

## Objective

620S to 690+ wiring information

## Equipment

690+ AC Drive, LA467461 Frame B encoder board, or 6054-00 Frame C - J encoder board, computer with DSELite installed, and assorted hand tools

## Procedure

1. Remove all power to the 620 drive.
2. Uninstall the 620 drive.
3. Install the 690+ drive with encoder board attached.

Note: Connect only the 3-phase input AC voltage wiring.

4. Apply the AC power to the 690+ drive.
5. Download Macro 6 to the 690+ drive using DSELite.

**\*\*Warning:** Minor adjustments to the drive software configuration *are* needed. The DSELite Macro 6 template needs to be verified for proper functionality.

**\*\* Hint\*\*** The digital inputs on the 620S drive were connected to the Preset block. However, the digital inputs on the 690+ are connected to the Sequencing Logic block.

6. Remove the AC power from the 690+ drive.
7. Install all power connections.
8. Using the chart below transfer the control wiring from the 620S terminals to the 690+ terminals.  
Note: The Thermistor connection has been replaced with the External Trip.
9. Using the encoder manual adjust the wiring changes from the 620S to the encoder option board.  
Note: Verify all control and power connections.
10. Re-apply the AC power.
11. Use 690+ quick start for basic motor operation.

### Related Documents:

690+ (Frame B – F) Install manual HA465492  
690+ (Frame G, H, J) Install manual HA465084  
690+ Software manual HA465038  
Frame B encoder Manual LA467407  
Frame C - J encoder manual HA467152  
690+ Quickstart HA470631

If you have questions, please call the Product Support Group at (704) 588-3246.



**Wiring Information**

Terminal Description	620S Terminal #	690+ Terminal #	Terminal Description	620S Terminal #	690+ Terminal #
Feedback Channel A	A1	HTTL Encoder	0v	E1	11
Feedback Channel A comp.	A2	HTTL Encoder	Digital In 1	E2	12 **
Feedback Channel B	A3	HTTL Encoder	Digital In 2	E3	13 **
Feedback Channel B comp.	A4	HTTL Encoder	Digital In 3	E4	14 **
Feedback Channel Z	A5	HTTL Encoder	Digital In 4	E5	15 **
Feedback Channel Z comp.	A6	HTTL Encoder	Digital Out 1	E6	23, 24 **
Encoder Supply	A7	HTTL Encoder	Digital Out 2	E7	21, 22 **
Encoder 0v	A8	HTTL Encoder	Digital Out 3	E8	25, 26
Ground	A9	HTTL Encoder	24V Supply	E9	20
Thermistor 0v	B1	Motor Therm	0V	F1	1
Thermistor Input	B2	Motor Therm	Analog In 3	F2	4 **
Health Output	B3	21, 22	Analog In 4	F3	5 **
Coast Stop	B4	19	Analog In 5	F4	--
Fast Stop	B5	18	Analog Out 2	F5	8
Jog	B6	16	-10 V Supply	F6	9
Start	B7	12	** Configurable Input		
Enable	B8	17			
24V Supply	B9	20			
Ground	C1	1			
Signal 0v	C2	1			
Ramp Input	C3	2			
Direct Input	C4	3			
Analog Out 1	C5	6			
+10V Supply	C6	9			

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### Process Information

Note: The chart below is correct after Macro 6 has been downloaded to the 690+ drive.

Terminal Description	620S Function	690+ Function
Analog In 1	Ramp Input 1	Speed Setpoint
Analog In 2	internal	Speed Trim 1
Analog In 3	Ramp Input 2	Speed Trim 2
Analog In 4	Not configured	Not configured
Analog In 5	Not configured	Not available
Analog Out 1	Speed Feedback	Ramp Output
Analog Out 2	Torque Feedback	Speed Feedback
Analog Out 3	Not available	Torque Feedback
Digital In 1	Ramp Hold	Run Forward
Digital In 2	Preset 1	Run Reverse
Digital In 3	Preset 2	Not Stop
Digital In 4	Preset 3	Remote Reverse
Digital In 5	internal	Jog
Digital In 6	Jog	Drive Enable
Digital In 7	Start	Not Fast Stop
Digital In 8	Enable	Coast Stop
Digital Out 1	Zero Speed	Health
Digital Out 2	Health	Zero Speed
Digital Out 3	Ready	(Ready) Switched On

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