



Precision Dose PLC Control Operator Interface

309563 rev.B

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Setup

Overview

The operator interface is mounted in the front of the Precision Dose control box. It allows you to set parameters that control and monitor the dosing of booster paste into the base material. The following information summarizes the screens available and what the various screens control.

When you press

Press the  button when you are instructed to press **Enter**.

1. When the control box is powered on, the operator interface displays the screen shown in FIG. 1. This Main screen displays current frequency of dosing rate and set up F1.

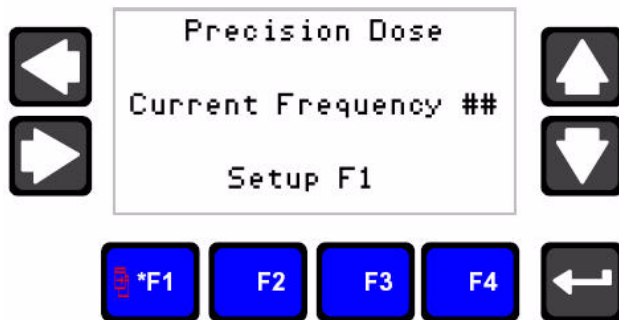


FIG. 1 Main Screen

2. Press **Setup F1**, *Prompt to enter password* appears (default password is '0000').
3. Enter the password and *Precision Dose Selects* screen appears. See FIG. 2.

This screen allows you to select from six options. Select an option by using the up and down scroll arrows to highlight an option, then press **Enter**. The selected screen will appear and you can edit the parameters.

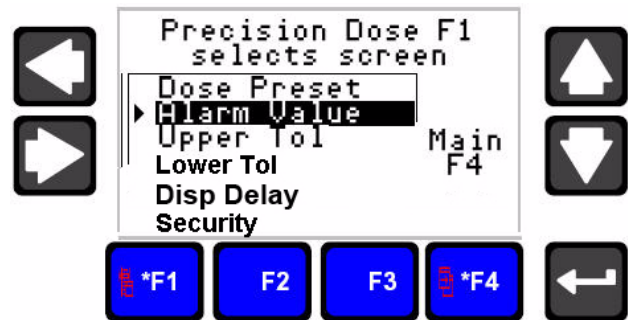


FIG. 2 Precision Dose selects screen

Entering Parameters

When you select an option on the *Precision Dose selects screen* the current value is displayed. To change the value, press **F1**, then use the up and down arrows to select a number 0-9. Use the right and left arrows to enter additional digits. When the correct number has been entered, press **Enter**. If the value is outside the acceptable range, and error screen will appear. Press any key to exit the error screen, then press **F4** to return to the screen control and repeat the procedure.

Dose Preset

Highlight *Dose Preset* on the *Precision Dose selects screen* and press **Enter** to display the screen shown in FIG. 3.

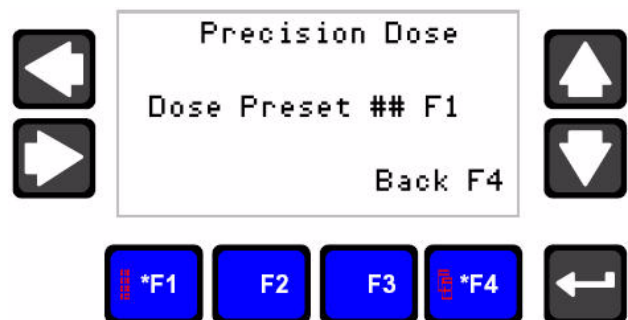


FIG. 3 Dose Preset Screen

The value entered for Dose Preset represents how many encoder pulses are required for the dosing valve to actuate one time. The default value of 22 gives and approximate booster level of 2%. For a higher level of booster, enter a lower value (the nominal value for 3% booster is 11). For a lower level of booster, enter a higher number (the nominal value for 1% booster is 44). These values are approximate for booster value. Follow the ratio check procedure to determine the actual booster value.

When dose preset is complete, press **F4** to return to the *Precision Dose selects* screen.

Alarm Value

Highlight *Alarm Value* on the *Precision Dose selects* screen and press **Enter** to display the screen shown in FIG. 4

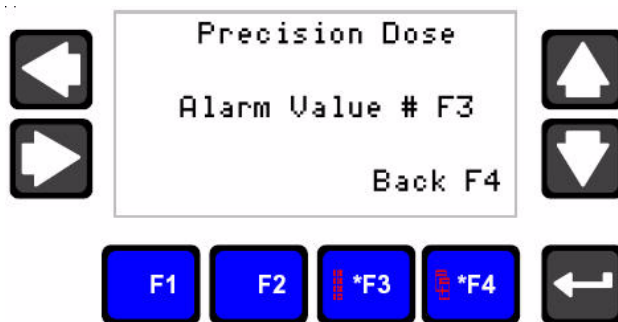


FIG. 4 Alarm Value Screen

This screen sets the frequency value alarm. The default value of 5 is correct for most applications. The only reason to enter a lower value is to limit the overall flow rate during dispense.

Upper Tolerance

Highlight *Upper Tol* on the *Precision Dose selects* screen and press **Enter** to display the screen shown in FIG. 5

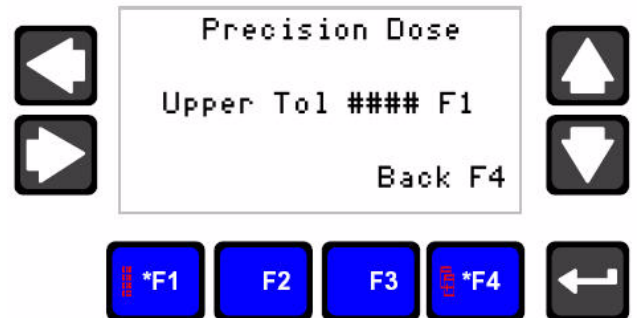


FIG. 5 Upper Tolerance Screen

In default mode the Precision Dose control program is set up to ignore pulses that fall more than 30% outside normal range. The consequence is that the dosing valve will fail to actuate if the PLC sees a high rate of pulses from the encoder. This condition can exist when the pump changes direction. Increasing the value displayed on the screen means that the PLC will continue to allow the dosing valve to actuate as pulse rates fall further outside of normal. Our experience is that Sikaflex materials will work well at a default value of 130. Bostik Findley materials require a higher value to be entered on this screen. Graco lab tests indicate that entering 1000 on this screen will give good performance with these materials without creating over-catalyzed, rigid material in the final cure state. Depending on material, it may be necessary to compare results at several different states.

Lower Tolerance

Highlight *Lower Tol* on the *Precision Dose selects* screen and press **Enter** to display the screen shown in FIG. 6

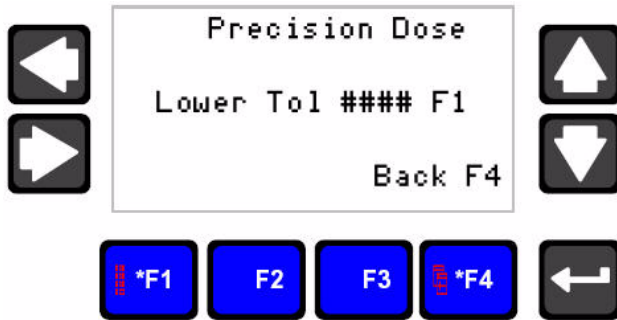


FIG. 6 Lower Tolerance Screen

The PLC program is also set to ignore pulses that are more than 30% below normal range. Changing this value means that the dosing valve continues to actuate even if a very low pulse count is fed to the PLC from the encoder. Our experience is that the nominal value of 70 works well for Sikaflex materials. In Graco lab tests, a value of 5 produced good results when dispensing Bostik Findley materials. As the upper tolerance parameter, actual results in production operation may vary. Graco recommends that you compare results at several settings to determine optimal performance.



Do not enter 0 (zero) in this field.

Display Delay

Highlight *Disp Delay* on the *Precision Dose selects* screen and press **Enter** to display the screen shown in FIG. 7

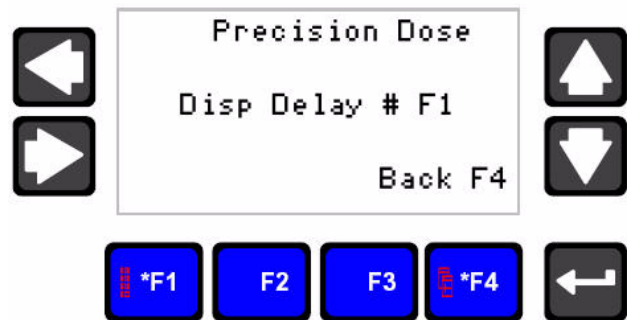


FIG. 7 Display Delay Screen

The value entered on this screen tells the PLC not to allow the dosing value to open for the value entered multiplied by the dosing preset value. For example, the displayed dispense delay (2) multiplied by the dosing preset value (22) equals 44. This means that the booster will not be fed into the base material until the encoder has delivered 44 pulses to the PLC. If this value is set to 0, the booster will flow immediately upon triggering the 2K Ultra-Lite valve supplied with the Precision Dose system. Do not change the value if there is a concern that an extra “shot” of booster will cause the material to become too rigid from being over catalyzed.

Security

Highlight *Security* on the *Precision Dose selects* screen and press **Enter** to display the screen shown in FIG. 8

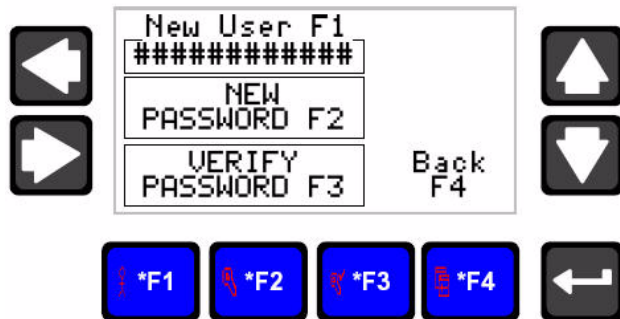


FIG. 8 Security Screen

This screen allows you to change the password.

1. Press **F1** to select Operator 1

2. Press **F2** to enter the new password.

To change the value, use the up and down arrows to select a number 0-9. Enter the next digit use the right and left arrows. When the correct number is displayed, press **Enter**.

3. You will be prompted to verify the password. Press **F3** to verify the new password.

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