

## Quick Reference Guide

# SOLENOID PULSE CONTROL

**altronic**

DE-3000 DIGITAL  
CONTROLLER SYSTEM

### TIPS AND HINTS TO ASSIST WITH INSTALLATION AND/OR OPERATION

02/03/17

#### Quick Description

- PID** The Solenoid Pulse Control is used to control the loading/unloading of a slide valve, also known as a load or capacity valve, in a rotary screw compressor application. The load point is always linked to the analog input from channel three. This can be suction or discharge pressure depending on the application. The pulses will energize momentarily to load or unload the valve. This process will continue to move in the unload or load direction until the desired effect is reached. There are a total of six main adjustments; four of which can be adjusted through the key pad.
- CTD** **Cycle Time Delay.** Adjusted from the key pad and the PC software, the value is in seconds, with a range from 1 to 999. This adjusts the time that a pulse off signal will last. For a faster correction, a low value would be desirable. A slower correction would require a larger value.
- SPDB** **Set Point Dead Band.** Adjusted from the key pad and the PC software, the Dead Band is the value of no response on each side of the set point. Example: If the set point is at 20 PSIG and the Dead Band is set to 1 PSIG the unload and load pulse outputs will not react when the pressure is between 19 and 21 PSIG.
- PB** **Proportional Band.** Adjusted from the key pad and the PC software, this accounts for preset present values of the error. For example, if the error is large and positive, the control output will be large and positive. The lower the number value of the Proportional Band, the longer the duration of the pulse time on signal will be. The duration increases more as the actual value moves farther away from the set point.
- PCSP** **Primary Control Set Point.** Adjusted from the key pad and the PC software, this is the main control set point or target.
- MDPT** **Max Digital Pulse Time.** Adjusted with the PC software only, the default value is 1000ms. In most cases, the Proportional Band and the Cycle Time Delay are sufficient, requiring no adjustment to this parameter. This controls the minimum time that the pulse is on.
- WUD** **Warm Up Delay.** Adjusted with the PC software only, this prevents any control correction adjustments until the time has expired following start up.

*This guide provides clarification and additional information to the Installation and Operating Manual, Form DE-3000 IOI 2-17.*

*Altronic literature is available from the Downloads page of [www.altronic-llc.com](http://www.altronic-llc.com)*

*Two other settings for the Solenoid Pulse Control in the software are INVERSE/DIRECT (action for the control direction) and Unload time at stop or fault.*

*Please consult FORM DE-3000 IOI 2-17 for more information.*

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## Edit and Changes

1. Press **MENU**
2. Press **ENTER** to confirm correct password (default is 1)
3. Press **MENU** to continue
4. Use **NEXT** key or ↑ and ↓ keys to move cursor to select **EDIT CONTROL VALUES**
5. Press **ENTER** after selection is made
6. Use **NEXT** key or ↑ and ↓ keys to move cursor to select **EDIT CONTROLS**
7. Press **ENTER** after selection is made
8. Use **NEXT** key or ↑ and ↓ keys to move cursor to select **EDIT PRIM. CONTROLS**
9. Press **ENTER** after selection is made

