



**Allen-Bradley 1336/1336VT  
115V AC Logic Interface Board  
(110/115/120V AC, 50/60 Hz Input Power)  
Cat. No. 1336-MOD-L3**

**Installation Data**

**What These Instructions Contain**

These instructions contain the necessary information to configure and install the 115V AC Logic Interface Board Option.

**Where This Option is Used**

B003-B200 and C003-C200 1336 Drives  
B003-B200 1336VT Drives

**What This Option Provides**

The 115V AC Logic Interface Board provides a means of interfacing various signals and commands to the 1336 or 1336VT Drive using 115V AC signals. A 115V AC power source must be supplied by the user for the board to operate. Plug in connectors on the 115V AC Interface Board allow it to be plugged directly into connectors on the Main Control Board. Two mounting thumb screws secure the board in place.

Twelve user interface terminals are provided on the board. Each of the twelve terminals is defined as either a user command input signal or interface common.

When a closed circuit is present between a signal terminal and interface common, a 115V AC potential will exist. This represents the selected state or high = True.

When an open circuit is present between a signal terminal and interface common, the input will go low to a False state.



**ATTENTION:** If the 115V AC Interface Board is to replace either the 1336-MOD-L1 or 1336-MOD-L2, external circuits must be reconfigured to operate at the 115V AC logic potentials required by the board. The application of either +5V DC or +24V AC to the 115V AC Interface Board will damage both the 115V AC Interface Board and the Main Control Board

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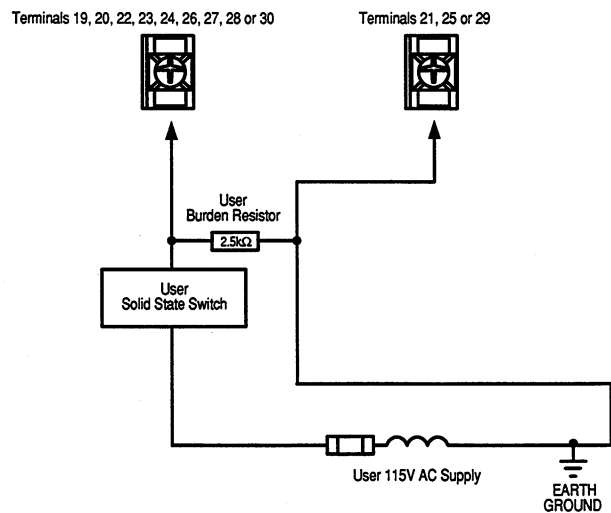
## Circuit Requirements

Circuits used with the 115V AC Logic Interface Board must meet the following requirements:

- Circuits must be capable of operating with high = true logic.
- In the high state, circuits must generate a voltage of 110-120V AC, 50/60 Hz and source a current of approximately 8.5mA for each input.
- In the low state, circuits must generate a voltage of no more than 10.0V AC. The leakage current must be less than 1mA into a 13k $\Omega$  load.

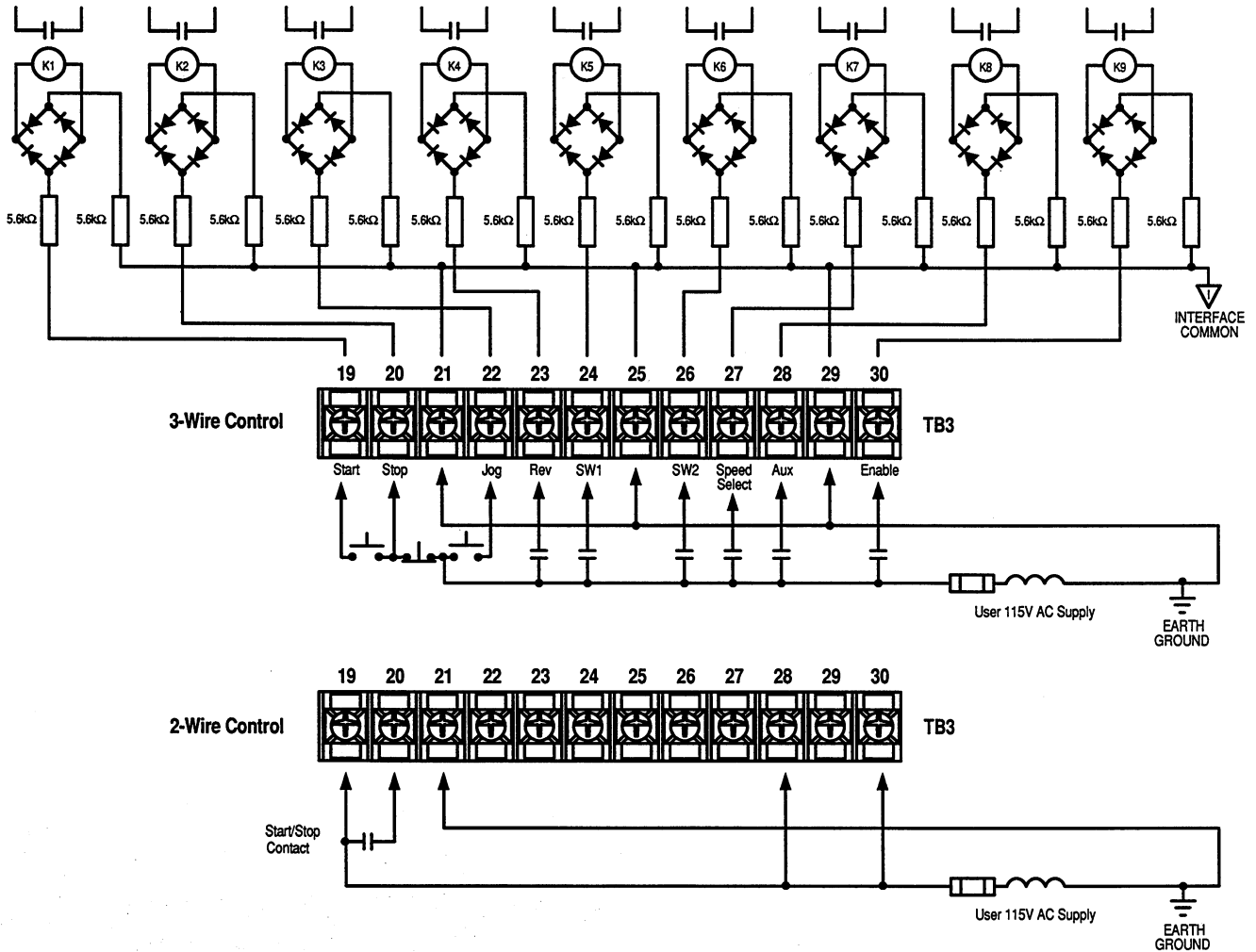
If solid state switches are used, the leakage current rating of the switch must be verified. In some instances a burden resistor may be required in the switch circuit to help ensure correct circuit operation.

- For solid state switches with a leakage current less than 1mA, a burden resistor is not required.
- For solid state switches with a leakage current rating of 1-5mA, a 2.5k $\Omega$ , 10W burden resistor must be used in each solid state switch circuit.



- For solid state switches with a leakage current rating greater than 5mA, contact your nearest Allen-Bradley Drives Distributor of Sales Office for assistance.

1336-MOD-L3 Typical Configurations



	Signal	Wire Group ①	Maximum Wire Size	Recommended Torque
Terminal 19, Interface Common	Start	3	14 AWG ③	7 In-Lbs ④
Terminal 20, Interface Common	Stop ②	3	14 AWG	7 In-Lbs
Terminals 21, 25, 29	Interface Common	3	14 AWG	7 In-Lbs
Terminal 22, Interface Common	Jog	3	14 AWG	7 In-Lbs
Terminal 23, Interface Common	Reverse	3	14 AWG	7 In-Lbs
Terminal 24, Interface Common	SW1	3	14 AWG	7 In-Lbs
Terminal 26, Interface Common	SW2	3	14 AWG	7 In-Lbs
Terminal 27, Interface Common	Speed Select	3	14 AWG	7 In-Lbs
Terminal 28, Interface Common	Auxiliary ②	3	14 AWG	7 In-Lbs
Terminal 30, Interface Common	Enable ②	3	14 AWG	7 In-Lbs

① Refer to the Wire Group Number Table in Chapter 6 of your 1336 or 1336VT Hardware User Manual.

② This signal must be present to permit the drive to operate from any control source.

③ 2.5 mm<sup>2</sup>.

④ .791 N-m.

## Installation Data

### 115V AC Logic Interface Board

**IMPORTANT:** Control functions affected by drive Parameter programming and selection are indicated on the following pages. Refer to your 1336 or 1336VT Programming Manual to verify that the drive is programmed to meet your requirements.

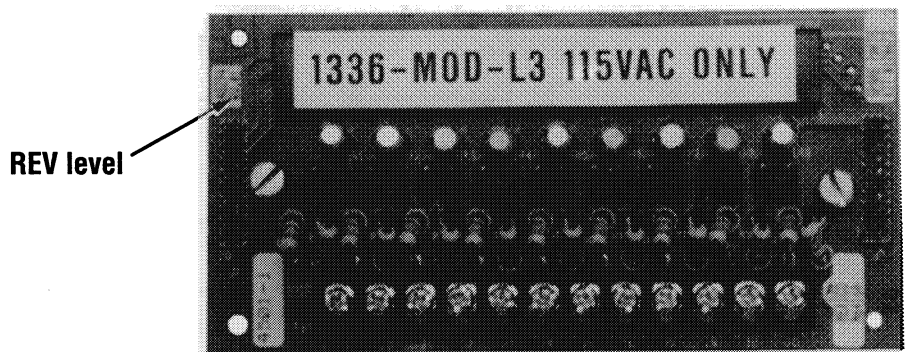
The 2-wire scheme allows a fault to be cleared by cycling the Start/Stop contact if the following is true:

- Parameter 14 = 1
- Parameter 39 = 1

If Auto Restart (Parameter 14) is not set to “1”, the drive can remain in an “F11” loop. Power must then be cycled to clear the fault.

## Signals and Commands

**Important:** Because of changes to the input delay filter in **REV 7** of the 1336-MOD-L3 board, the maintained timed interval required for the **Stop**, **Auxiliary** and **Enable** signals will increase from 20 to 90ms.



## Terminal 19 and Interface Common

### Start

Momentary True = Start

False = Continue Last State

This input will command the drive to start if all hardwired interlocks are closed. The drive will continue to run until a Stop command is received, an interlock is opened or a fault is detected. A maintained True state is not required to keep the drive running but is permitted. A False state is required to allow the drive to respond to a momentary Stop input.

## Terminal 20 and Interface Common

(This signal must be maintained as True to permit the drive to operate from any control source.)

### Stop

Maintained True = Not Stop

Momentary False = Stop

Stop must be a maintained True input to permit the drive to start and run. A momentary False of 20ms (90ms for REV 7 or above) or more or any other drive Stop command will initiate a drive stop sequence as programmed by Parameter 10, Stop Select.

## Terminals 21, 25, 29

### Interface Common

Terminals 21, 25 and 29 are used to terminate both minus or common interface signals to TB3. Terminals 21, 25 and 29 are also used to terminate any cable shields connected to TB3. For the 1336-MOD-L3 115V AC Logic Interface Board, Terminals 21, 25 and 29 are isolated from drive signal common and chassis ground.

### **Terminal 22 and Interface Common**

#### **Jog**

True = Jog

False = Interrupt Jog and Allow Other Functions

This input will jog the drive if it is not running and interlocks permit. As long as interlocks permit and the jog command remains True, the drive will continue to run at the programmed jog frequency.

### **Terminal 23 and Interface Common**

#### **Reverse**

True = Reverse

False = Forward

Parameter 22 enables the direction of drive rotation to be controlled by an input at Terminal 23. A maintained False will select the forward direction, a maintained True the reverse direction.

### **Terminal 24 and Interface Common**

#### **SW1**

True = SW1 Function Selected

False = SW1 Function Not Selected

Parameters 26-31 define the SW1 function.

### **Terminal 26 and Interface Common**

#### **SW2**

True = SW2 Function Selected

False = SW2 Function Not Selected

Parameters 26-31 define the SW2 function.

### **Terminal 27 and Interface Common**

#### **Speed Select**

True = Selects Parameter 6, Frequency Select 2

False = Selects Parameter 5, Frequency Select 1

The drive speed reference can come from a variety of sources. Refer to Chapter 8 — Speed Selection of your 1336/1336VT User Manual for details.

### **Terminal 28 and Interface Common**

(This signal must be maintained as True to permit the drive to operate from any control source.)

#### **Auxiliary**

Maintained True = Auxiliary Interlocks Are Closed

False = Auxiliary Interlocks Are Open

Auxiliary allows the drive to be interlocked using external interlocks. The interlocks must be closed and this input True to permit the drive to operate. When an interlock opens and the input is False for 20ms (90ms for REV 7 or above) or longer, the drive will initiate a programmed stop sequence and generate Fault F02.

### **Terminal 30 and Interface Common**

(This signal must be maintained as True to permit the drive to operate from any control source.)

#### **Enable**

Maintained True = Drive Enabled

False = Disable Drive

Enable must be a maintained True input to permit the drive to run and jog the motor. If this input is False for 20ms (90ms for REV 7 or above) or longer, drive programming can still be accessed if power is not removed from the drive or control logic. Operating capabilities however are not permitted, and drive outputs will be disabled and the motor will coast-to-stop.



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