ALLEN-BRADLEY
BULLETIN 1336
2-WIRE & 3-WIRE START/STOP

APPLICATION NOTE #8

March 4, 1994

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 drive Logic Interface boards allow the Users to control the start/stop functions with either TWO-WIRE or THREE-WIRE configurations. The TWO-WIRE control utilizes a single contact to start and stop the drive. The THREE-WIRE method has separate inputs for start and stop.

Setup of the drive parameters is necessary to properly implement these different methods of control.

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

The diagrams, parameter settings, and auxiliary hardware used in this application note are designed to address specific issues in many different applications. Some changes by the Users may be necessary to apply the concepts of this document to a specific application.

TERMS AND DEFINITIONS

1336-MOD-L1 - TTL logic interface (low true logic)
1336-MOD-L2 - 24VDC logic interface (high true logic)
1336-MOD-L3 - 115VAC logic interface (high true logic)

DESCRIPTION

The **THREE-WIRE** style of control is typical for an operator station with push-button controls. The start push-button being a momentary close and the stop a momentary open. The drive parameter settings will affect the required sequence of the push buttons and how the drive reacts to these inputs. Refer to table 1 for parameter settings.

Setting Parameter 39 to a value of 1 allows the STOP input to clear a fault. The START input must remain logically false while the STOP input goes false then true. When the fault is cleared the drive will display F01.

If parameter 14 is set to zero prior to initiating a start command, the stop button must be pressed a second time after the F01 display. If parameter 14 is set to a value of 1, the stop input does not need to be cycled a second time.

This type of start/stop control is not compatible with a process that requires "auto restart".

Refer to figures 1 and 2 for diagrams.

PARAMETER SETTINGS **TABLE 1**

PARAMETER #	NAME	SETTING
14	AUTO RESTART	0 = DISABLED 1 = ENABLE
39	FAULT CLEAR	0 = DISABLED 1 = ENABLED

TWO-WIRE control is used most often when interfacing with PLC's or other process controls with relay outputs. This method uses a single input to control both the START and STOP functions.

For this method of control to work properly, the START input at TB3 Terminal 19 should be jumpered logically true. The STOP input will then start the drive when it is logically true and stop the drive when it is false.

With the START input jumpered "true", Parameters 14 and 39 must be set to a value of 1. Removing the STOP input will clear the fault. Returning this input to a "logic true" state will restart the drive.

Refer to figures 3 and 4 for diagrams.

APPLICATION CONSIDERATIONS

When TWO-WIRE control is utilized with the local control panel, *1336-MOD-FA2* or one of the REMOTE CONTROL PANELS, *1336-MOD-RP2, RP3,* the STOP push-button on the panel will allow the drive to restart once the button is released. Refer to application note #3 1336-MOD-RP2,RP3 REMOTE CONTROL PANEL for additional information.

Refer to application note #15 LOGIC INTERFACE COMPATIBILITY for additional information on compatible input devices.

For use on ungrounded 120V AC systems refer to application note #12 120V AC INTERFACE GROUNDED/UNGROUNDED.

3-WIRE CONTROL WITH 115V AC INTERFACE

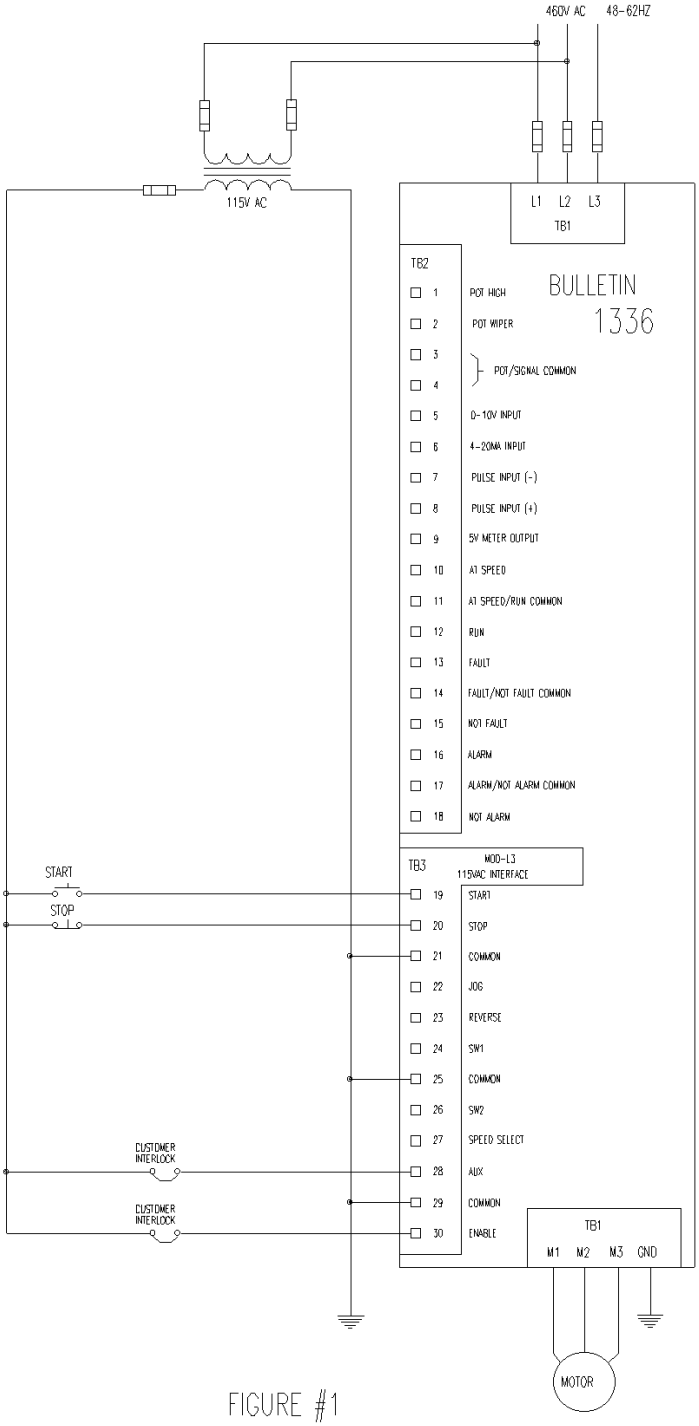

FIGURE #1

3-WIRE CONTROL WITH TTL INTERFACE

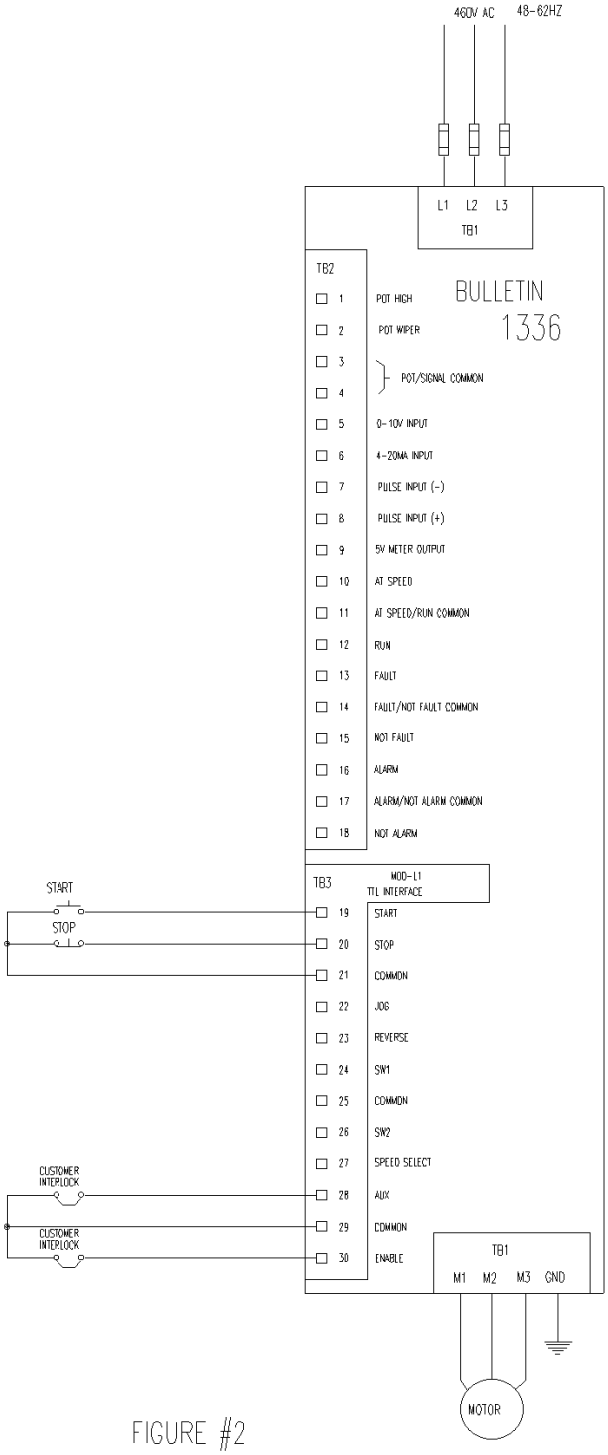

FIGURE #2

2-WIRE CONTROL WITH 115V AC INTERFACE

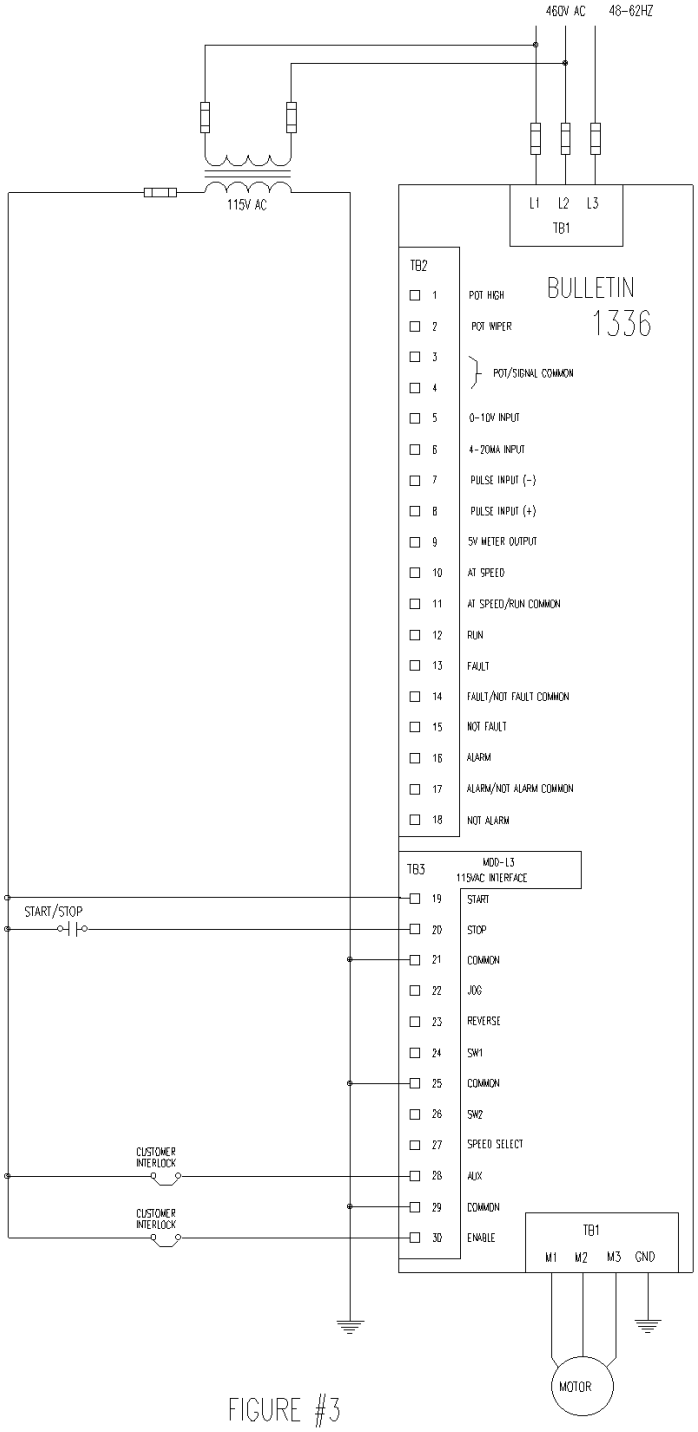

FIGURE #3

2-WIRE CONTROL WITH TTL INTERFACE

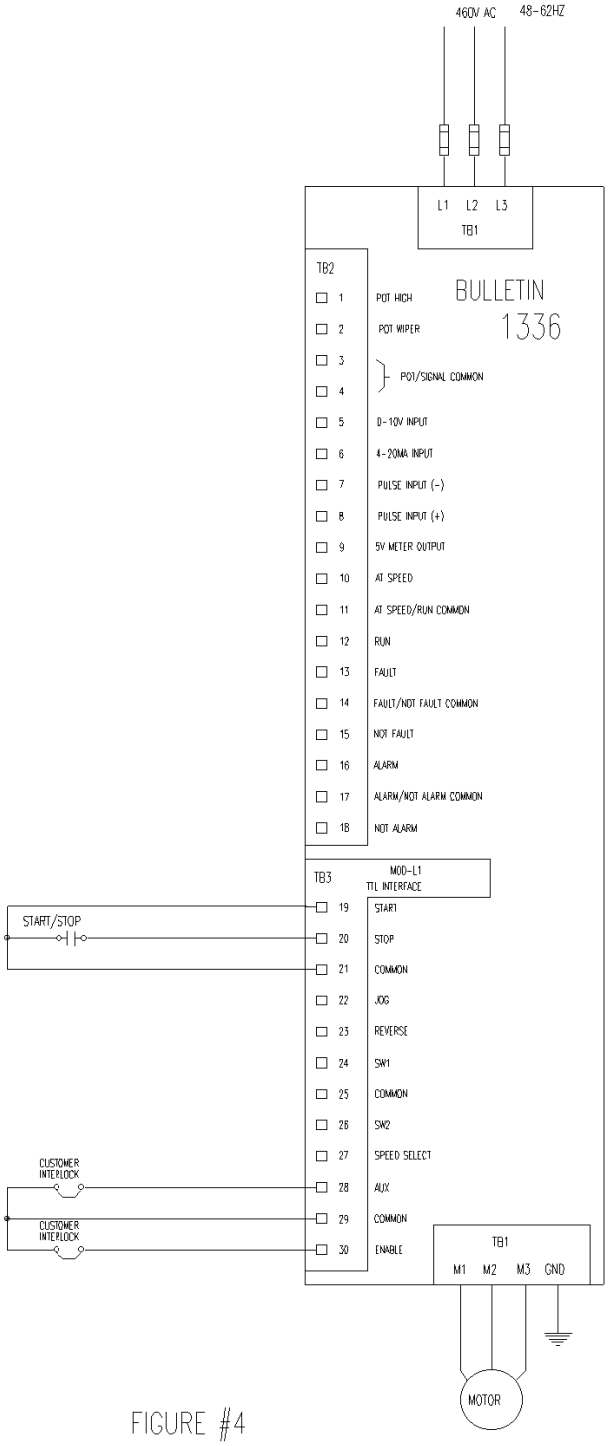

FIGURE #4