CERUS
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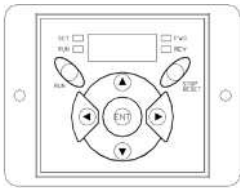
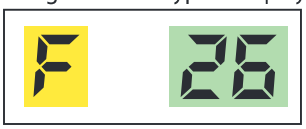
GS/C Series VFD
QUICK START GUIDE



Using the LCD keypad display



PARAMETER "GROUP" "CODE"

Use the ◀ (Left), ▶ (Right) keys to scroll through the five parameter groups: DRV▶F▶H▶ ▶DRV
Use the ▲ (Up), ▼ (Down) keys to scroll through parameter codes within each parameter group.

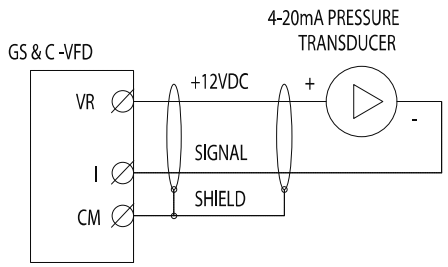
Parameter	Description	Fan & Pump - Recommended Settings
NOTE*: When entering parameters, any changes made will only be stored if the Enter button is pressed twice after making the change.*		
0.00	Frequency command / Reference (Paramter that first appears when VFD is powered up.)	Local Control: Set target speed (Hz) (*PID see below)
DRV	Drive Start / Stop Control Method (Looks like DRU on display)	Local Control: 0 (Keypad) Remote Control: 1
FRQ	Frequency Setting Method (Looks like FR9 on display)	Local: 1 (Keypad-2) Remote: 3 for 0-10V or 4 for 4-20mA PID Control: 0 (KeyPad-1)
F1	Forward / Reverse Run Disable	Reverse Run Disable: 2
F24	High / Low Frequency Limit enable	If Needed: 1 (Do not use for PID control)
F26	Minimum frequency limit. (Only visibe if FU1-33 = Yes)	Set desired low limit (Hz) (Do not use for PID control)
F39	Output Voltage Adjustment (If motor rated voltage is less than input voltage, set this parameter accordinglyy. For example, if Input Voltage is 480VAC & Motor Voltage is 460VAC, set parameter to 96%)	100%= Output voltage will be the same as input voltage when drive is running at full speed.
F50	Electronic Motor Thermal Overload Protection	1 (Yes)
F59	Stall Prevention (Stall level can be adjusted if necessary on F60)	111*
H19	Input/Output Phase Loss Protection	11*- not needed for Single Phase input
H20	Power on Start (VFD will start if remote start contact is closed at drive power-up)	1 (Yes)
H21	VFD will Restart After a Fault was Reset.	1 (Yes)
H22	Speed Search (VFD will start on the fly if motor is still spinning)	1110*
H26	Number of Auto Restart Attempts	3
H27	Restart Delay (Set as maximum as possible for your application)	60.0sec.
H30	Motor size: kW= HP x 0.75	Kilowatt rating of motor
H31	Number of Motor Poles = 7200/ max RPM of motor	Number of motor poles
H33	Motor Full Load Current = Full Load Amps x Service Factor	Motor Full Load Current
Additional Parameters for Proportional Integral Derivitive (PID) Control in Single Motor Applications (Typicallly used when VFD needs to maintian a desired pressure or temperature based on direct sensor feedback to VFD)		
H49	PID Control Enable	1 (Parameters "rEF" will not appear until this parrameter is set to 1)
***rEF**	PID Set Point Reference Parameter	Set Point=(Desired press or temp) x 60Hz/ (Max Range of Sensor)
H50	Feedback for PID control: select 0 for 4-20mA or 1 for 0-10V	0 for 4-20mA feedback or 1 for 0-10V feedback
H51	Proportional Gain for PID Control Response	Higher percentage = greater speed change at same feedback value
H52	Integral Time for PID Control Response	Higher number = longer response time at same feedback value
H56	Minimum Frequency Limit for PID Control	Set desired low limit in Hz
H61	Sleep Mode Delay Time	Desired sleep mode delay time in seconds
H62	Sleep Mode Frequency (VFD enters sleep mode when VFD speed decreases below frequency entered here for time set on H-61)	Desired sleep frequency in Hz (If minimum frequency is entered on H-56, set H-62 to .5-1Hz. higher than H-56)
H63	Sleep Mode Wake Up Level (Percentage of sensor range that feedback signal must reach before VFD will wake up from sleep mode)	Desired level in % (for normal PID control, set level slightly lower than desired press. Set opposite for inverted PID control)
Reset Parameters		
H93	If Needed, Use this Parameter to Reset all Setting to Default	Reset all Setting: 1 (Will return to 0 when done).

NOTE: For reversed PID control (VFD should increase speed when feedback value is more than a set-point) change I8 or I13 to 60Hz and I10 or I15 to 0.0Hz. To calculate a set-point = **60Hz-(Pset. x 60Hz/Pmax).**

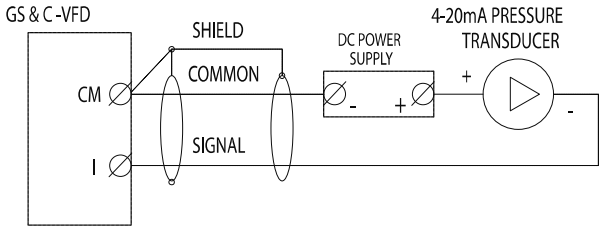
* For Binary Bit parameters the bit must be in the top position to equal On (1) and the bottom position to equal Off (0) and are numbered from right to left. Example: H22: 1110 = $^{III}_{I}$ = Bit 3 on, Bit 2 on, Bit 1 on, Bit 0 off)

** When entering parameters any changes made will only be stored if the Enter button is pressed twice after making the change.

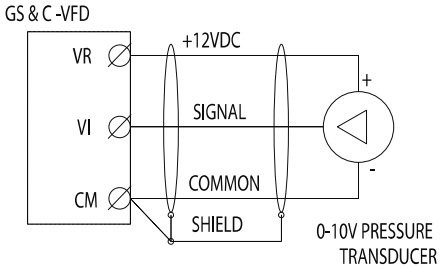
TWO-WIRE SENSOR 4-20mA WITH VFD DC POWER



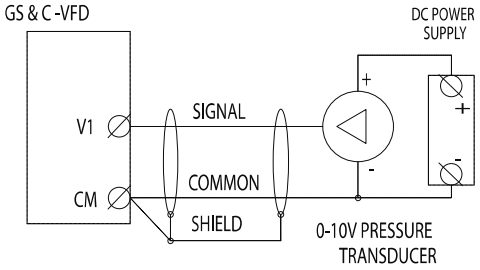
TWO-WIRE SENSOR 4-20mA WITH EXTERNAL DC POWER



THREE-WIRE SENSOR 0-10V WITH VFD DC POWER



THREE-WIRE SENSOR 0-10V WITH EXTERNAL DC POWER



GS Wiring Schematics