



## ALLEN-BRADLEY BULLETIN 1336 HIGH/LOW SPEED

### APPLICATION NOTE # 13

January 2, 1997

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#### PURPOSE

The purpose of this document is to provide guidelines for wiring and control schemes for the Bulletin 1336 AC Drive. This document is to be used as a suggestion only. Users must

ensure that installations meet applicable codes and are suitable for the existing conditions.

The Bulletin 1336 User Manual should be used as a reference to ensure that proper wire selection, routing, and fusing guidelines are followed.

#### WHAT THIS NOTE CONTAINS

The Bulletin 1336 remote speed pot can be configured for a HIGH/LOW function with the use of a selector switch and fixed resistors. This allows the Users to switch from a LOW speed to HIGH speed with the switch and still utilize the POT to trim the speed.

#### INTENDED AUDIENCE

This application note is intended to be used by personnel familiar with the hardware components and programming procedure necessary to operate the Bulletin 1336/1336VT.

#### WHERE IT IS USED

changes

The diagrams, parameter settings, and auxiliary hardware used in this application note are designed to address specific issues in many different applications. Some

by the Users may be necessary to apply the concepts of this document to a specific application.

**DESCRIPTION**

operating

The addition of two fixed resistors is necessary to create an offset for the HIGH/LOW function. The following

frequencies are based on a drive minimum frequency setting of zero hertz and a maximum of 60 HZ. Installing a 10K ohm resistor between TB2 terminal 1 and the high end of the speed pot will create a maximum frequency of 33HZ when the remote speed pot is fully CW. Installing the 10K ohm resistor between TB2 terminal 3 and the return of the speed pot will create a minimum limit of 33HZ. To complete the circuit, a 2-position selector switch is utilized to select which resistor is in the circuit.

With the switch in the LOW position, the resistor between TB2 terminal 1 and the speed pot will cause a voltage drop. The result is a limited voltage supplied to the speed pot and thus a frequency range from 0-33HZ.

circuit

When the switch is set to the HIGH position, the resistor between TB2 terminal 1 and the speed pot is bypassed with the switch. Another resistor is then pulled into the

between TB2 terminal 3 and the speed pot return. This resistor will cause a voltage drop after the pot creating a frequency range of 33-60HZ. Refer to figure 1 for diagram.

required

Overlapping contacts on the selector switch are not

for this application. A 3-position selector may be used to offer a MID speed. The MID setting has to open both sets of contacts. The frequency range will be from 23-46HZ.

**APPLICATION  
CONSIDERATIONS**

When operating in the LOW speed mode the full range of the speed pot can be utilized. In the HIGH speed mode the speed pot must not be turned fully CW or a F09 fault will occur. This fault code is for an open pot return. The speed pot should be limited to a 340 degree maximum turn.

The recommended wattage value for the fixed resistors and potentiometer are 2 watt.

**PARAMETER SETTINGS****TABLE 1**

PARAMETER #	NAME	SETTING
5	FREQ. SELECT 1	5 = REMOTE SPEED POT
7	ACCEL TIME 1	0-600 SECONDS
8	DECEL TIME 1	0-600 SECONDS

the

The acceleration and deceleration times set in parameters 7 and 8 determines the rate of change in frequency between

minimum and maximum frequency settings.

BULLETIN 1336 WITH HIGH/LOW SPEED SELECTION

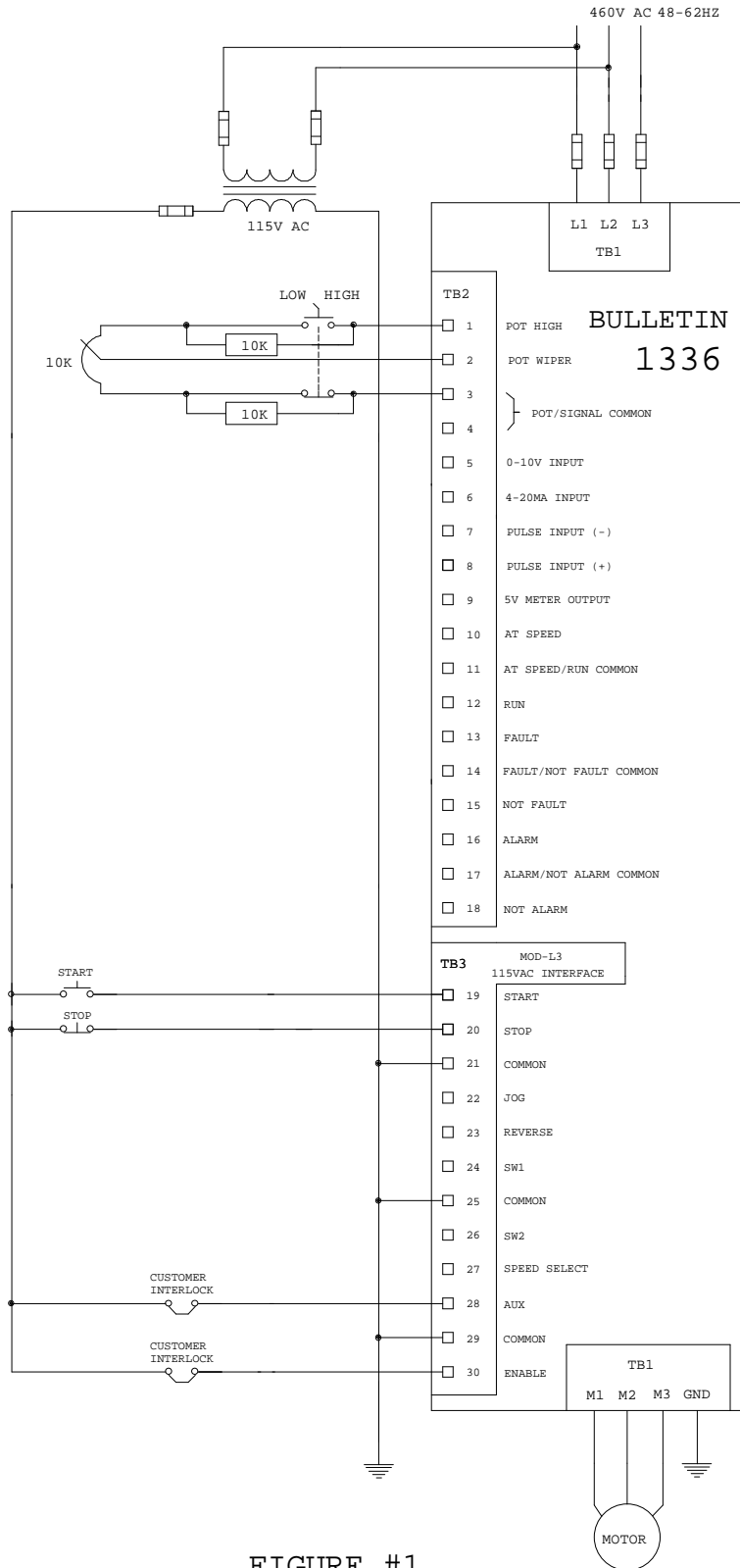


FIGURE #1

AB Drives