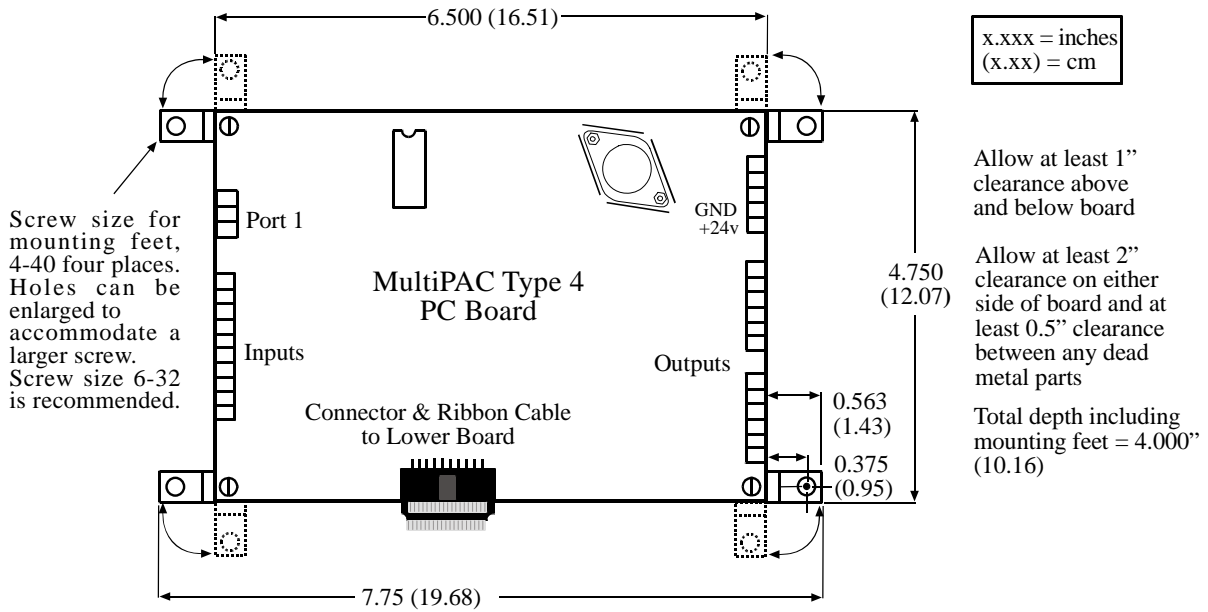
Figure 2-2. Type 4 PC Board Dimensions
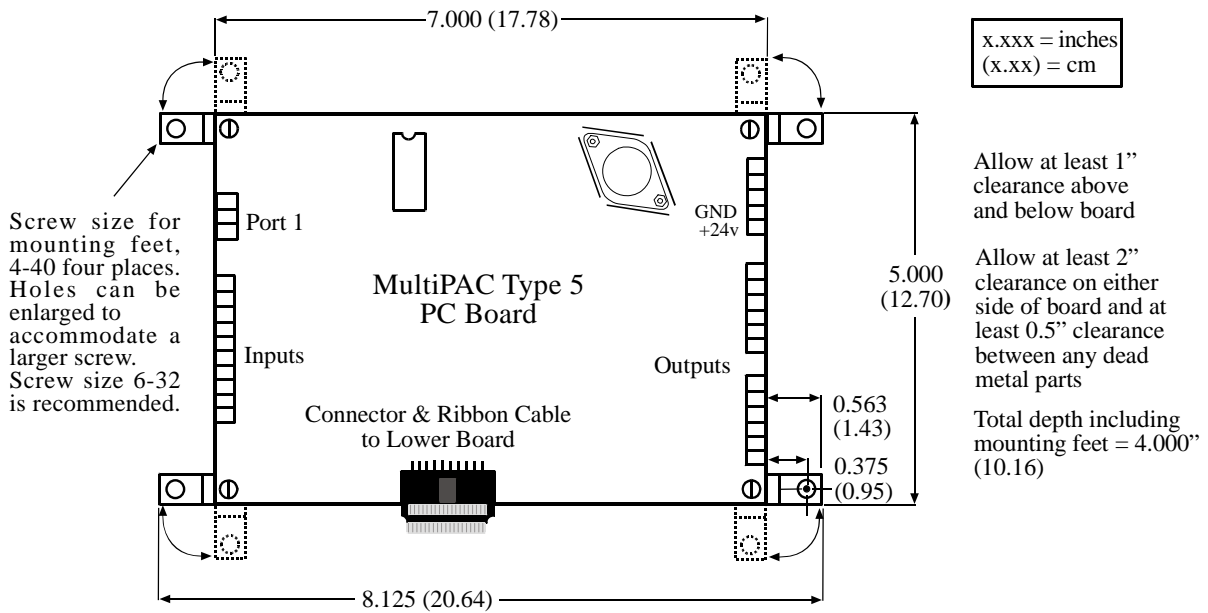
Figure 2-3. PC Board Dimensions Type 5

The first step—checking the machine

Before starting the installation, make sure any tooling has been removed from the machine. Then **check all modes of machine operation**. Run the machine in inch, single stroke, and continuous modes. Make sure the machine has working top stop and emergency stop circuits. Verification that the machine operates and stops properly is extremely important because MultiPAC will be tied in to the machine stop circuits. Do not forget to mark your electrical prints where you wire in MultiPAC.

Preparation for mounting MultiPAC In your console or enclosure

To prepare for mounting MultiPAC in your console or enclosure, follow these steps:

1. Determine a convenient place to mount MultiPAC Type 4 or 5 PC Board in your console or enclosure.
2. Refer to the drawings in Figures 2-2 and 2-3 for mounting dimensions.
3. Find a convenient place to mount your switching power supply. Refer to Figures 2-4 and 2-5 for dimensions.
4. Mount a short piece of din rail (not provided) approx. 2" long close to where you just located your PC board. Refer to drawing in Figure 2-4 or mount on an existing rail.
5. Snap power supply onto din rail. Refer to Figure2-4.

Power Supply Mounting Dimensions

24VDC Output to
MultiPAC PC Board

◄───── 1.75" (4.45cm) ─────►

L+   L-   ⏚

entrelec
⏚

SCHIELE
Systron®
Power 24V/1A **PS**

○ Power

Din Rail (not included)

L ○   ○ L+

Input
90-260 VDC

Output
24 V DC

N ○   PWM   ○ L-

⏚ ○   ○ ⏚

L   N   ⏚

AC Input from Control
Panel
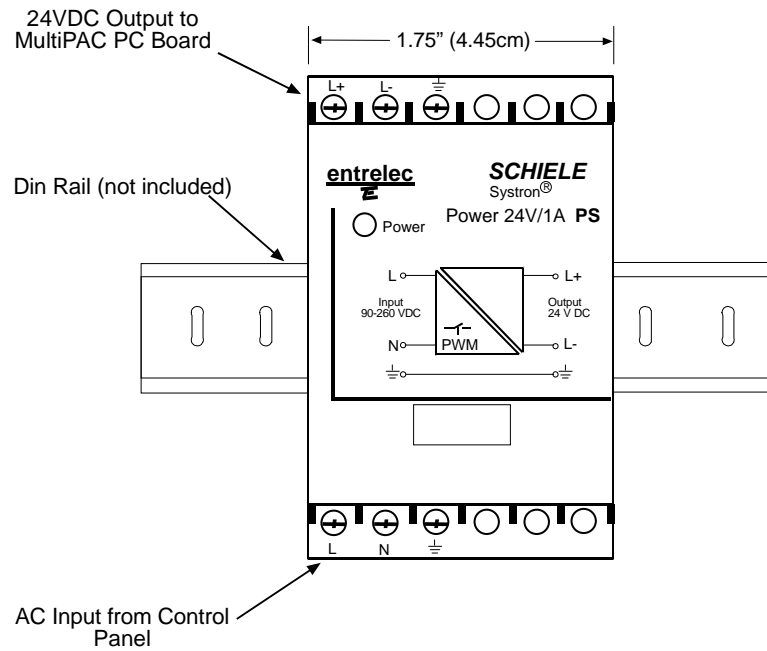
**Figure 2-4. MultiPAC 24VDC Power Supply front view mounted on Din Rail
(not included)**

◄──────── 3.94" (10.01cm) ────────►

3.06" (7.77cm)
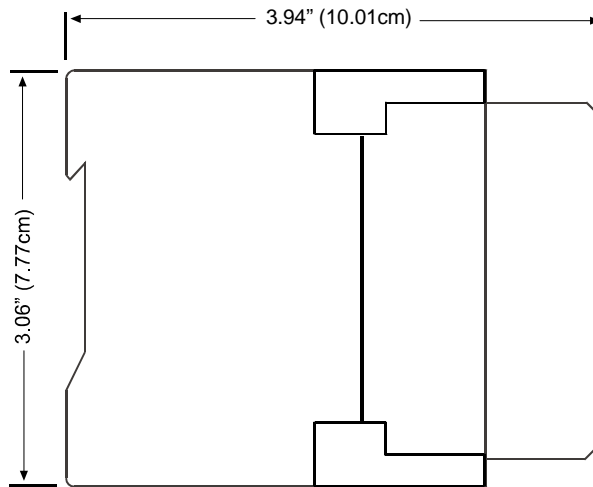
Figure 2-5. MultiPAC Power Supply side view dimensions

Wiring your MultiPAC Type 4&5

> ⚠ **WARNING**
>
> **ELECTRIC SHOCK**
> * Disconnect main power before installation.
> * Turn off all power to the machine and equipment used with the machine
> * Ensure that installation is performed by qualified personnel.
>
> Failure to comply with these instructions could result in death or serious injury.

Connecting AC to the 24VDC Switching Power Supply

To connect AC power to the 24VDC Switching Power Supply follow these steps:

1. Determine how you will bring wiring from your AC source to the left side of the power supply. You will need three wires – high, neutral, and ground. No.16 wire is recommended (No. 14 if local code requires it).

2. Locate the connector on the bottom of the power supply. Refer to fig 2.4 for its exact location.

3. Prepare wires to be inserted into connector by stripping off approximately ¼ inch of insulation.

4. With a small flat blade screwdriver, back off screws so that throat of connector opens large enough to insert the diameter of the gauge wire you are using.

5. Insert wires into connector according to color. Black (HI) into connector on Power Supply marked with the letter "L", White (neutral) into the connector marked with the letter "N" and Green (Ground) into the connector marked with the ground symbol.

6. Tighten connector for each wire so that a good connection is made.

PC Board Layout Type 4
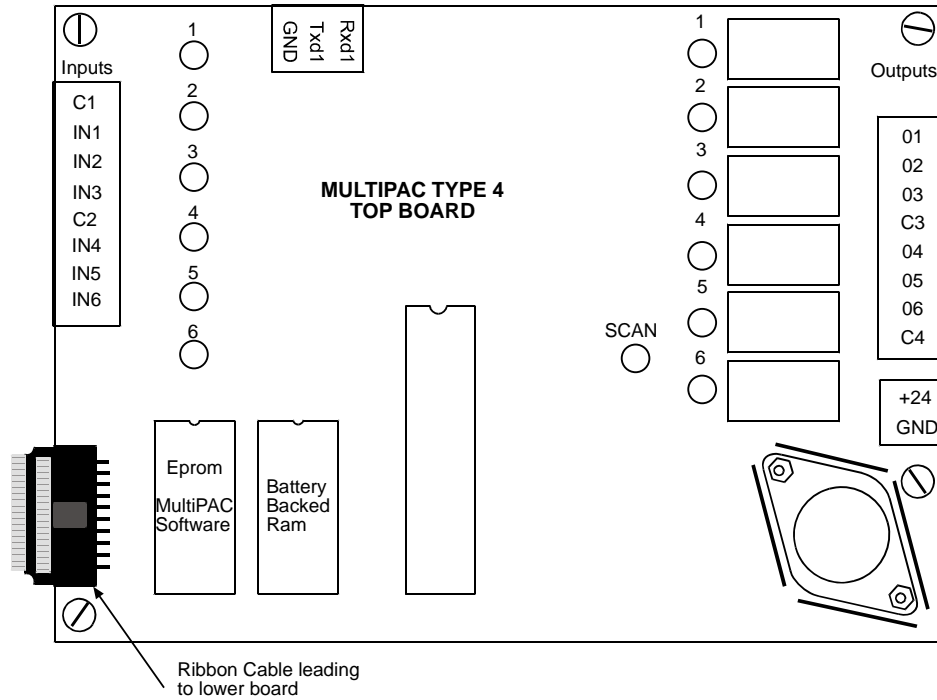
Figure 2-6. MultiPAC Type 4 top PC Board layout
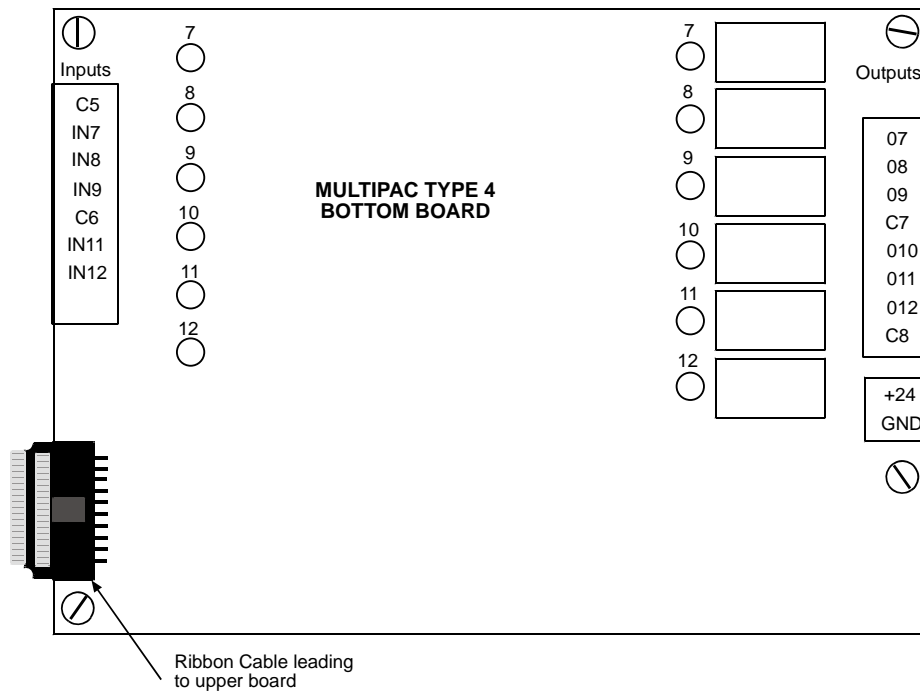
Figure 2-7. MultiPAC Type 4 bottom PC board layout

PC Board Layout Type 5

Factory istalled jumper wires for power to lower board.

Eprom
MultiPAC Software

Battery Backed Ram

Port 1
Rx
Tx
Com

Inputs
C1
IN1
IN2
IN3
IN4
C2
IN5
IN6
IN7
IN8

1
2
3
4
5
6
7
8

MultiPAC Type 5
Top Board

SCAN

1
2
3
4
5
6

GND
+24

1C
1
2C
2
3C
3

4C
4
5C
5
6C
6

Ribbon Cable and Jack Leading to lower Expansion Board for Speed Control (Type 5 only). 8 more inputs and 6 more outputs.
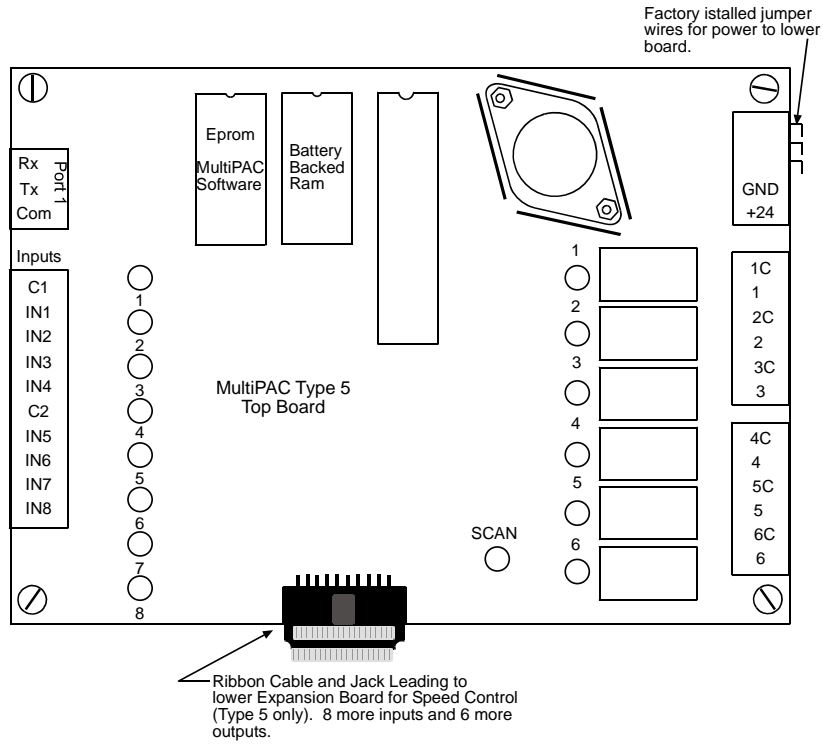
Figure 2-8. MultiPAC Type 5 top PC board layout
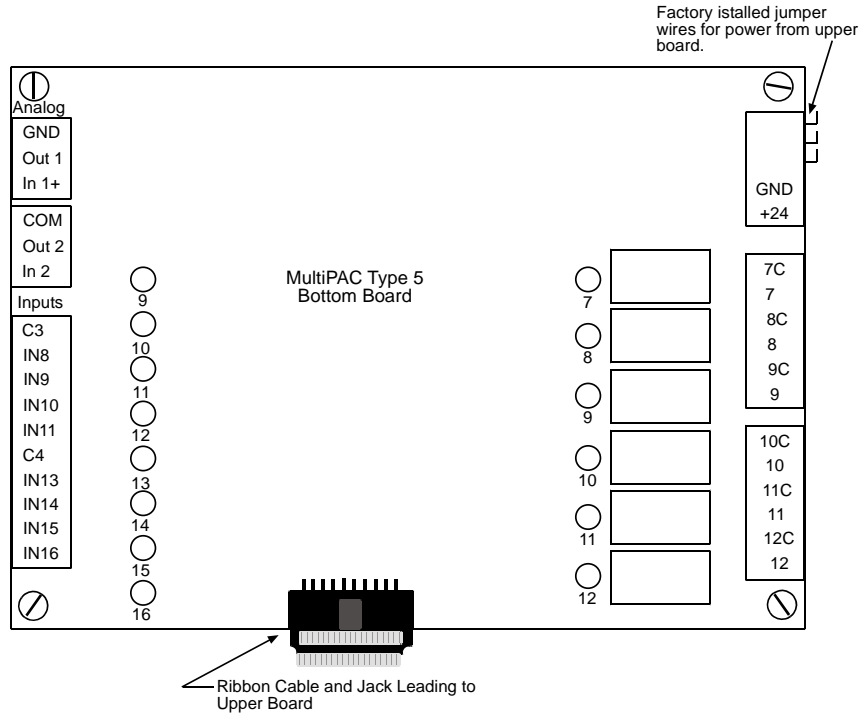
Figure 2-9. MultiPAC Type 5 bottom PC board layout

⚠ WARNING

ELECTRIC SHOCK

• Disconnect main power before installation.

• Turn off all power to the machine and equipment used with the machine

• Ensure that installation is performed by qualified personnel.

Failure to comply with these instructions could result in death or serious injury.

Connecting 24VDC From Power Supply to MultiPAC PC Board

1. Determine how you will bring wiring from your 24VDC Power Supply to your MultiPAC PC Board. You will need three wires – positive, ground and chassis ground. No.22 gauge low voltage hook up wire is recommended

2. You will need to have enough # 22 gauge wire (Red, Black and Green) to travel from Power supply to MultiPAC PC Board

3. Prepare wires to be inserted into connectors by stripping off approximately ¼ inch of insulation. Locate the connector on the top of the power supply. Refer to figure 2-6 through 2-9 for its exact location.

4. With a small flat blade screwdriver, back off screws so that throat of connector opens large enough to insert the diameter of the gauge wire you are using.

5. Insert wires into connector according to color. Red (Positive) into connector on Power Supply marked with the letter "L+", Black (Ground) into the connector marked with the letter "L-" and Green (Ground) into the connector marked with the ground symbol.

6. Tighten connector for each wire so that a good connection is made.

7. Locate DC power connector located on MultiPAC PC board. Refer to figure 2-6 & 2-8 for its exact location. It is marked +24 and GND.

8. Repeat set 5

9. Insert into connector according to color. Red (Positive) into connector on PC board marked +24, Black (Ground) into the connector marked GND. Attach Green (Chassis ground) wire coming from power to Chassis. For Type 4, you must also install jumper wires to lower board (see Type 4 wiring diagram at the end of this manual).

10. Repeat step 6

Wiring Communications Cable between SmartPAC and MultiPAC Type4&5

1. Locate the 30-foot or 100-foot piece of cable you ordered with your kit. (4-conductor shielded cable without connector). This is a low voltage connection. Use green, white, black, and shield wires. Red wire is not needed and can be cut off. **Caution be careful not to cut off ground shield   It is necessary for proper MultiPAC operation**

2. Wire connections as shown in the table below and wiring diagram at the end of this Manual. Locate TB103 at the SmartPAC Board (consult your SmartPAC manual) and the connector on MultiPAC Board marked with Rx, Tx, and Com (Port 1). Refer to Figure2-6 for its exact location.

3. Run communications cable from SmartPAC to MultiPAC. If SmartPAC and MultiPAC are in separate enclosures, use liquid-tight conduit between each enclosure. Strip off approximately 2 ½ inches of insulation exposing all four conductors and the braided shield. Be careful not to run low voltage and high voltages in the same conduit. Stripping, inserting and tightening procedure is the same as when you connected the power supply.

Table 2-1. SmartPAC and MultiPAC Communications Connections

MultiPAC Comms. Connector		SmartPAC TB 103	
Pin ID	Connection	Pin #	Connection
Rx	Rx (white)	226	TXD3 (white)
Tx	Tx (green)	225	-RXD3 (green)
Com	Com or GND (black)	224	+RXD3 (black)
		*224 +RXD3	*229 Gnd.

4.   *With a short piece of wire (You can use a piece of scrap wire left over from Comms. cable) jump pin # 224 (+RXD 3) to pin # 229 (Gnd) on SmartPAC (TB103 connector).

5.   Connect shield (Thin braided silver looking wire with no insulation) to the chassis ground lug located in SmartPAC (Refer to your SmartPAC manual for its exact location) and the other end in MultiPAC to a chassis ground location in your console or enclosure (Refer to Figure 2-10).
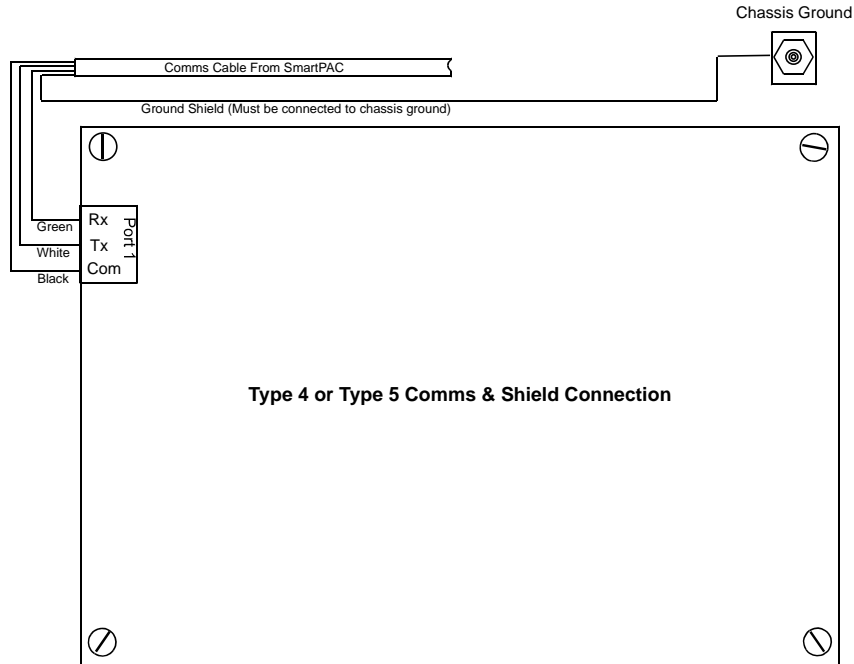
Figure 2-10 Connecting ground shield to MultiPAC PC board

Wiring the Inputs on MultiPAC (Type 4&5)

Clutch Engaged (Input 1)

1.   Locate input #1(pin #2) on your MultiPAC PC Board. Refer to figures 2-6 & 2-8 for its exact location.

2.   Determine how you will provide a low voltage signal to this input. In order to activate this input you will have to find a way to pull it to ground. Pins 205 and 206 on TB1 on your SmartPAC are input check wires from the DSV (Dual Safety Valve). It is necessary to signal MultiPAC when the DSV is engaged. There are a couple of ways of accomplishing this. One way is by using a 120 VAC relay to open and close a set of dry contacts when the DSV is open and closed. The dry contacts of the relay can be used to switch a ground signal to input 1 of MultiPAC. The other way is to signal MultiPAC that the clutch is engaged is to use the clutch engaged output from Wintriss Press Control (only if WPC is used). Ultimately the way you signal MultiPAC when the clutch is engaged is determined by how you are signaling SmartPAC.

Note: SmartPAC has the ability to accept high or low voltage signals into its input check circuit. MultiPAC does not. If your SmartPAC is using a high voltage signal for its input check circuit, a relay needs to be used to sense the input at SmartPAC and switch a contact to ground for the MultiPAC. Refer to wiring diagram at the end of this manual. If a Wintriss Press Control is part of the control, than the output from Pin 29 of the Clutch Brake Control can be wired directly to input 1. (Refer to you WPC users manual)

3. Once you have determined how you will provide the necessary signal to MultiPAC's clutch engaged input, connect it to input #1(pin#2) on MultiPAC (Type 4 or 5) PC board.

Flow Switches (Inputs 2-10)

A flow switch is a type of switch found on all Minster presses equipped with a MonitorFlow lube systems. The purpose of these switches are to detect the presence of lubrication in the lube lines that leads to 8 bearing locations and a sump return line. Once there is adequate oil pressure and flow to the flow switch, contacts in the switch close and a resulting ground signal is sent to the control. These flow switches are most often found mounted in an enclosure located on the back of the press. This enclosure is easy to recognize by all the lube lines leading to the different bearing points on the press. Each Flow switch is identified with a bearing name (e.g. OUTER RH MAIN BEARING). If you have a set of schematics with your press, an electrical diagram showing the wire number associated with each flow switch input should be clearly illustrated. There are nine in all. If you don't have access to any schematics showing your original Minster MonitorFlow System, you will have to ring them out and label them before any wiring is disconnected. Inputs from the flow switches terminate on the original Minster PC board. For your convenience we have kept the pin numbers for these inputs identical to that on the MultiPAC control board (See wiring diagrams at the back of this manual).

Flywheel Brake Released Limit Switch (Input 11)

1. If your press is equipped with a flywheel brake, MultiPAC can be used to control and monitor the brake.

2. Input 11 of MultiPAC is the terminal to which you wire the flywheel brake limit switch. It is normally open and closes when the flywheel brake is released.

3. Refer to the wiring diagrams at the end of this manual for exact wiring of the flywheel brake limit switch.

Motor On (Input 12)

1. Wire a signal to the MultiPAC to indicate to the MultiPAC that the main motor is on, either in Forward or Reverse. This input must be used if MultiPAC is controlling and monitoring a flywheel brake or if the MultiPAC is a Type 5 with speed control.

Important: On a Type 4 MultiPAC, if you are not using the flywheel brake option, do not wire Input 12 (Motor On). On a Type 5 MultiPAC, if you are not using the flywheel brake option, jump Input 12 (Motor On) to Input 11 (Flywheel Brake Released Limit Switch).

Wiring the Outputs on MultiPAC (Type 4&5)

Topstop: Output 4 (Type 4), Output 2 (Type 5)

1　Output 4 on MultiPAC Type 4 and Output 2 on MultiPAC Type 5 must be wired into the control's stop circuit and will be used to Top Stop the press in the event of a lube fault.

2　Refer to your press's wiring diagrams to determine how you will tie in these circuits, also refer to the wiring diagrams at the end of this manual for exact wiring.

Main Motor Inhibit (Output 7)

1.　This dry contact output can be wired in series with the motor forward circuit. If a Flywheel Brake error occurs, this output will stop the main motor.

Flywheel Brake (Output 10 & 11)

1　Output 10 and 11 are used to engage or disengage the flywheel brake. The flywheel brake solenoid can be wired to either one of these outputs. Output 10 turns on when the main motor is turned on. Output 11 turns off when the main motor is turned on.

2　Refer to your press's wiring diagrams and the wiring diagrams at the end of this manual for exact wiring.

Analog Speed Control Wiring

> **Important:** Speed Control is available only with MultiPAC Type 5. Type 5 MultiPAC has 2 PC boards. The lower board is the expansion board that contains the analog portion needed to control the speed of a press. **You must also have a variable speed press and motor drive that has a 0-10 vdc input and a 0-10 vdc velocity drive output for MultiPAC Type 5 function properly**.

1　Locate analog connectors on your MultiPAC lower expansion board. Analog output 2 and analog input 2 are used to send and receive signals from the motor drive and MultiPAC.

2　Connect the output of MultiPAC (out 2) to the 0-10 volt input of the motor drive. (This input to motor drive is sometimes a potentiometer)

3　Next, connect the input of MultiPAC (in 2) to the 0-10 volt output of the motor drive. The analog input is used to receive feedback from the drive on how fast the motor is actually going (Actual Flywheel Speed). The output from the drive is often times referred to as a tachometer output.

4　Connect the ground from MultiPAC port 2 (gnd) to the ground connection located on your motor drive.

5　Refer to your presses wiring diagram and wiring diagram for your motor drive as well as wiring diagram located in the back of this manual for the exact wiring.

Chapter 3 Type 4 System Check Out

Once you have completed your installation, it is a good idea to check your work to make sure input connections from flow switches have been wired correctly.

Step 1. Turn SmartPAC Program / Run key to **Program.**

Step 2. Power up SmartPAC and turn on main motor.

Step 3. At the MAIN PROGRAM screen enter the INITIALIZATION MENU by simultaneously depressing the 1 and clear key

```
THE CURRENTLY LOADED TOOL IS # 12121
■GNO41  FH  NEA
SENSORS DISABLED


            PROGRAM OR LOAD TOOL NUMBERS
            SENSOR ENABLE / DISABLE & STATUS


   USE THE CURSOR KEYS TO CHANGE SELECTIONS
   PRESS ENTER TO ACCESS TOOL NUMBERS.
```
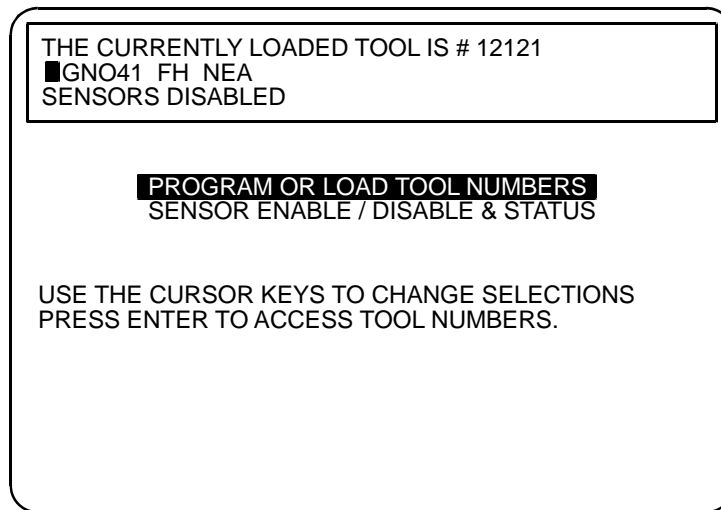
Figure 3-1. Main Program Screen

Step 4. Once in the INITIALIZATION MENU select LUBE / SPEED INIT

```
                MAIN INITIALIZATION MENU

   USE THE CURSOR          RESOLVER ZERO
   KEYS TO CHOOSE          POSITION SENSOR
   MENU ITEMS.  PRESS      INSTALLED OPTIONS
   THE ENTER KEY TO        PRESS NAME
   SELECT, SWITCH TO       SET BRAKE MONITOR
   RUN WHEN DONE.          SELECT CAM NAMES
                           AUTO ADVANCE
                           CUSTOM SENSOR NAMES
                           SENSOR ENABLE MODE
                           TOOL INFORMATION
                           SECURITY ACCESS
                           PACNET
                           LUBE / SPEED INIT
```
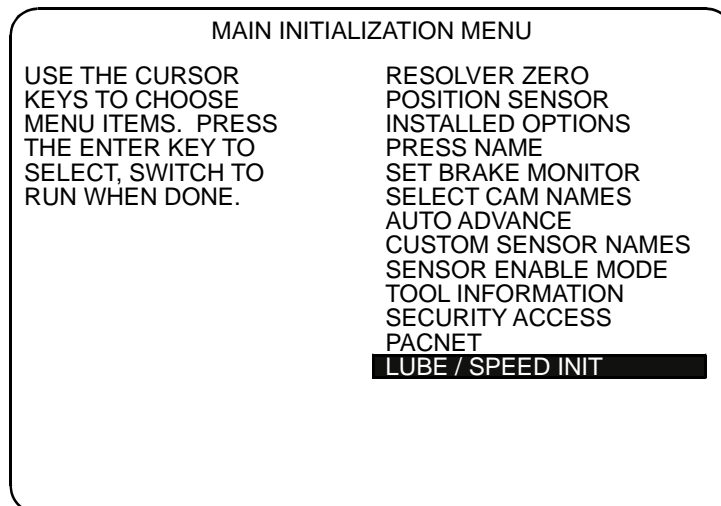
Figure 3-2. Main Initialization Screen

Step 5. Select LUBE CONTROL INITIALIZATION to view flow switch status.

```
┌─────────────────────────────────────────────┐
│                                               │
│          LUBE / SPEED CONTROL  INITIALIZATION │
│                                               │
│                                               │
│          LUBE CONTROL INITIALIZATION          │
│          SPEED CONTROL INITIALIZATION         │
│                                               │
│          USE CURSOR KEYS TO SELECT THE FUNCTION│
│          YOU WISH TO CHANGE, PRESS THE ENTER KEY│
│          TO CHANGE IT.  PRESS RESET WHEN DONE.  │
│                                               │
│                                               │
│                                               │
│                                               │
│                                               │
│                                               │
└─────────────────────────────────────────────┘
```
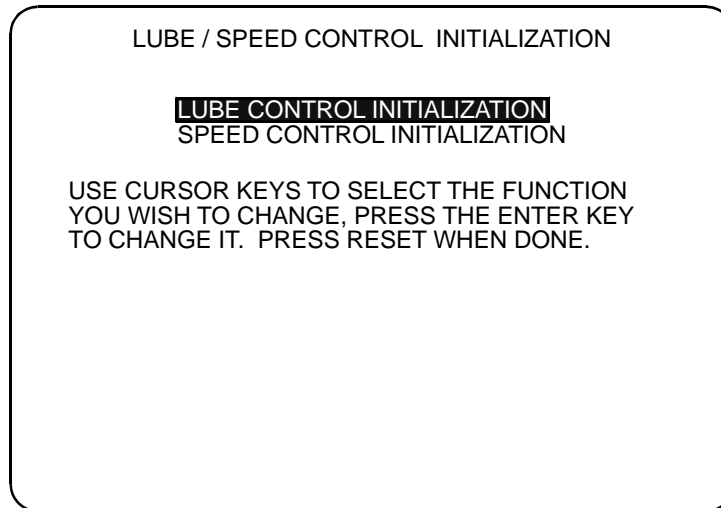
Figure 3-3. Lube / Speed Control Initialization Screen

Step 6. To view status of flow switches select Function Switch F6

```
┌──────────────────────────────────────────────┐
│                                                │
│    ┌──────────────────────────────────┐        ┌──┐
│    │ THE PRESS LUBRICATION FOR THIS   │     ▷  │F1│
│    │ MACHINE IS NOT PROGRAMMABLE.  THE│        └──┘
│    │ SYSTEM IS AUTOMATICALLY MONITORED.│    ▷  │F2│
│    │ ANY MALFUNCTION OF THE SYSTEM WILL│        └──┘
│    │ RESULT IN TOP STOPPING THE PRESS AND│  ▷  │F3│
│    │ DISPLAYING AN ERROR MESSAGE.     │        └──┘
│    │ PRESS THE F6 KEY TO MONITOR      │     ▷  │F4│
│    │ INDIVIDUAL FLOW SWITCHES.        │        └──┘
│    └──────────────────────────────────┘     ▷  │F5│
│                                                └──┘
│              MONITOR FLOW SWITCHES ▶  ▷  │F6│
│                                                └──┘
└──────────────────────────────────────────────┘
```
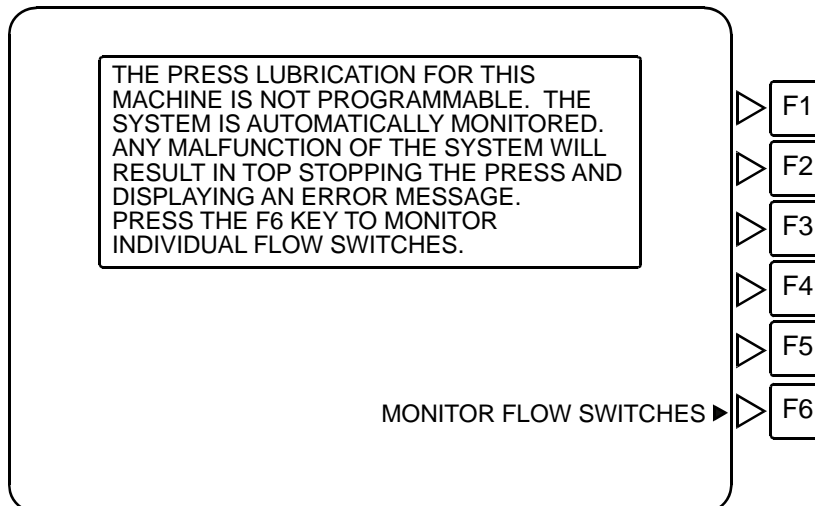
Figure 3-4.   Monitor Flow Switch F6 Screen

Step 7. This is the screen in SmartPAC's INITIALIZATION screen that allows the user to view the status of the flow switches. If a square is filled solid, no oil flow is achieved. If a square is unfilled, oil flow is achieved.   All squares must be unfilled to engage the clutch and run the press. Unlike your original Minster Lube System, no reset is required to proceed.
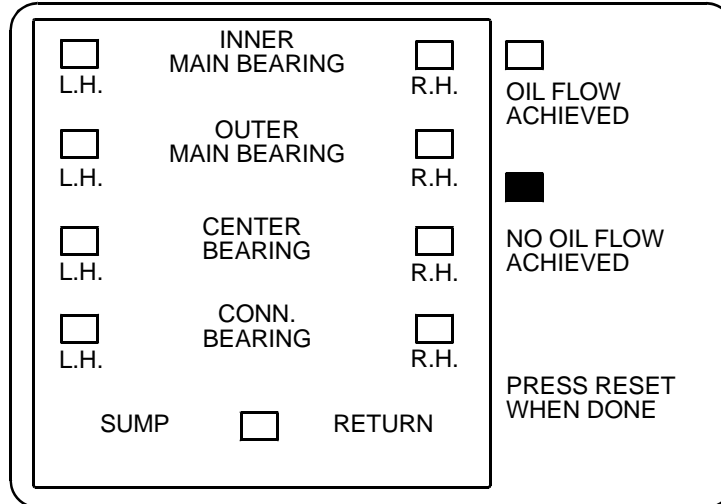
Figure 3-5. View Flow Switches in the Initialization Screen

Step 8. It is also possible to view status of flow switches while in the Run Mode. Select Monitor Flow.
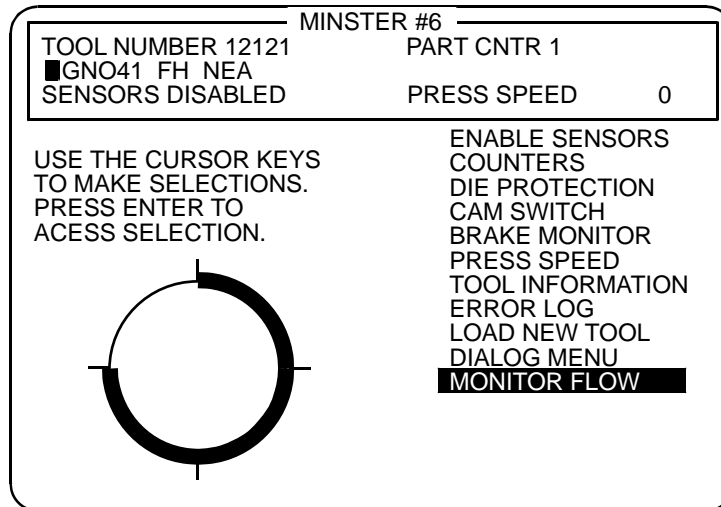
Figure 3-6. View Flow Switches in the Run Screen

Chapter 4 Speed Control Programming

Initialization Mode (Programming Minimum and Maximum press speeds)

1. Start out by getting your SmartPAC into the **Initialization** mode.
2. Select **LUBE/SPEED INIT** from the menu
3. The next screen will be **LUBE/SPEED CONTROL INITIALIZATION** (Figure 4-1)

```
            LUBE / SPEED CONTROL INTIALIZATION

            LUBE CONTROL INITIALIZATION
            SPEED CONTROL INITIALIZATION


         USE CURSOR KEYS TO SELECT THE PRAMETER
         YOU WISH TO CHANGE.  PRESS THE ENTER KEY
         TO CHANGE IT.  PRESS RESET WHEN DONE
```
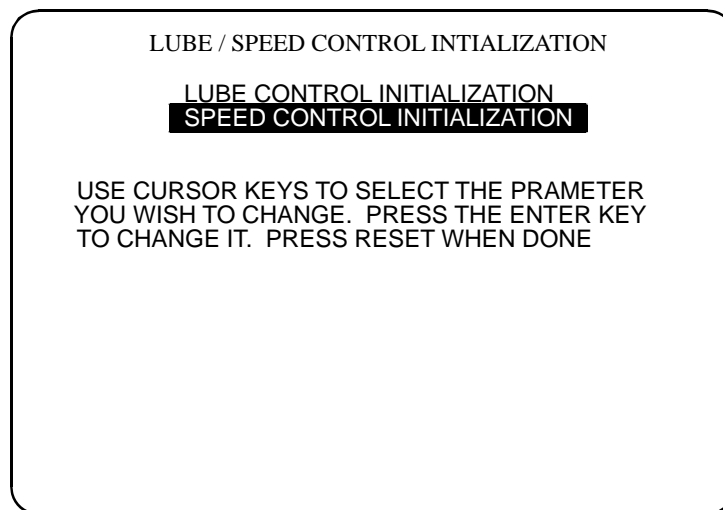
Figure 4-1. Lube / Speed Control Initialization

4. Select **SPEED CONTROL INITIALIZATION**
5. The next screen will be **PRESS SPEED SETUP** (Figure 4-2)

```
                    PRESS SPEED  SETUP


           MAXIMUM  PRESS SPEED  = 100
           MAXIMUM SS SPEED      = 60
           MAXIMUM INCH SPEED    = 40
           MINIMUM  PRESS SPEED  = 20



           ENTER THE  MAXIMUM SPEED OF THE PRESS.
           THIS VALUE SHOULD ONLY BE  ENTERED
           ONCE.  THIS VALUE IS USED TO CALCULATE
           THE  SIGNAL TO THE  MOTOR  DRIVE.
```
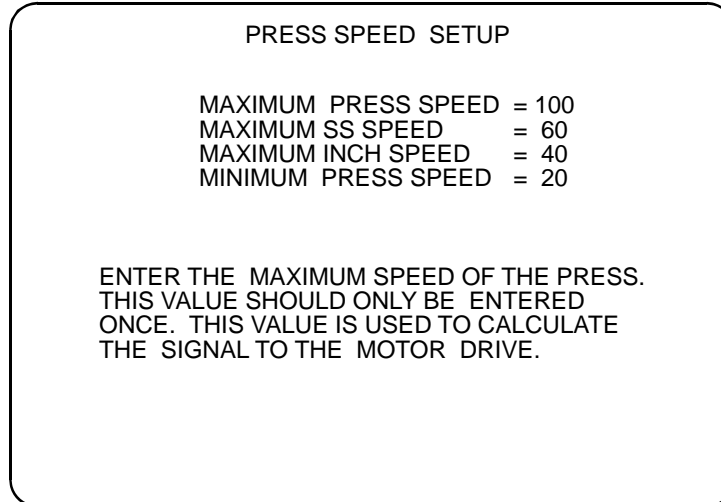
Figure 4-2. Press Speed Setup

6. Next enter the Maximum Speed. This value is critical for the calibration of the speed control and must be equivalent to the 10 VDC input to your variable speed drive. Refer to your press or drive manufacturer's manual. SmartPAC assumes linear relationship between 0 to 10 VDC and zero and the Max. Speed you set here.

7. Next enter the Maximum Single Stroke (SS) speed. This will be the maximum speed that is allowed for any tool in Single Stroke.   If it is not necessary to limit the speed allowed, set this to the maximum Press Speed value.

8. Next enter the Maximum inch speed. This will be the maximum speed that is allowed for any tool in inch.   If it is not necessary to limit the speed allowed, set this to the maximum Press Speed value.

9. Next enter the Minimum Speed. This value is not used for calibration. You can leave it at zero, or you can use it to set a lower limit for running your press for any tool in any mode. For example, if you want to make sure that the press is never operated below 20 SPM for any tool and mode including Inch, enter 20. While programming speeds for any tool in this example, SmartPAC will not accept any value below 20 SPM.

Program Mode (Programming operating modes and speeds by tool number)

> **NOTICE**
>
> In many instances, different tools or dies may have certain speed requirements for each mode (i.e. Inch, Single Stroke, or Continuous). MultiPAC speed settings can also be changed in the Run mode. If you want to add security and limit access to only certain personal, you may do so in the Initialization mode by selecting **Security Access,** than select **Adj. Press Control**. Change the setting to either Password required or Program Mode Only. Doing this will only allow authorized personal from making changes to Press Control Parameters while in the Run Mode. (If you limit access to program only, remove Prog/Run keys)

1. Add or edit new tools and tool parameters just as you have done prior to installing MultiPAC with Speed Control. Select an existing tool or create a new one.

2. While in the Program mode select **Press Control** (WPC integration) Figure 4-3 **or Press Speed** (no WPC integration) Figure 4-4 to program speed settings.

```
            PRESS CONTROL PARAMETERS


    TOP STOP ANGLE        330  DEGREES


    CONTINUOUS SPEED      80   SPM
    SINGLE STROKE         60   SPM
    INCHING SPEED         40   SPM


    USE THE CURSOR KEYS TO CHOOSE THE VALUE YOU
    WANT TO CHANGE.  PRESS THE ENTER KEY TO
    CHANGE IT.  PRESS RESET WHEN DONE.
```

Figure 4-3. Press Control Parameters (Program Mode WPC integration)

```
┌──────────────────────────────────────────────────┐
│                                                    │
│              PRESS SPEED PARAMETERS                │
│                                                    │
│                                                    │
│         CONTINUOUS SPEED    80   SPM               │
│         SINGLE STROKE       60   SPM               │
│         INCHING SPEED       40   SPM               │
│                                                    │
│                                                    │
│         USE THE CURSOR KEYS TO CHOOSE THE VALUE YOU│
│         WANT TO CHANGE.  PRESS THE ENTER KEY TO    │
│         CHANGE IT.  PRESS RESET WHEN DONE.         │
│                                                    │
│                                                    │
└──────────────────────────────────────────────────┘
```
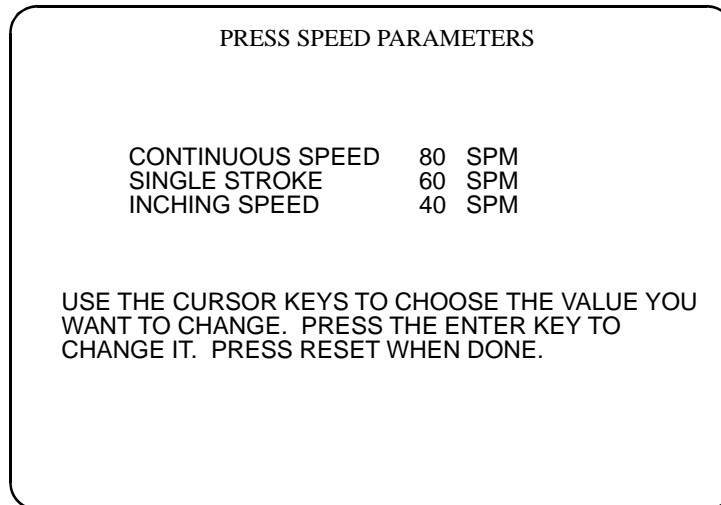
Figure 4-4. Press Speed Parameters (Program Mode no WPC integration)

3. Next enter speeds for each mode, according to how fast you want your tool to run.(i.e. Inch, Single Stroke and Continuous)

4. Enter values by selecting the mode you want to change and press enter. A dialog box will appear for you to enter a speed value in rpm. You can use the up/down cursor keys to increase (up) or decrease (down) the value or use the numerical keypad to enter values. Press **Enter** when finished.

5. Repeat step 4 for each operating mode. When you are finished programming all your speed parameters press **Reset** to save settings.

6. To run your press with this tool you must first load it. If you are not familiar with loading a tool, consult your SmartPAC Manual.

Run Mode (Increasing or Decreasing Press Speed)

NOTICE

Press speed changes can only be made incrementally while in this mode. Due to specific speeds that tools are meant to run at, only qualified personal should be allowed to make speed changes while operating the press.

---

1. While in the Run mode select **Press Control** (WPC integration) Figure 4-5 **or Press Speed** (no WPC integration) Figure 4-6 to program speed settings.

```
TOOL NUMBER 2020              PART CNTR 2002
FLANGE                        TWO HAND INCH
SENSORS ENABLED                  80   FSPM


             PRESS CONTROL ADJUST MENU

   TOP STOP ANGLE                330   DEGREES

   CONTINUOUS SPEED               80   SPM
   SINGLE STROKE                  60   SPM
   INCHING SPEED                  40   SPM




   USE THE CURSOR KEYS TO SELECT THE VALUE
   TO CHANGE.  PRESS THE ENTER KEY TO CHANGE
   IT.  PRESS THE RESET KEY WHEN DONE.
```

Figure 4-5. Press Speed Adjust (Run Mode WPC integration)

```
TOOL NUMBER 2020              PART CNTR 2002
FLANGE
SENSORS ENABLED                  80   FSPM



   CONTINUOUS SPEED               80   SPM
   SINGLE STROKE                  60   SPM
   INCHING SPEED                  40   SPM



   USE THE CURSOR KEYS TO SELECT THE VALUE
   TO CHANGE.  PRESS THE ENTER KEY TO CHANGE
   IT.  PRESS THE RESET KEY WHEN DONE.
```

Figure 4-6. Press Speed Adjust (Run Mode no WPC integration)

2. Highlight the mode of operation you want to make changes to and press enter.

3. Using the up/down cursor keys, either increase or decrease the press speed by holding down on the appropriate key until the desired speed is reached. The **up** key increases and the **down** key decreases the speed. Press Reset.

4. If you need to make changes to other operating modes, use the up/down cursor keys to select the desired mode. Repeat step 3 to make changes.

Calibration

It may be necessary to calibrate your MultiPAC so that accurate speeds are displayed on your SmartPAC Screen.

Steps:

1. Make sure that the SPEED CONTROL INITIALIZATION parameters have been set up properly. Enter the Maximum and minimum speeds that the press will be run. Try running the press. If the speed displayed in the status box does not match that which is displayed in the angle wheel graphic, proceed to step 2.

2. Program a tool with all three modes of operation (INCH, SINGLE STROKE, and CONT) to the maximum speed that you programmed in the speed control initialization setup.

3. Locate the three Analog 2 Port potentiometers found on the edge of the lower board. Find the one that is labeled Out 2 Gain. Refer to Fig 4-7 for its location.

4. Start the main motor.

5. Put a voltmeter across the terminals Out2 and COM (common). Refer to Figure 4-7 for its exact location. The voltage reading should read 10VDC. If it doesn't, adjust the Out 2 Gain potentiometer until it does.

Note: If the press doesn't run at the correct maximum speed after making this adjustment, the Drive will need to be adjusted. Consult your Drive manual for instructions on how to adjust it.

6. After you have adjusted Out2 to the 10VDC you will need to calibrate the input 2 (In2). Refer to Figure 4-7 for its exact location. Find an output from the variable speed drive that will give you a 0-10 VDC output, which corresponds to the flywheel speed.

7. Before hooking this 0-10VDC input into the MultiPAC, run a jumper wire from Out2 to In2.

8. Start the main motor of the press again.

9. Make sure the output from Out 2 is still at 10VDC.

10. With the main motor running and the clutch is disengaged, you should read the Max Press Speed in status box of the SmartPAC screen where it is labeled FSPM (flywheel stokes per minute).   If it doesn't, adjust the In2 Gain potentiometer until it does.

Note: If the press doesn't run at the correct maximum speed after making this adjustment, the Drive will need to be adjusted. Consult your Drive manual for instructions on how to adjust it.

11.Once your MultiPAC is calibrated properly, you will be able to accurately program various speeds for each mode of operation (Inch, Single Stroke and Continuous). The graph shown in 4-8 is an example of voltage readings at analog port 2 with relation to the mode you are in and SPM.

Note: Actual voltage readings depend on how you have programmed the Min and Max speed settings in Initialization.
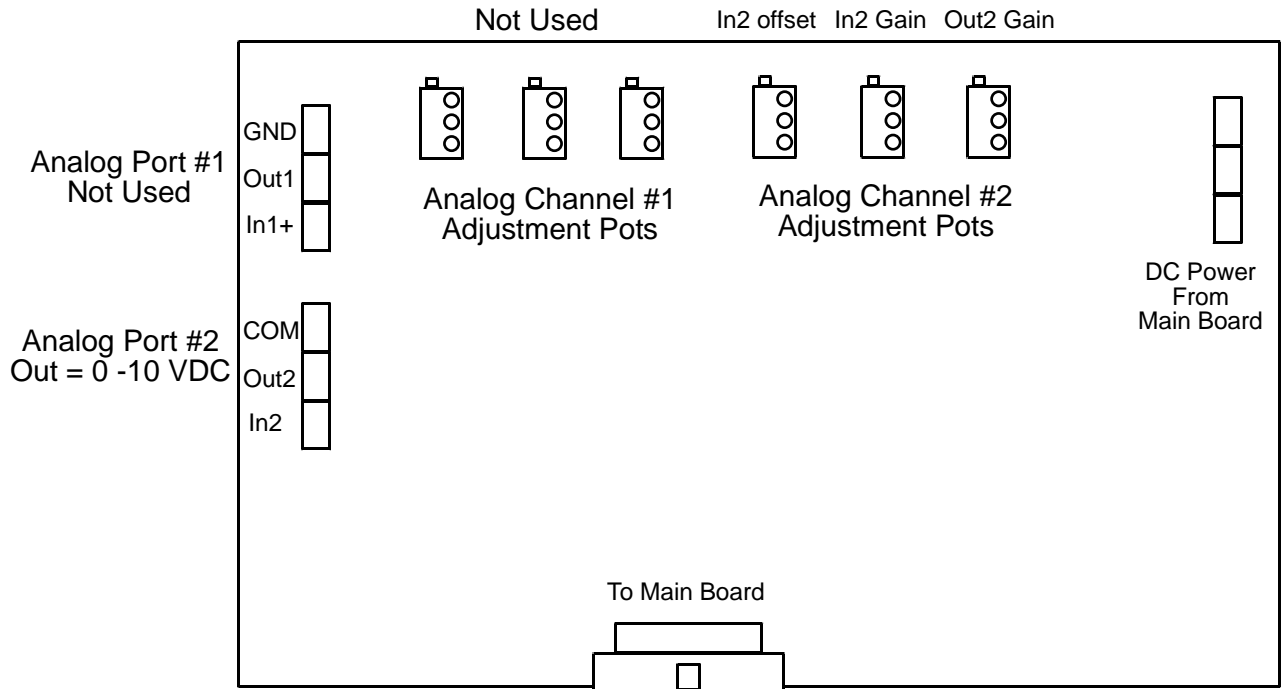
Figure 4-7. Analog board (lower board) adjustment potentiometers
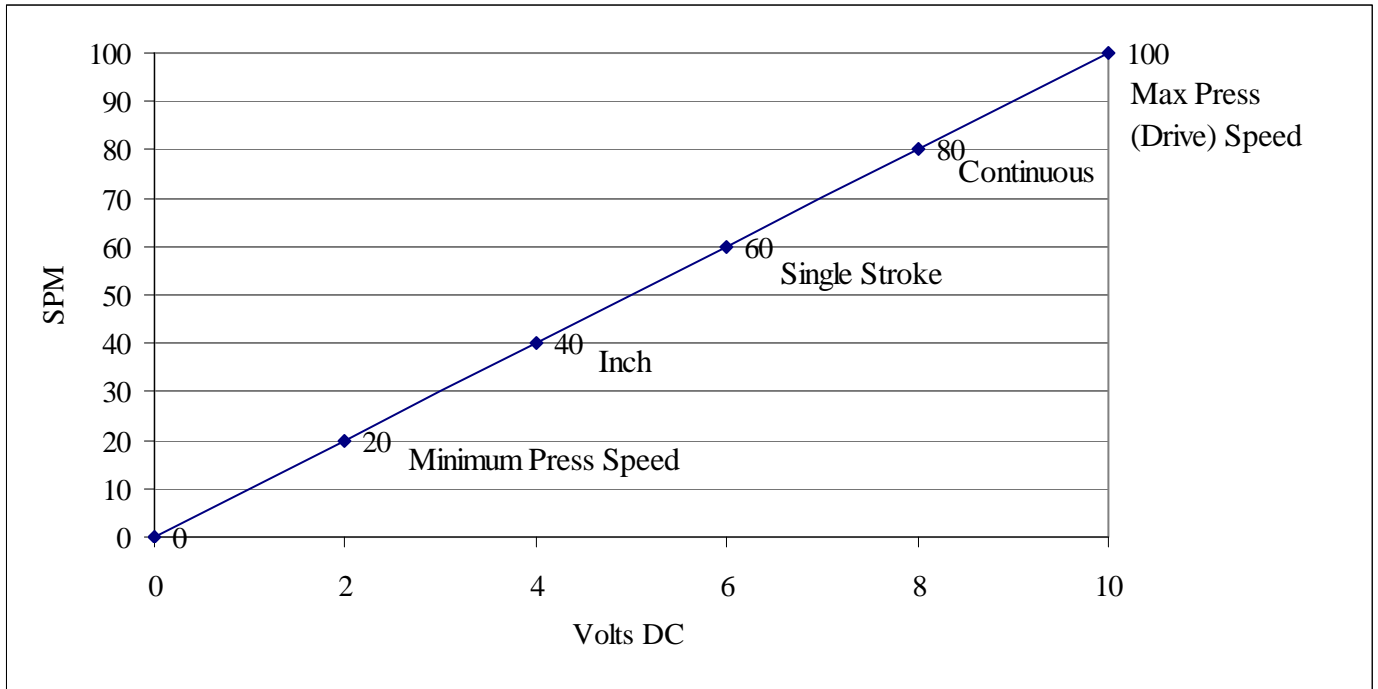
Figure 4-8. Analog Port 2 Output Voltage vs. SPM (Example)

Chapter 5 Fault Messages

Lubrication and Hydraulic Overload fault messages will be displayed on your SmartPAC LCD display or in the error log. These messages record the error or other conditions when the press stops or when a fault occurs. If you are unfamiliar with how to view error messages in your error log, it is explained in chapter 7 of your SmartPAC manual. If you get a fault or error message when the press is stopped or you are in the Run mode, the letter Err will blink in the LED display. To resume operation after an error message occurs, clear the error message by pressing the Reset key. Correct the malfunction or other message before running the press.

Messages displayed when a lube fault occurs

Flow Switch Lube Faults

A (e.g. RIGHT HAND, INNER MAIN BEARING) FAULT HAS OCCURED. THE FLOW SWITCH ON THIS LINE HAS DETECTED A FAULT (see Table 5-1 for a complete list of Fault Messages).

Explanation:

A total of 10 flow switches are connected to MultiPAC's (Type 4 or 5) inputs (inputs 2-10). The purpose of these flow switches is to detect proper lubrication flow to specific bearing points on the press. If one or more of these flow switches detects an insufficient flow of lubrication, a fault will occur and the press will Top Stop.

Remedy:

If you are experiencing error messages, check the following:

Is there enough oil in the reservoir (SUMP RETURN)?

Is there oil flow at the flow switch?

Is there a clogged or broken feed line going to the bearing?

Is there a loose connection on either the flow switch or MultiPAC connectors?

Is there a defective flow switch?

Tips:

You can use an ohmmeter to check continuity through the switch when the main motor is running.

Use the LUBE MONITOR screen on the SmartPAC to help determine which specific switch to check.

If everything checks out ok and you are still experiencing fault messages, contact **TECH SUPPORT.   Call 800-586-8324 (8-5 EST).**

Table 5-1. Flow switch fault messages - Inputs and LED #'s

FAULT MESSAGE (Displayed on SmartPAC)	INPUT / LED #
SUMP RETURN	2
OUTER RIGHT HAND MAIN BEARING	3
INNER RIGHT HAND MAIN BEARING	4
RIGHT HAND CENTER BEARING	5
RIGHT HAND CONNECTION BEARING	6
LEFT HAND CONNECTION BEARING	7
LEFT HAND CENTER BEARING	8
INNER LEFT HAND MAIN BEARING	9
OUTER LEFT HAND MAIN BEARING	10

Messages displayed when a flywheel brake fault occurs

THE FLYWHEEL BRAKE IS ENGAGED WHEN THE MOTOR HAS BEEN STARTED. CHECK THE FLYWHEEL BRAKE.

Explanation:

MultiPAC is receiving a signal from input 12 that the motor is On but is not receiving a signal from input 11 that the Flywheel Brake Released Limit Switch has changed state.

Remedy:

Check to make sure that MultiPAC is signalling the flywheel brake correctly and that the Flywheel Brake Released Limit Switch is wired correctly to input 11.

Note 1: Input 1 is Clutch Engaged
This is a low voltage signal. If WPCII or WPC2000 are rpesent, pin 29 can be used to signal this input.

Note 2: If not using the flywheel brake feature, do not wire Main Motor On to Input 12.

REVISIONS	DRAWN	DATE	WINTRISS CONTROLS GROUP
By:	GVR	10/6/10	
Date:	CHK.		
	APPROVALS		TITLE
	ENG.		MultiPAC Type 4
	MFG.		SmartPAC 1
FILE NAME	PRESS#	SIZE	DRAWING NUMBER	REV
REL.			
	SCALE		SHEET	OF

OUTPUT
24VDC/1A

ENTRELEC 24VDC
+L   L
-L   N
GRD   GRD
INPUT
90-260VAC

MODE SELECTOR
(GND)
(CONT)
(S.S.)
(INCH)
(OFF)

MAINPOWER
CONNECTOR
TB102
205 (A)
206 (B)
207 (C-STOP)
208 (C-STOP)
209 (T-STOP)
210 (T-STOP)

RESOLVER PORT TB101
212 (SHLD)
213 (S1)
214 (S2)
215 (R1)
216 (S3)
217 (R2)
218 (S4)

Wintriss SmartPAC 2

TB107
245 (+V)
246 (PDS. SEN)
247 (GND)
248 (ZERO CAM)
249 (REM RES)
250 (GND)
251 (LOCKOUT)
252 (SETUP)
253 (DP STA 2)
254 (DP STA 1)

WPC PORT(6)
330 (-TXD6)
329 (+TXD6)
328 (-RXD6)
327 (+RXD6)
326 (GRD)
325 (-TXD5)
324 (+TXD5)
323 (TXD5)
322 (-RXD5)
321 (+RXD5)

TB105

SPARE 1 PORT(5)

TB106

SPARE 2 PORT(8)
320 (-TXD8)
319 (+TXD8)
318 (TXD8)
317 (-RXD8)
316 (+RXD8)
315 (GRD)
314 (-TXD7)
313 (+TXD7)
312 (TXD7)
311 (-RXD7)
310 (+RXD7)

SPARE 3 PORT(7)

TB104
SPECIAL PORT(3)
224 (-RXD3)
225 (+RXD3)
226 (TXD3)
227 (+TXD3)
228 (-TXD3)
229 (GND)

PacNET PORT(4)
230 (+RXD4)
231 (-RXD4)
232 (TXD4)
233 (+TXD4)
234 (-TXD4)

TB103
SFI PORT(1)
235 (+RXD1)
236 (-RXD1)
237 (TXD1)
238 (+TXD1)
239 (-TXD1)
240 (GND)

MODULE PORT(2)
241 (+RXD2)
242 (-RXD2)
243 (+TXD2)
244 (-TXD2)

RED
GRN
WHT

RED
GRN
WHT

CLUTCH ENGAGED
See Note 1

SUMP RETURN

OUTER RH MAIN BEARING

INNER RH MAIN BEARING   GND

RH CENTER BEARING

RH CONN BEARING

LH CONN BEARING

LH CENTER BEARING

INNER LH MAIN BEARING

OUTER LH MAIN BEARING

FLYWHEEL BRK RELEASED
LIMIT SWITCH
See Note 2

MAIN MOTOR ON

Rx
Tx
Com

MULTIPAC TYPE 4
TOP BOARD

C1
IN1
IN2
IN3
C2
IN4
IN5
IN6

SCAN

O1
O2
O3
C3
O4
O5
O6
C4

Wire to TOP STOP
(Wire #80 and #81
if Wintriss Press Control)

+24
GND

803
802

MULTIPAC TYPE 4
BOTTOM BOARD

C5
IN7
IN8
IN9
C6
IN10
IN11
IN12

O7
O8
O9
C7
O10
O11
O12
C8

MOTOR FORWARD INHIBIT

FLYWHEEL BRAKE SOLENOID
N/O
FLYWHEEL BRAKE SOLENOID
N/C
FLYWHEEL BRAKE SOLENOID
COM

See Note 3

+24
GND

803
802

Note 1: Input 1 is Clutch Engaged
This is a low voltage signal. If WPCII
or WPC2000 are rpesent, pin 29 can be
used to signal this input.

Note 2: If not using the flywheel brake
feature, do not wire Main Motor On to
Input 12.

Note 3: If using the flywheel brake feature,
Output 10 or 11 will be used to control the
Flywheel Brake Solenoid. Some solenoids turn ON
with Main Motor, some turn OFF.

OUTPUT
24VDC/1A

ENTRELEC 24VDC

+L   L
-L   N
GRD   GRD

INPUT
90-260VAC

TB203
1
258 (GND)
257 (REMOTE RES.)

MAINPOWER
CONNECTOR
TB101
1

201 (L2)
202 (L1)
203 (GND)
204 (CHAS)
205 (S-STB1-)
206 (S-STB1+)
207 (S-STB2-)
208 (S-STB2+)
209 (S-STB3-)
210 (S-STB3+)
211 (GND2)

TB202
1
256 (GND)
255 (LOCKOUT)
254 (OP STA 2)
253 (OP STA 1)

RESOLVER PORT TB106
212 (SHLD)
213 (S1)
214 (S2)
215 (R1)
216 (S3)
217 (R2)
218 (S4)

VPC PORT TB104
219 (+RXD)
220 (-RXD)
221 (+TXD)
222 (-TXD)
223 (GND)

TB201
1
252 (GND)
251 (CONT)
250 (SINGLE)
249 (INCH)
248 (OFF)

POSITION
SENSOR
TB107
245 (+V)
246 (POS)
247 (GND)
1

Wintriss SmartPAC

SPARE PORT   CPR PORT   SFI PORT   MODULE PORT
TB103   TB102

224 (+RXD3)
225 (-RXD3)
226 (TXD3)
227 (+TXD3)
228 (-TXD3)
229 (GND)
230 (+RXD4)
231 (-RXD4)
232 (TXD4)
233 (+TXD4)
234 (-TXD4)

235 (+RXD1)
236 (-RXD1)
237 (TXD1)
238 (+TXD1)
239 (-TXD1)
240 (GND)
241 (+RXD2)
242 (-RXD2)
243 (+TXD2)
244 (-TXD2)

GND

CLUTCH ENGAGED
See Note 1

SUMP RETURN

OUTER RH MAIN BEARING

INNER RH MAIN BEARING

RH CENTER BEARING

RH CONN BEARING

LH CONN BEARING

LH CENTER BEARING

INNER LH MAIN BEARING

OUTER LH MAIN BEARING

FLYWHEEL BRK RELEASED
LIMIT SWITCH
See Note 2

MAIN MOTOR ON

GND

Rx
Tx
Con

IN1
IN2
IN3
IN4
C2
IN5
IN6
IN7
IN8

C1

MULTIPAC TYPE 5
TOP BOARD

GND
+24

TO BOTTOM BOARD

SCAN

1C
1
2C
2
3C
3
4C
4
5C
5
6C
6

Wire into
Top-Stop Circuit
(Wires #80 and #81 on a
Wintriss Press Control)

COM
OUT1
IN1

COM
OUT2
IN2

C3
IN9
IN10
IN11
C4
IN13
IN14
IN15
IN16

MULTIPAC TYPE 5
BOTTOM BOARD

TO TOP BOARD

7C
7
8C
8
9C
9
10C
10
11C
11
12C
12

MOTOR FORWARD INHIBIT

FLYWHEEL BRAKE SOLENOID
N/O

FLYWHEEL BRAKE SOLENOID
N/C
See Note 3

TORSPEC 5001 TCP
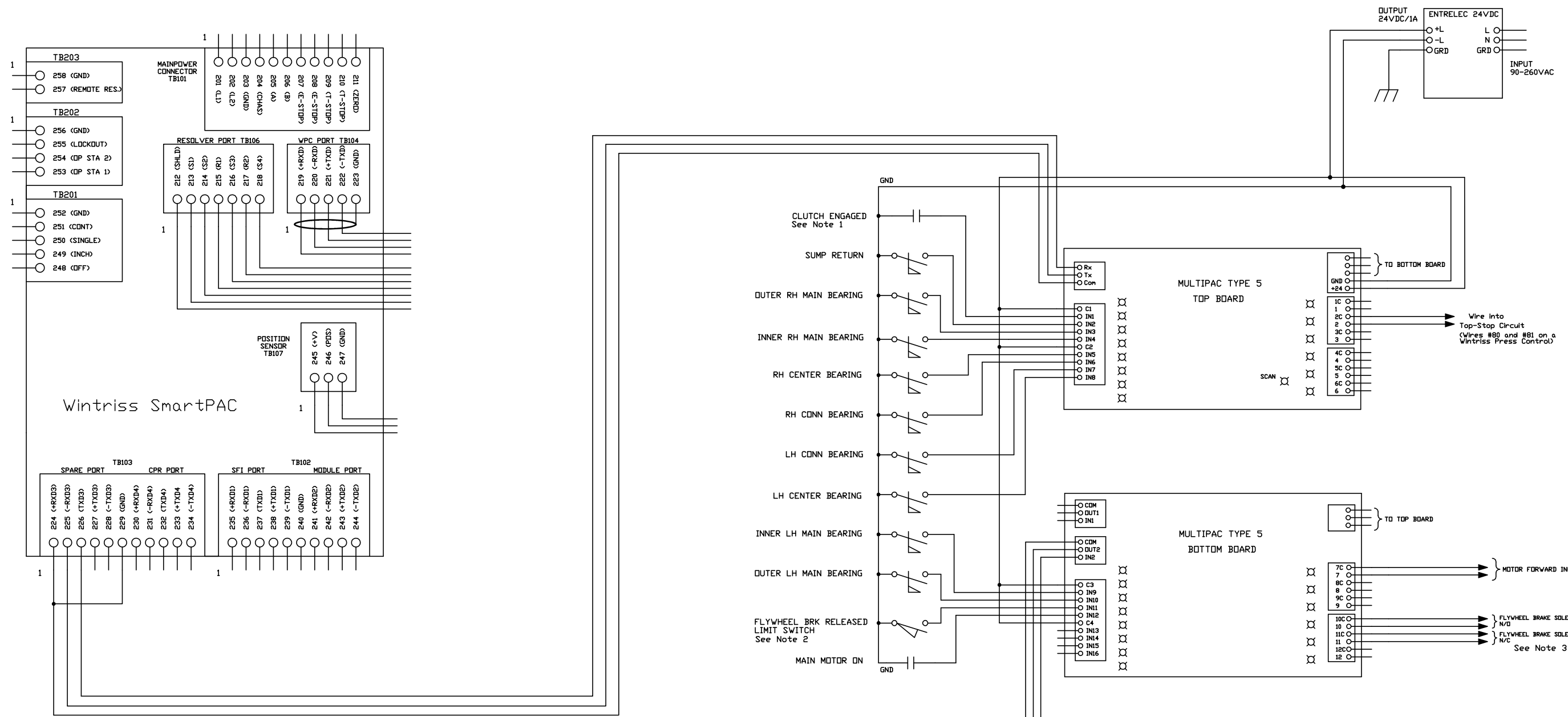EDDY CURRENT CONTROL
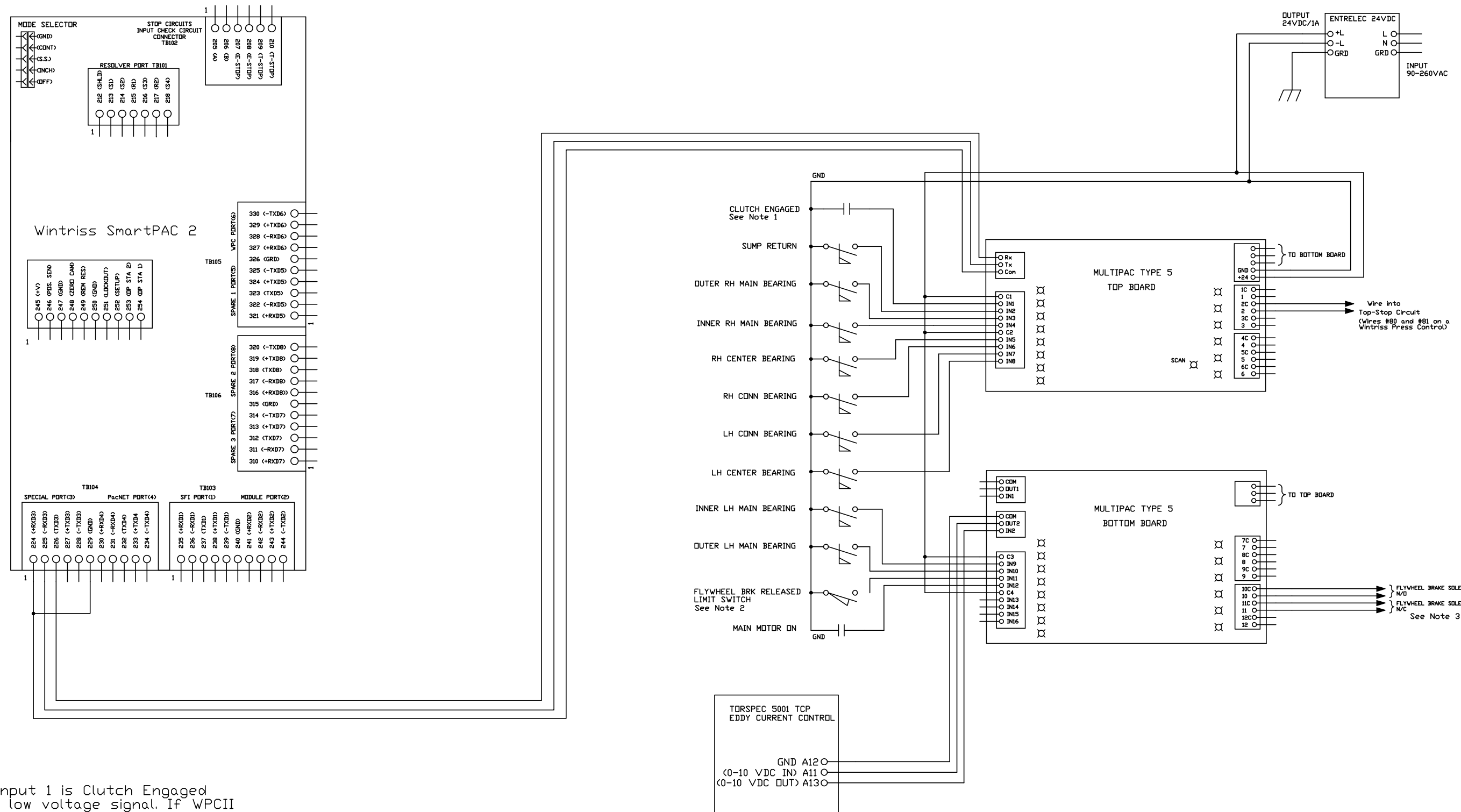
GND A12
(0-10 VDC IN) A11
(0-10 VDC OUT) A13

Note 1: Input 1 is Clutch Engaged
This is a low voltage signal. If WPCII
or WPC2000 are rpesent, pin 29 can be
used to signal this input.

Note 2: If not using the flywheel brake
feature, do not wire Main Motor On to
Input 12.

Note 3: If flywheel brake is used, Outputs 10
or 11 should be used to control the flywheel
brake solenoid. Some solenoids activate when the
Main motor is turned ON. Some activate when the
Main motor is turned OFF.

REVISIONS By: Date:	DRAWN GVR	DATE 10/7/10	WINTRISS CONTROLS GROUP
	CHK.		
A copy of this drawing, dated _____, has been provided to you as a courtesy. Any revisions made by you should be clearly marked on the drawing and identified by indicating in the box above, who made the revisions and on what date the revisions were made. Wintriss will not be held responsible for any revisions made to this drawing or for any changes made to the equipment referred to herein as a result of these revisions.	APPROVALS		TITLE
	ENG.		MultiPAC Type 5 SmartPAC 1
	MFG.		
	FILE NAME		PRESS# / SIZE / DRAWING NUMBER / REV
	REL.		
	SCALE		SHEET OF

MODE SELECTOR
(GND)
(CONT)
(S.S.)
(INCH)
(OFF)

STOP CIRCUITS
INPUT CHECK CIRCUIT
CONNECTOR
TB102

RESOLVER PORT TB101

Wintriss SmartPAC 2

TB105

WPC PORT(6)
330 (-TXD6)
329 (+TXD6)
328 (-RXD6)
327 (+RXD6)
326 (GRD)
325 (-TXD5)
324 (+TXD5)
323 (TXD5)
322 (-RXD5)
321 (+RXD5)

SPARE 1 PORT(5)

TB106

SPARE 2 PORT(8)
320 (-TXD8)
319 (+TXD8)
318 (TXD8)
317 (-RXD8)
316 (+RXD8)
315 (GRD)
314 (-TXD7)
313 (+TXD7)
312 (TXD7)
311 (-RXD7)
310 (+RXD7)

SPARE 3 PORT(7)

TB104
SPECIAL PORT(3)   PacNET PORT(4)

TB103
SFI PORT(1)   MODULE PORT(2)

OUTPUT
24VDC/1A

ENTRELEC 24VDC
+L   L
-L   N
GRD   GRD

INPUT
90-260VAC

GND

CLUTCH ENGAGED
See Note 1

SUMP RETURN

OUTER RH MAIN BEARING

INNER RH MAIN BEARING

RH CENTER BEARING

RH CONN BEARING

LH CONN BEARING

LH CENTER BEARING

INNER LH MAIN BEARING

OUTER LH MAIN BEARING

FLYWHEEL BRK RELEASED
LIMIT SWITCH
See Note 2

MAIN MOTOR ON

GND

Rx
Tx
Con

MULTIPAC TYPE 5
TOP BOARD

IN1
IN2
IN3
IN4
C2
IN5
IN6
IN7
IN8

TO BOTTOM BOARD
GND
+24

SCAN

1C
1
2
3C
3
4C
4
5
6C
6

Wire into
Top-Stop Circuit
(Wires #80 and #81 on a
Wintriss Press Control)

COM
OUT1
IN1

COM
OUT2
IN2

C3
IN9
IN10
IN11
IN12
C4
IN13
IN14
IN15
IN16

MULTIPAC TYPE 5
BOTTOM BOARD

TO TOP BOARD

7C
7
8C
8
9C
9
10C
10
11C
11
12C
12

FLYWHEEL BRAKE SOLENOID
N/O

FLYWHEEL BRAKE SOLENOID
N/C

See Note 3

TORSPEC 5001 TCP
EDDY CURRENT CONTROL

GND A12
(0-10 VDC IN) A11
(0-10 VDC OUT) A13

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DRAWN   GVR
DATE   10/7/10
CHK.
APPROVALS
ENG.
MFG.
FILE NAME
REL.

WINTRISS CONTROLS GROUP

TITLE
MultiPAC Type 5
SmartPAC 2

PRESS#   SIZE   DRAWING NUMBER   REV

SCALE   SHEET   OF