

Quick Reference Guide

DE-3000 Solenoid Pulse Control

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TIPS AND HINTS TO ASSIST WITH INSTALLATION AND/OR OPERATION

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 keypad.

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

Altronic literature can be found at: www.altronic-llc.com in the Technical Library.

CTD Cycle Time Delay. Adjusted from the keypad 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 keypad 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 keypad 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 keypad 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.

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

Solenoid Pulse Control		
Primary Channel Number	03	
Cycle Time Delay	010	Sec
Setpoint Deadband	+001.0	
Proportional Band	060	%
Primary Control Setpoint	+020.0	
Max Digital Pulse time	1000	mSec
Warmup Delay	00	Min

