

**Quick Reference Guide**

*Wiring/  
Power Up/  
Parameter Setting*

*Reliance Electric  
GV6000 AC Drive  
1/2 to 200 HP*



Quick Reference Instructions:  
A quick reference to some basic configurations and drive features.

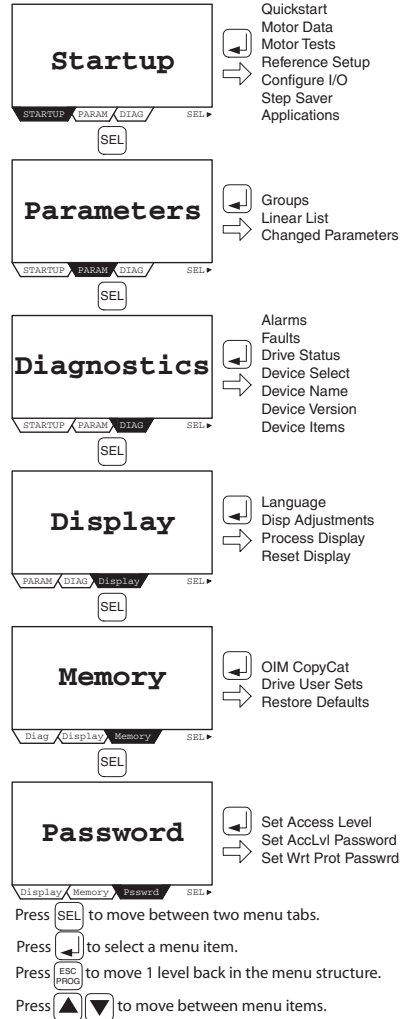
- Volts/Hertz Regulation
- Sensorless Vector Regulation
- Flux Vector Regulation

D2-3544

**OIM Keypad and Display**

The supplied keypad and display allow for setup, parameter adjustment, monitoring and diagnostics.

**Operator Interface Module (OIM)**



**NOTE:** This material is not intended to provide operational instructions. Appropriate Reliance Electric Drives instruction manual information and precautions should be studied prior to installation, operation, or maintenance of equipment.

**Startup Menu**

**OIM Startup Menu**

The Startup Menu parameters can be accessed via the keypad tab menu. Once into the selection list the following parameters can be set to configure the drive to the installed motor.

**1. Quick Start**

- Regulation Type
- Encoder PPR
- Speed Units
- Stop Type
- Motor NP FLA
- Maximum Speed
- Minimum Speed
- Accel Time
- Decel Time
- Speed Ref Select
- Current Limit

The default configuration is defined as:

Drive Voltage Rating = Motor Voltage  
Start/Stop control = OIM  
Speed Reference = OIM  
Control Mode = Sensorless Vector

If the drive default configuration is to be used for initial startup then the above parameters are the only settings required.

If the user needs to customize the drive configuration different than the default setting, then the user should verify parameter settings accessible throughout start-up menu.

**2. Input Voltages**

- 200/240, 400/480, and 600 VAC, based on model number


**3. Motor Nameplate Data**

- Motor NP Power
- Motor NP FLA
- Motor NP Volts
- Motor NP Hertz
- Motor NP RPM

**Startup Menu**

**4. Motor Tests**

- Direction Test
- Autotune
- Inertia Test



**ATTENTION:** Rotation of the motor in an undesired direction can occur during these procedures. Failure to observe this precaution could result in damage to equipment or bodily injury.

**5. Reference Setup**

- OIM Keypad, Analog Input, Network, MOP, Frequency, Encoder, Presets

**6. Configure I/O**

- Digital Inputs/Outputs
- Analog Outputs

**7. Step Saver, Applications**

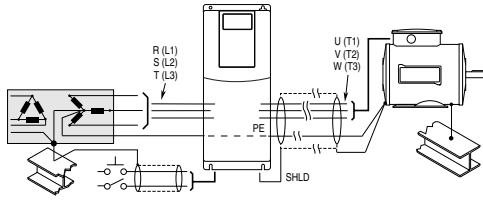
**Control Mode**

Motor Cntl Sel (53) performance can be selected from:

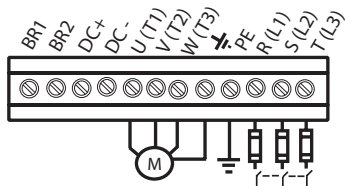
- Sensorless Vector (default)  
High performance control without encoder feedback
- SV Economize  
Sensorless vector with energy saving
- Custom V/Hz  
Basic open loop control. Multi-motor application
- Fan/Pump: V/Hz  
Provides for a Fan load V/Hz curve
- FVC Vector  
Highest performance mode of control achieved with encoder feedback

## Power Wiring

Input Voltage: Determined by model number. Voltage Class configures the drive for International voltage supplies.

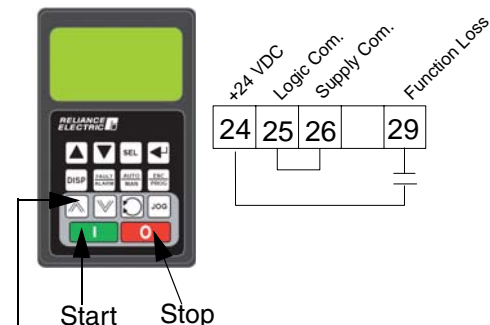


**ATTENTION:** The GV6000 does not provide branch circuit protection. The user must install the proper protection devices.



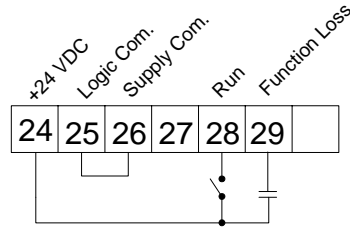
## Control Wiring

**Default:** (Out-of-the-box) configuration is for Keypad control. The user will be able to start the controller using the built-in drive mounted operator interface module.



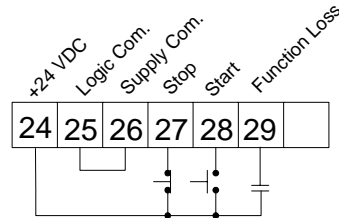
## Control Wiring (cont.)

### Two Wire Start/Stop Control



Logic Source Sel (89) = Terminal Block  
 Digital In1 Sel (361) = Not Used  
 Digital In2 Sel (362) = Run  
 Digital In3 Sel (363) = Function Loss

### Three Wire Start/Stop Control

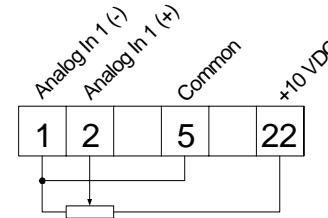


Logic Source Sel (89) = Terminal Block  
 Digital In1 Sel (361) = Stop  
 Digital In2 Sel (362) = Start  
 Digital In3 Sel (363) = Function Loss

See Digital Inx Sel (parameters 361 to 366) for configuration of all logic inputs.

## Reference Wiring

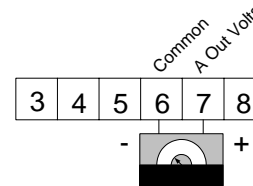
### Analog Reference Wiring (0 to 10 VDC Input)



Speed Ref A Sel (90) = Analog In 1  
 Speed Ref Hi (91) = 60 Hz.  
 Speed Ref Lo (92) = 0 Hz.  
 Analog In Config (320) = .xx00  
 Analog In 1 Hi (322) = 10.0 V  
 Analog In 1 Lo (323) = 0.0 V

Analog Inputs can be configured for 4 - 20 mA. See instruction manual D2-3540.

### Analog Output Wiring (0 to 10 VDC Output)



Analog Out Absolute (341) = 1  
 Analog Out1 Sel (342) = Output Freq.  
 Analog Out1 Hi (343) = 10.0 V  
 Analog Out1 Lo (344) = 0.0 V

## Terminal Assignments

#	Signal	Default
1	Analog In 1 (-)	Depends on params 320 - 327
2	Analog In 1 (+)	
3	Analog In 2 (-)	
4	Analog In 2 (+)	
5	Pot Common	-
6	Analog Out 1 (-)	Depends on params 340 - 347
7	Analog Out 1 (+)	
8	Analog Out 2 (-)	
9	Analog Out 2 (+)	
10	HW PTC Input 1	-
11	Digital Out 1 NC	Fault
12	Digital Out 1 Common	
13	Digital Out 1 NO	NOT Fault
14	Digital Out 2 NC	NOT Run
15	Digital Out 2/3 Common	
16	Digital Out 3 NO	Run
17	Analog In Jumper - Analog In 1	
18	Analog In Jumper - Analog In 2	
19	Analog In Jumper - Analog In 1	
20	Analog In Jumper - Analog In 2	
21	-10V Pot Reference	-
22	+10V Pot Reference	-
23	HW PTC Input 2	-
24	+24 VDC	-
25	Digital In Common	-
26	24V Common	-
27	Digital In 1	Stop-CF
28	Digital In 2	Start
29	Digital In 3	Function Loss
30	Digital In 4	Jog
31	Digital In 5	Auto/Man.
32	Digital In 6/Hardware Enable	Speed Sel 1

## Encoder Connections

No.	Description	
8	+12 VDC Power	Internal Power source 250 mA
7	+12 VDC Common	
6	Encoder Z (NOT)	Pulse marker or registration input <sup>(1)</sup>
5	Encoder Z	
4	Encoder B (NOT)	Quadruple B input
3	Encoder B	
2	Encoder A (NOT)	Single channel or quadruple A input
1	Encoder A	

(1) Z channel can be used as a pulse input while A and B are used for encoder.

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