Die Protection Sensor Disable Modes

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When a die protection program is well established, and the tools are fully protected with sensors, die crashes are most likely to occur when presses are run with the die protection system disabled*. **This may be due to an operator forgetting to re-enable the sensors after an event that requires them to be temporarily disabled, or because someone decided that it would be 'easier' to run the die without protection**.   Regardless of the reason, a die protection system cannot prevent die crashes when it is turned off.   The SmartPAC 2 has a number of built-in safeguards that make it much more difficult to run the dies with the sensors inadvertently (or surreptitiously) disabled.

The Wintriss SmartPAC 2 offers a number of alternatives on how die protection sensors can be disabled. You may want to disable die protection sensors in order assist when starting a new job, starting a new strip in a progressive tool, help eliminate nuisance shutdowns after a legitimate fault has occurred, or allow ram movement when a fault is still present.

Determining how the disable sensor selection behaves originates in the SmartPAC's main initialization menu; this is the menu where selections determine how the SmartPAC will operate for all tool numbers. From the main initialization menu Sensor Enable Mode heading there are three choices available that dictate how sensors will be behave when disable sensors is selected from the run menu. If the optional Wintriss WPC 2000 clutch/brake control is installed users also have an additional menu selection for disabling sensors when the inch mode is selected

The Sensor Enable mode choice:

- **Manual Disable –** Sensors are disabled when the disable sensor selection is chosen in the run menu and sensors will not be re-enabled until the enabled sensor selection is chosen
- **Auto Disable By Tool –** All sensors are disabled for a programmed amount of strokes.
- **Auto Disable By Sensor-** Each individual sensor can be disabled for a programmed amount of strokes

Both Auto by tool number and Auto by sensor require additional programming in the program tool number menu.

If Optional WPC 2000 clutch/brake control is installed:

Setup Mode

- Disabled – Setup mode is not used, sensors are active in the inch mode
- In Inch – Green sensors are automatically disabled whenever the mode select switch is in the inch positions. (red and yellow sensors are active)
- In Inch/Interrupted Stroke – Green sensors are automatically disabled when the inch mode is selected or if the WPC is in the interrupted stroke. (WPC 2000 automatically reverts to two hand

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    DIE PROTECTION MODE SELECTION MENU

    SENSOR ENABLE MODE =   AUTO BY TOOL
    SETUP MODE         =    IN INCH


 USE THE CURSOR KEYS TO SELECT THE MODE
 YOU WANT TO CHANGE. PRESS THE ENTER KEY
 TO CHANGE IT. PRESS THE RESET KEY WHEN
 YOU ARE DONE.
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IDLE
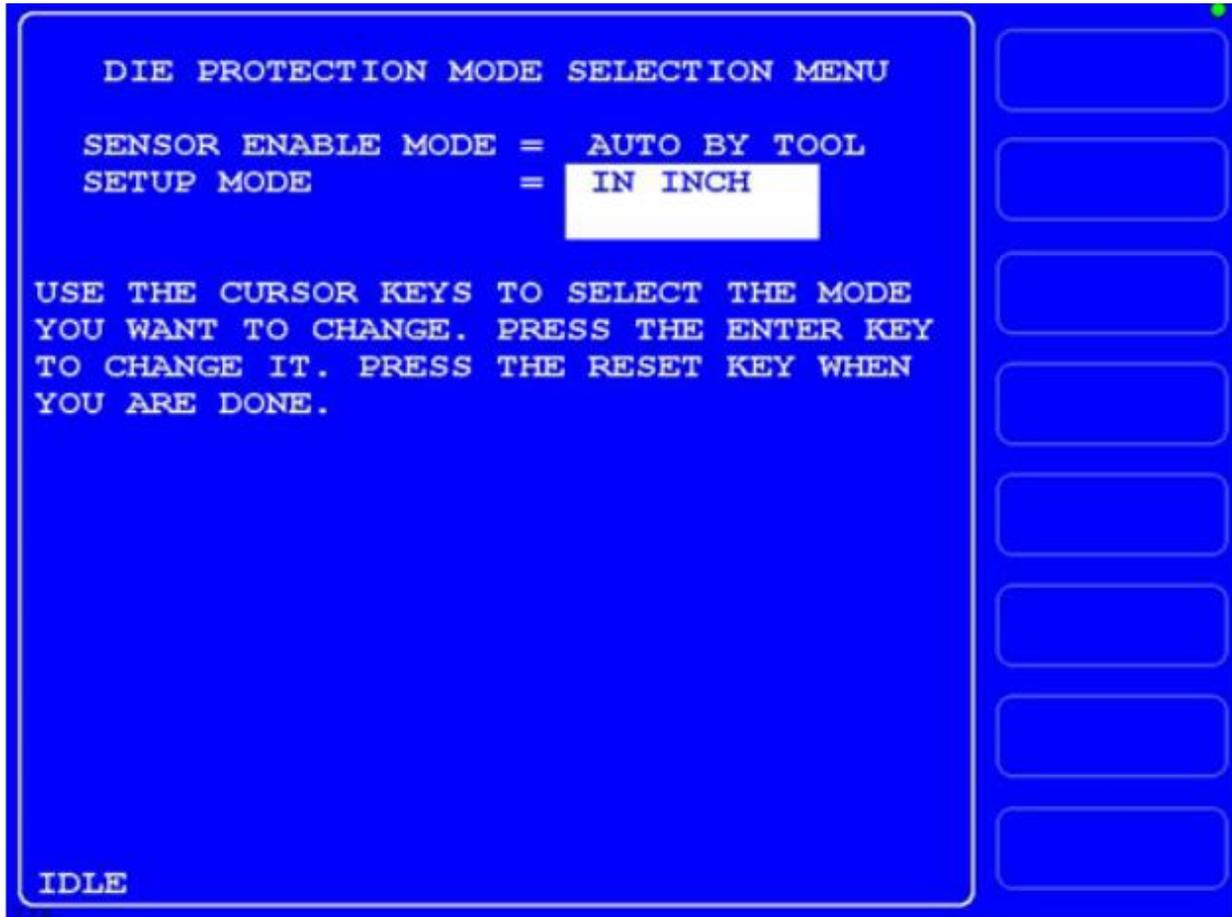
(Bypass in Inch can be used with SmartPAC's that are not equipped with The Wintriss WPC 2000, please consult with your local PRI salesperson on how to hard-wire a non Wintriss stroke select switch into a SmartPAC 2)

Settings for Sensor disable mode in the program tool Menu:

If manual disable is selected in the initialization menu then there is no additional programming required in the main programming menu. Please note that the user must remember to manually re-enable sensors for the sensors to be active. Failure to do so could result in die crashes die to the sensors inadvertently not being active.

If Auto Disable By Tool is selected in the initialization menu you will need to program the number of strokes you would like the sensors to be disabled for whenever the disable sensor selection is chosen in the run menu. A new selection and text will appear on the left side of SmartPAC 2screen when you select Die Protection: Auto enable counter is the text and you will need to input the number of strokes the sensors will be disabled for whenever disable sensors is selected in the run mode.

- The Maximum allowable strokes are 99.
- Default setting is zero, zero means that sensors will not be disabled at all when disable sensors is selected
- Users will need to program the number of strokes in **all existing tool numbers.**

If Auto Disable By Sensor is selected:

For any new tool number programmed after the selection for Auto Disable By Sensor is made in the initialization a new choice will come up on the screen after the user selects a sensor name asking the user how many strokes you want this particular sensor to be bypassed when the disable sensors is selected in the run mode. Similar to Auto by tool, leaving the stroke count a t zero means this particular sensor will not be disabled, max amount strokes is 99.

Disabling Sensors in the Run Mode:

Up to this point all the settings made in the initialization and program menu modes have been made to determine how the sensors will behave when the disable sensor selection is chosen in the run menu.

Now when the disable selection is chosen the sensors will stay disabled based on the Disable mode selected in the initialization menu and if applicable the stroke counts programmed in the program tool number menu.

Disabling Sensors in the Program Position:

Please note sensors can also be disabled when the key is in the program position, in some instances the key may have to be turned to the program position in order to disable sensors. SmartPAC will not allow a sensor fault to be reset until the actual failure has been fixed. In some instances it may require the ram to be moved from its current position in order to fix the actual fault. When this situation occurs the operator will need to disable the sensors from the program position before the ram can be moved. Please use extreme caution when this step is performed due to the fact that the initial fault condition still exists but sensors are now disabled and no fault will be given

Sensor Disable Security:

The Security Access selection in the SmartPAC Initialization menu can be used to provide control over who is allowed to enable and disable sensors. From the security access choice located in the initialization menu scroll down to the Disable Sensors selection, Sensor Disable can be locked out in the run mode, requiring the program/run key to be placed in the program position in order to disable sensors or the decision to disable sensors can be set to password protection where a password will need to be entered in order to disable sensors.

The security access does not override the disable in inch mode or inch/interrupted stroke mode.

Sensors Disabled Output
The SmartPAC 2's DiProPAC board has an output that actuates whenever the sensors are disabled.   This

output can be connected to a strobe light, siren, or some other indicator to alert the operator (or anyone else in the area) when the sensors are disabled.