GALaxy IV – Quickstart
HPV 900 AC Geared Induction

CAUTION

Elevator control products must be installed by elevator personnel who have been trained in the construction, maintenance, repair, inspection, and testing of elevator equipment. The elevator personnel must comply with all applicable safety codes and standards.

CAUTION

Every safety precaution, whether or not specifically stated in this document, must be implemented when installing, adjusting or servicing elevator equipment. All safety precautions must be followed to ensure the safety of elevator personnel and the general public.

1.0   Requirements for a running platform during initial startup

1.1   Wire Motor and Main Line Power as shown in the job connection diagrams.

1.2   Install and wire Governor as shown in the job connection diagrams.

1.3   Wire the motor encoder cable as shown in the job connection diagrams.

1.4   If controller is equipped with dynamic braking resistors, wire the DBR temperature sensor to the temperature sensor board.

1.5   Add temporary connections on the GALX-1102 Main I/O Board and Expansion I/O boards as shown in Figures 1, 2, 3, and 4.

1.6   Set the toggles switches on the GALX-1102 Main I/O Board as show in Figure 4.

1.7   Check/set parameters in the controller LCD user interface. See "GALaxy IV Controller Settings" in Table 1.

1.8   Check/set parameters in the HPV 900 drive. See "HPV 900 AC Geared Drive Settings" in Table 2.

1.9   Verify the PIC and PAL fault LED's are off. See the GALX-1102AN Main I/O Board in Figure 4. If these LED's are on, refer to the GALaxy IV adjustment manual for possible causes of these faults.

1.10   Verify that the motor rotation direction and speed are correct. If the motor rotation direction and speed are not correct, see page 4 for determining the correct motor rotation direction and speed.

CAUTION

All temporary connections must be removed before placing the elevator in service. Refer to the GALaxy IV Manual for complete adjustment procedures.
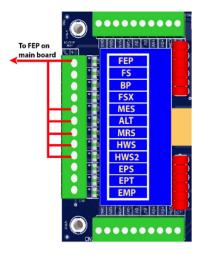

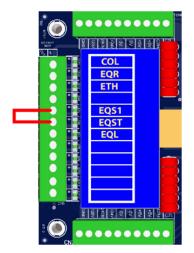Figure 1: Typical I/O Expansion Board Fire I/O Board

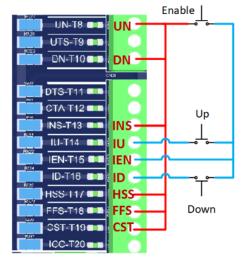Figure 2: Typical I/O Expansion Board Earthquake I/O Board (if used)

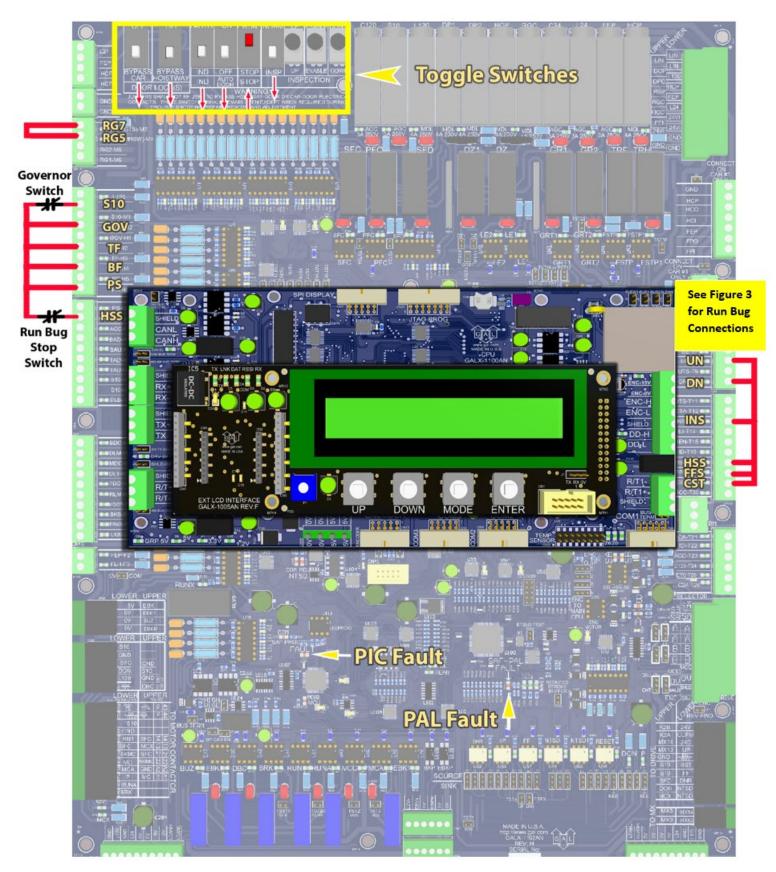Figure 3: GALX-1102AN Main I/O Board With Run Bug. See Figure 4 For Run Bug Stop Switch

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Figure 4: GALX-1102AN Main I/O Board

Table 1: GALaxy IV Controller Settings

Preset the following parameters from the LCD User Interface "Adjustable Variables" menu.

Safety Processor Adjustable Variables Submenu (Motor Encoder Speed Feedback):	
Top Speed (contract speed fpm)	INSP Velocity (set to 140)
Encoder RPM (set to value in A1-Contract Mtr Spd)	Leveling Vel (set to 140)
Encoder PPR (set to value in A1-Encoder Pulses)	ETS UP VEL (set to Top Speed – only used for reduced stroke buffer)
Encoder Type (set to 4 = incremental)	ETS DOWN VEL (set to Top Speed – only used for reduced stroke buffer)
Control Type (set to 2 = Tract DF)	Soft Stop Time (set to 3)
2 Stop (0 = Multi – Stop; 1 = 2 Stop)	PAL ETS UP Vel (set to Top Speed)
Rear Doors (0 = Front Only; 1 = Rear)	PAL ETS DN Vel (set to Top Speed)
UTS Velocity (set to Top Speed)	
DTS Velocity (set to Top Speed)	
NTS Processor Adjustable Variables Submenu	
Top Speed (contract speed fpm)	DT Velocity (set to Top Speed)
Encoder RPM (set to value in A1-Contract Mtr Spd)	UT1 Velocity (set to Top Speed)
Encoder PPR (set to value in A1-Encoder Pulses)	DT1 Velocity (set to Top Speed)
Encoder Type (set to 0 if using APS; set to 1 if using tapeless selector)	UTn Velocity (set to Top Speed)
UT Velocity (set to Top Speed)	DTn Velocity (set to Top Speed)
Car Motion Submenu	
When Using Tapeless Selector:	When Using APS Selector:
Top Speed (set to Contract Speed)	Top Speed (set to Contract Speed)
Inspect Speed (set to 25 FPM)	Inspect Speed (set to 25 FPM)
Encoder PPR (set to 10,000 PPR)	Encoder PPR (not Used)
Encoder RPM (set to governor RPM)	Encoder RPM (not used)
Motor RPM (set to value in A1-Contract Mtr Spd)	Motor RPM (set to value in A1-Contract Mtr Spd)
System Options Submenu	
Drive Baud Rate = 0 (19,200)	
Encoder Type = 0	

Table 2: HPV 900 AC Geared Drive Settings

Preset the following parameters from the HPV 900 digital operator.

Drive A1 Submenu	
Contract Car Spd	Top Speed of Elevator
Contract Mtr Spd	Motor RPM at contract speed
Encoder Pulses	Motor Encoder PPR
Power Convert A4 Submenu	
Input L-L Volts	RMS Line to Line voltage
Motor A5 Submenu	
Motor ID	4 Pole dflt (if 4 pole motor); 6 Pole dflt (if 6 or 8 pole motor)
Rated Mtr Power	Nameplate HP
Rated Mtr Volts	Nameplate Motor Volts
Rated Excit Freq	Nameplate Hz
Rated Motor Curr	Nameplate Amps
Motor Poles	4 for 1800 RPM Motor; 6 for 1200 RPM Motor; 8 for 900 RPM Motor
Rated Mtr Speed	Nameplate RPM

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Determining correct motor rotation direction and speed.

1) Run the elevator on inspection.

2) If the elevator runs controlled but in the wrong direction, with no drive faults, change the motor rotation direction by setting the parameter C1-MOTOR ROTATION to the opposite setting in the HPV 900 drive. Run the elevator on inspection and verify that the motor rotation direction and speed are correct.

3) If the drive generates an "ENCODER FAULT" or a "HIT TORQUE LIMIT" alarm, change the encoder direction by setting the parameter C1-ENCODER CONNECT to the opposite setting in the HPV 900 drive. Run the elevator on inspection and verify that the motor rotation direction and speed are correct.

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