

P-VFD V0.4 Bypass Quick Start Guide

LCD keypad display

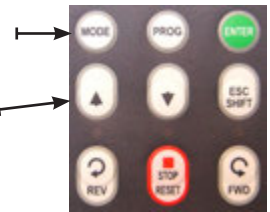
DRV ▶T/K 0.0 A
00 STP 0.00 Hz

PARAMETER GROUP

PARAMETER CODE

The Mode Button moves you through the five program groups: DRV >FU1>FU2>I/O>APP>DRV

Use the ↑ (Up) & ↓ (Down) keys to cycle through the parameters within each group and to adjust settings within parameters.



Parameter	Description	Fan & Pump - Recommended Settings
Parameters Pre-Set at Factory by Cerus Industrial		
DRV-03	Drive Start / Stop Control Method	Remote Control: Fx/Rx-1
FU1-66	Overload Trip	Yes
FU1-68	Overload Trip Delay Time	30.0sec.
FU1-69	Input/Output Phase Loss Protection	111 - not needed for 1Ø input
FU1-70	Stall Prevention (for high starting torque motors set FU1-71 to 105-110%)	111
FU2-20	Power on Start (VFD starts if remote run contact is closed at VFD power-up)	Yes
FU2-21	VFD will Restart After a Fault was Reset	Yes
FU2-22	Speed Search (VFD will start on the fly if motor is still spinning)	1110
FU2-25	Number of Auto Restart Attempts	3
FU2-26	Restart Delay (Set as maximum as possible for your application)	60.0sec.
I/O-22	Operating Mode for Programmable Digital Input 3 (M3)	Open-Loop
I/O-74	Frequency Detection Level (Used for internal safety contact)	1.0Hz
I/O-75	Frequency Detection Bandwidth (Used for internal safety contact)	1.0Hz
I/O-76	Operating Mode for Programmable Digital Output 1 (A1 & C1)	Run (Relay closes when VFD is given a Run signal and outputs voltage)
I/O-80	Operating Mode for Fault Output Relay (3A, 3B & 3C)	100 (Relay engages after Auto Restart Attempts (FU2-25) have failed)
Additional Parameters for Field Start-Up		
DRV-00	Frequency Command / Reference (If Used)	Local Speed Control: Set target speed in Hz (*PID see below)
DRV-04	Frequency Setting Method	Local: Keypad-2 Remote: V1 for 0-10V or PID Control: Keypad-1 I for 4-20mA
FU1-01	Forward / Reverse Run Disable	Rev. Prevention
FU1-33	High / Low Frequency Limit Enable	If Needed: Yes (Do not use for PID control)
FU1-34	Minimum Frequency Limit. (Only visible if FU1-33 = Yes)	Set desired low limit in Hz (Do not use for PID control)
FU1-49	For P4 VFD base input voltage is 440VAC. In the USA it should be set to 109.1% 480VAC. For P2 VFD base voltage is 220VAC at 100%.	104.5% for 460V power / 109.1% for 480V power / 94.5% for 208V power / 104.5% for 230V power
FU1-50	Motor Rated Voltage	Voltage rating of motor (i.e. 230V or 460V)
FU2-40	Motor Size: kW=HP x 0.75	Kilowatt rating of motor
FU2-41	Number of Motor Poles: # of Poles=7200 ÷ max RPM of motor	Number of motor poles
FU2-43	Motor Full Load Current = Full Load Amps x Service Factor	Motor Full Load Current
Additional Parameters for Proportional Integral Derivative (PID) Control in Single Motor Applications (Typically used when VFD needs to maintain a desired pressure or temperature based on direct sensor feedback to VFD)		
*DRV-00	PID Set Point (DRV-04 must be set to Keypad-1 or Keypad-2)	Set Point=(Desired press or temp) x 60Hz ÷ (Max Range of sensor)
APP-02	Select Yes for Using Internal PID Control with Analog Sensor	Yes
APP-06	Feedback for PID control: select I for 4-20mA or V1 for 0-10V	I = 4-20mA feedback, V1 = 0-10V feedback
APP-07	Proportional Gain for PID Control Response	Higher percentage = greater speed change at same feedback value
APP-08	Integral Time for PID Control Response	Higher number = longer response time at same feedback value
APP-11	Minimum Frequency Limit for PID Control	Set desired low limit in Hz
APP-15	Select Yes to Invert PID Control Output (If VFD should increase speed if feedback value is higher than set-point)	Yes = Inverted PID Control No = Standard PID Control
APP-63	Sleep Mode Delay Time (Sleep Mode parameters only visible if APP-01 is set to MMC and APP-43 must be set to 0)	Desired sleep mode delay time in seconds
APP-64	Sleep Mode Frequency (VFD enters sleep mode when VFD speed decreases below frequency entered here for time set on APP-63)	Desired sleep frequency in Hz (If minimum frequency is entered on APP-11, set APP-64 to .5-1Hz. higher than APP-11)
APP-65	Sleep Mode Wake Up Level (Differential percentage of Set Point value for wake up level)	Usually set to 2-5%
Save/Upload, Download, & Reset Parameters		
FU2-91	Save all Parameter Changes to Keypad & Permanent Memory	Save Parameters: Yes (Will return to No when done)
FU2-92	Download Saved Parameters from any P-Series Keypad to VFD	Load Parameters: Yes (Will return to No when done)
FU2-93	If Needed, Use this Parameter to Reset all Settings to Default	Reset all Settings: All Groups (Will return to No when done)