

# Quick Start Instructions

## Wiring

## Power Up

## Parameter Setting

### Reliance Electric Drives SP600 AC Variable Frequency Inverter - 1/2 to 20 HP



## NEMA 4X/12 Washdown

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

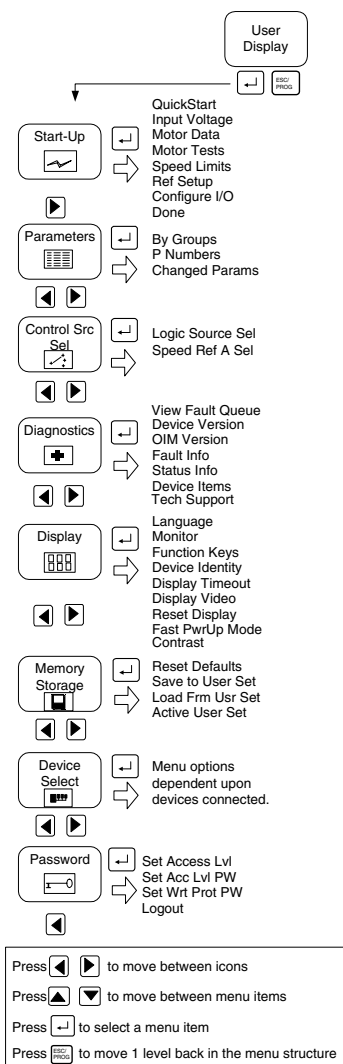
D-2992

**Rockwell  
Automation**

## OIM Keypad and Display

The built-in keypad and display allow for  
setup, parameter adjustment, monitoring  
and diagnostics.

Operator Interface Module (OIM)



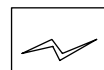
**NOTE:** This material is not intended to provide operational  
instructions. Appropriate Reliance Electric Drives  
instruction manuals precautions should be studied prior to  
installation, operation, or maintenance of equipment.

## Quick Start

### OIM Quick Start Menu

The Quick Start Parameters can be  
accessed via the keypad menu icon. Once  
into the selection list the following  
parameters can be set to configure the  
drive to the installed motor.

START-UP



#### 1) QuickStart

- Stop Mode A (Ramp)
- Motor NP FLA (Drive Dependant)
- Minimum Speed (0.0 Hz)
- Maximum Speed (60.0 Hz)
- Accel. Time 1 (10.0 sec.)
- Decel. Time 1 (10.0 sec.)
- Speed Reference A select (OIM)
- Digital IN2 Select (Start)

(Defaults)

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 575 VAC,  
based on model number

#### 3) Motor Nameplate Data

- Motor Power Units
- Motor Power

## Quick Start

### 3) Motor Nameplate Data cont'd

- Motor FLA
- Motor Volts
- Motor Hertz
- Motor RPM

### 4) Motor Tests

- Direction
- AutoTune

**ATTENTION:** Rotation of the motor in an  
undesired direction can occur during this  
procedure Autotune (61) = Rotate Tune  
(2). To guard against possible injury  
and/or equipment damage, it is recommended that the  
motor be disconnected from the load before  
proceeding.

### 5) Speed Limits

- Minimum, Maximum
- Direction Limit
- Stop Mode

### 6) Reference Setup

- OIM Keypad, Terminal Block,  
Network, Other

### 7) Configure I/O

- Digital Inputs/Outputs
- Analog Outputs

## Control Mode

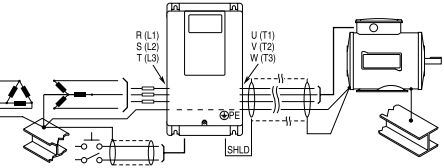
(P53) Torque Perf Mode

Control performance can be selected  
from:

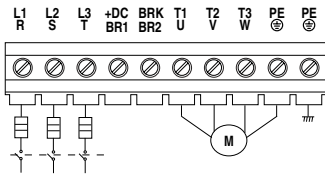
- Sensorless Vector (default)  
Highest performance mode of control
- SV Economize  
Sensorless Vector with energy saving
- Custom V/Hz  
Basic open loop control. Multi-motor  
application
- Fan/Pump: V/Hz  
Provides for a Fan load V/Hz curve

## Power Wiring

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

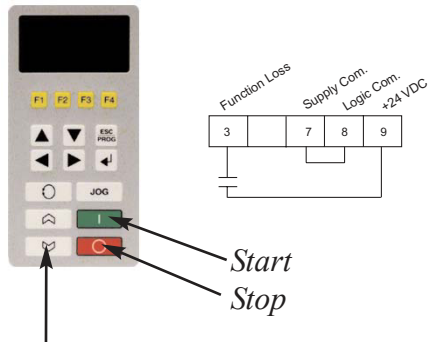


**ATTENTION:** The SP600 does not provide branch circuit protection. The user must install the proper protection devices.



## Control Wiring

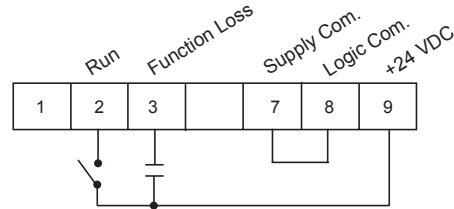
**Default:** (Out-of-the-box) configuration is for Keypad control. The user will be able to start the controller using the built-in drive mounted operator interface module.



Increase / Decrease Speed

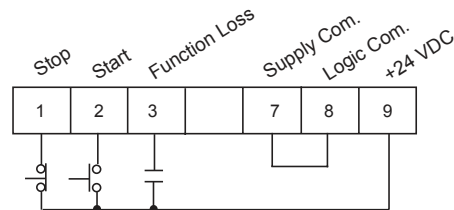
## Control Wiring cont'd

### Two Wire Start/Stop Control



(P89) Logic Source Sel = Terminal Block  
(P361) Digital In1 Sel = Not Used  
(P362) Digital In2 Sel = Run  
(P363) Digital In3 Sel = Function Loss

### Three Wire Start/Stop Control

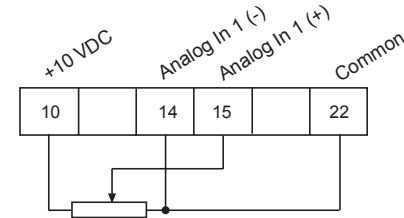


(P89) Logic Source Sel = Terminal Block  
(P361) Digital In1 Sel = Stop  
(P362) Digital In2 Sel = Start  
(P363) Digital In3 Sel = Function Loss

See Parameters P361 to P366 for configuration of all logic inputs.

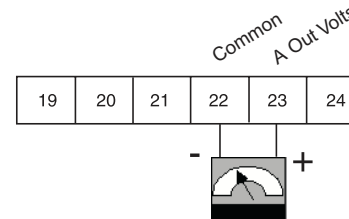
## Reference Wiring

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



(P90) Speed Ref A Sel = Analog In1  
(P91) Speed Ref Hi = 60 Hz.  
(P92) Speed Ref Lo = 0 Hz.  
(P320) Analog In Config = ..xx00  
(P322) Analog In 1 Hi = 10.0 V  
(P323) Analog In 1 L0 = 0.0 V  
Analog Inputs can be configured for 4-20 mA. See instruction manual.

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



(P341) Analog Out Absolute = 1  
(P342) Analog Out1 Sel = Output Freq.  
(P343) Analog Out1 Hi = 10.0 V  
(P344) Analog Out1 Lo = 0.0 V

## Terminal Assignments

| Term.# | Definition             | Default           |
|--------|------------------------|-------------------|
| 1      | Digital In #1          | Stop/Clr Flt      |
| 2      | Digital In #2          | Start             |
| 3      | Digital In #3          | Function Loss     |
| 4      | Digital In #4          | Jog               |
| 5      | Digital In #5          | Manual            |
| 6      | Digital In #6          | Speed Sel 1       |
| 7      | +24VDC Int. Common     | Logic             |
| 8      | Logic Input Common     | Input Supply      |
| 9      | +24VDC Output          | Terminals         |
| 10     | +10VDC Ref. Supply     |                   |
| 11     | Relay Out #1 - NO      |                   |
| 12     | Relay Out #1 - C       | /Fault*           |
| 13     | Relay Out #1 - NC      |                   |
| 14     | Analog In #1 Volts (-) | Not Assigned      |
| 15     | Analog In #1 Volts (+) |                   |
| 16     | Analog In #1 (4-20ma)  | Default 4-20 mA   |
| 17     | Analog In #1 (4-20ma)  | Input             |
| 18     | Analog In #2 Volts (-) | Default 0-10 VDC  |
| 19     | Analog In #2 Volts (+) | Input             |
| 20     | Analog In #2 (4-20ma)  | Not Assigned      |
| 21     | Analog In #2 (4-20ma)  |                   |
| 22     | Analog Common          | Analog Output     |
| 23     | Analog Out Volts (+)   | Output Freq. (Hz) |
| 24     | Relay Out #2 - NO      |                   |
| 25     | Relay Out #2 - C       | Running*          |
| 26     | Relay Out #2 - NC      |                   |

\* Form C Relay contact outputs:  
NO (Normally Open)  
NC (Normally Closed)  
C (Common)



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