

INSTALLATION INSTRUCTIONS

NXCESVFD

VFD Plug-In Assembly

for use with PPC-4000

INTRODUCTION

The NXCESVFD plug-in assembly provides variable frequency drive (VFD/VSD) capability to the PPC4000. Along with the NXCVESVFD plug-in assembly, firmware installed in the PPC4000 has to include VFD operation. This can be verified by the engineering code shown on the bar code label.

DESCRIPTION

The NXCESVFD provides two independent channels. Each channel provides a precision 4-20 mA output to control the VFD, a calibrated 4-20 mA input and an encoder input for VFD positional feedback.

Alternatively, either VFD output channel can be mapped to indicate firing rate, setpoint, sensor value and servo positions on a chart recorder or other recording type device.

Refer to technical manual PPC-4001 for VFD operation instructions.

BEFORE INSTALLING THE NXCESVFD



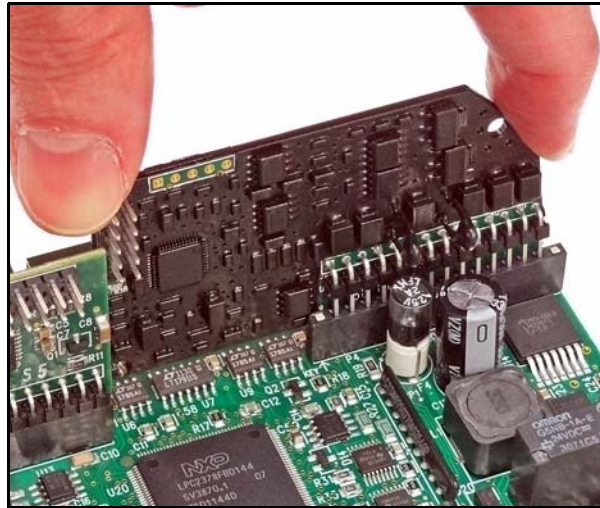
CAUTION: Ensure that electric power is turned off. Be aware that power to some interlocks (operating controls, air flow switches, modulating circuits, etc.) may be derived from sources other than what is controlling the PPC4000. Be sure to discharge electrostatic charge by making contact with a grounding surface.

1. Remove all plug-in terminal blocks from PPC4000.
 - a. Do not pull on terminal blocks by the connected wires. With a flat tip screw driver, simply pry each terminal block away from its mating connector. When prying out terminal blocks do not use excessive force.
2. Loosen the 3 cover mounting screws. The screws are held in place in the cover by retainers.
3. Remove the cover by lifting the cover away from the PPC4000.
4. Locate the VFD plug-in assembly connector in the upper left hand portion of the PPC4000.

Cover Retaining Screws

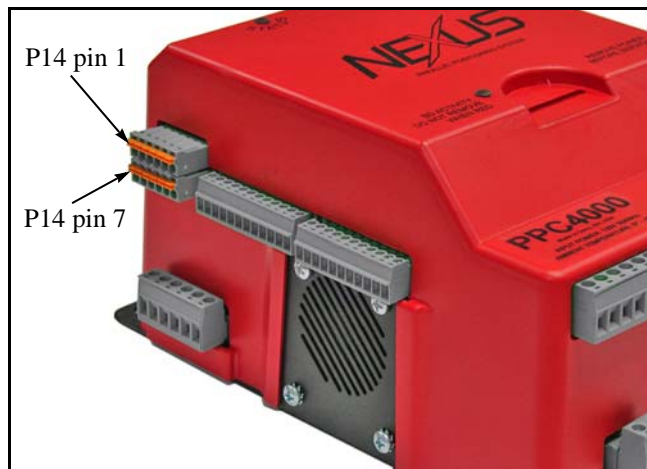


5. Be sure to discharge electrostatic charge by making contact with a grounded surface.
6. Grasp the VFD board such that the connector on the VFD board is facing to the right.
 - a. Be sure to line up connector pins properly. Use alignment pins on motherboard as a guide.
7. Insert VFD board into connector on PPC4000 until firmly seated.
8. Re-install cover over PPC4000 until screws are contacted against stand-offs.
9. Tighten screws to secure cover to chassis.
10. Re-insert all terminal blocks until fully seated.
11. Apply power.
12. From the INFO screen use the UP/DOWN arrows and find firmware revision information. The VFD firmware should be shown as a non-zero number.



Wiring Informaton

The VFD analog in, analog out and encoder signals are connected to terminal block P14 on the PPC4000. Connector P14 is a two row connector. The bottom row is connected together and COMMON to all analog and encoder signals.



Note: Due to the possibility of high frequency electrical noise, it may be necessary to ground the shield at both ends. Verify the equipment bonding (GREEN) wire is connected.

	VFD1			VFD2		
Function	4-20 mA Out [To VFD]	4-20 mA In [From VFD]	Encoder In	4-20 mA Out [To VFD]	4-20 mA In [From VFD]	Encoder In
Signal	P14.6	P14.4	P14.2	P14.5	P14.3	P14.1
Common	P14.12	P14.10	P14.8	P14.11	P14.9	P14.7

Connect drain wires to EARTH post located on PPC4000 chassis.

NXCESVFD SPECIFICATIONS	
VFD OUT:	4-20 mA, Input impedance of external device: Max. 750 ohms
VFD IN:	4-20 mA, Input impedance: 100 ohms
ENCODER IN:	2.4 Kohm pull-up to 24 vdc





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