

FAST AND FRIENDLY **BRASS**

QUALITY UNCOMPROMISED

First, let's get this disclaimer out of the way. If you mess up your VFD, I'm not responsible. If you garf the programming in your VFD, Craig Forcht is not going to fix it for free. So, if you're thin skinned or faint hearted, just stop reading now. If you're a do-it-yourself type, want to learn, and want to improve the performance of your Forcht Auto-Driven 1050 press, read on.

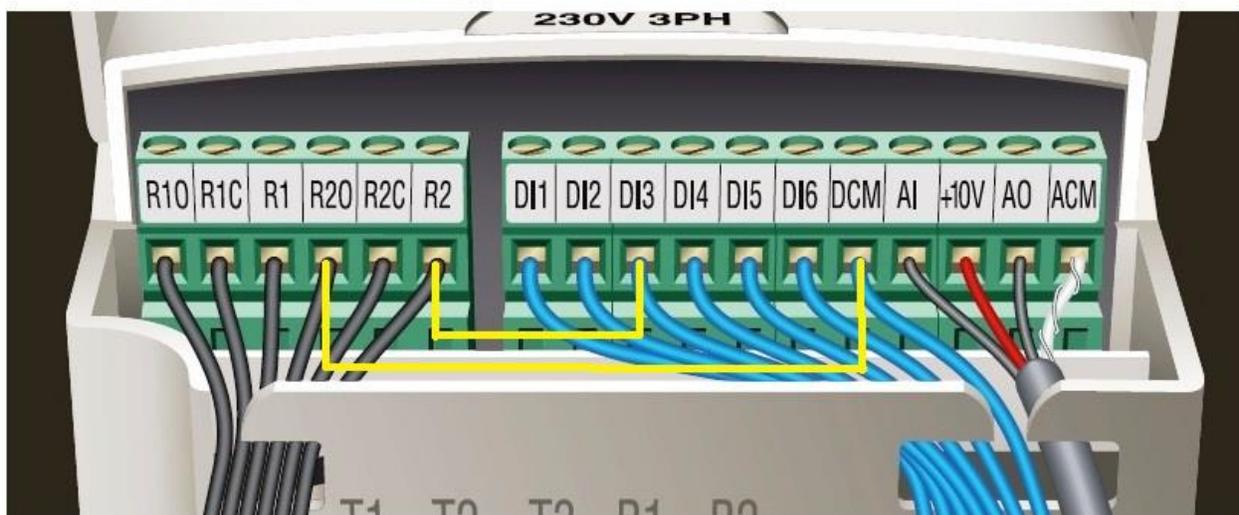
The Automation Direct GS2 is a very powerful VFD (Variable Frequency Drive), which has the ability to detect the loading of the drive by the auto-drive motor. As configured from Forcht Firearms, the GS2 does not have this feature turned on. This is understandable, considering minor programming of the VFD is required based on each caliber. Consumer grade products have to be designed and configured for the lowest common denominator. As is said in the engineering world, "If you build something that is idiot proof, God will build a better idiot."

In this article, we're going to enable this powerful feature, which will stop the press based on load detection. The huge advantage to this is stopping the press if it jams, thus not breaking parts, or wearing on the mechanical clutch. Using this feature does not mean the mechanical clutch can be locked out. The clutch is still needed for proper functioning, and should be set just tight enough as to not slip during normal press operation.

Now, we're going to do a little wiring. Flip up the bottom panel on the GS2, and you'll see a whole bunch of terminals. The great news is that none of these are high current. They are all very low current, and won't shock you. For safety, unplug your GS2 from wall before performing any wiring.

Make the connections shown in yellow in the below photo. The wire sizes can be very small since there's no load, only sensing. 24-30 AWG is fine (Wire from a Cat5 computer cable will work if handy). If R2O and R2 are in use, R1O and R1 can be substituted.

Control Terminal Wiring



Now, to unlock the drive so it can be programmed. The below sequence is how each parameter will be programmed. "Program" button until major parameter group, then "Up/Down" buttons until minor parameter group. "Enter" to get into the parameter. "Up/Down" to select the parameter variable, and "Enter" to program the selection.

Press the "Program" button on the front of the GS2 until 9.00 is displayed. Then use the "Up Arrow" on the front until 9.07 is displayed. Once 9.07 is displayed, press the "Enter" key. If the drive is locked, "1" will be displayed. By using the up/down button, change this parameter to "0" and press "Enter" again. Your drive is now unlocked and changes are permissible.

Using the "Program", "Up/Down Arrows", and "Enter" buttons on the front of the VFD, the following parameters will be changed:

P3.12 Multi-Function Output Terminal (Wiring terminals R2/R2O shown in photo above): Default is 01. Change to 07 (If you used terminals R1/R1O instead, change parameter P3.11 instead of P3.12)

P6.07 Over-torque Detection Mode: Default is 00. Change to 01. (This enables the over-torque detection)

P6.08 Over-torque Detection Level: Default is 150. Change to 50 as a starting value.

With just these few simple changes, the "electronic clutch" of the GS2 is now enabled, but will need to be tuned. The only parameter that will ever need to be changed is P6.08. P6.08 is the parameter that detects how much load the press motor is putting on the VFD. The number should only be high enough as to avoid press stoppage during normal operation. This number will also change based on caliber. A piece of 9mm pistol brass will resize much easier than a piece of .308 rifle brass. As such, when the proper load level is found, record this number on a chart with each of the calibers being processed. Consider this part of setup time for caliber conversion.

I hope you have enjoyed this tutorial and find it of use.

Regards;

Bill Birmingham

Owner - www.FastAndFriendlyBrass.com