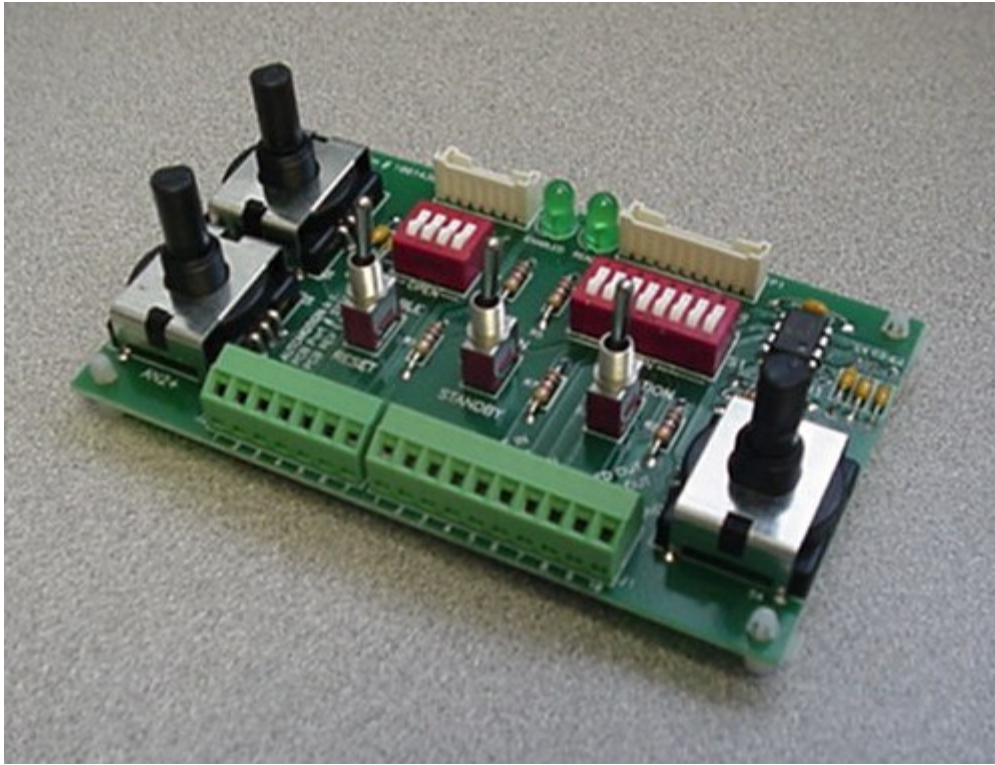# Quick Start I/O Users Guide

QUICK START I/O TEST INTERFACE

This users guide gives a brief description of the minimum requirments for hook up and operation of the Quick Start I/O interface. This guide is not intended to fully define the operation or function of the quick start I/O interface. Please refer to the users manual for a full explaination of this product with specifics to the individual product. This product is designed for use with the ACS100, ACS200, and ACS300 product family, the ACE500series and ACE1000 series.

Quick Start I/O Users Guide

⚠️ **PLEASE READ THE ENTIRE USERS GUIDE FIRST BEFORE ATTEMPTING TO USE THIS PRODUCT.**

This guide describes the operation of the Quick Start I/O low voltage test interface manufactured by ElectroCraft Inc.

This document applies to sub assembly No. 1001436 only.

We reserve the right to modify our products at any time. Information, specifications, and material data that appear within this user manual are subject to change without notice. For the latest revision of this manual please check our web site at www.electrocraft.com or contact Electrocraft.

If you require further assistance, please email, call, or fax:

ELECTROCRAFT MI, INC

(734) 662-7771

Fax #(734) 662-3707

www.electrocraft.com

Revision History

RELEASE NUMBER	DATE	DESCRIPTION	COMMENTS
1.0	05/15/09		Initial Release

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Document Control: A11099

Table of Contents

1   Product Safety Precautions

Read Section 1 before using the Quick start I/O test interface.
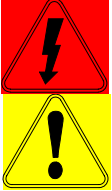
WARNING! READ THIS <u>ENTIRE</u> SECTION BEFORE ATTEMPTING TO USE THE QUICK START I/O TEST INTERFACE AND ACS/ACE SERVO DRIVE! GIVE SPECIAL ATTENTION TO ALL BOLD PRINT ITEMS.

To operate your drive successfully, these minimum safety precautions MUST be followed to insure proper performance without injury to the operator and damage to motor or control. **FAILURE TO OBSERVE THESE SAFETY PRECAUTIONS COULD RESULT IN <u>SERIOUS BODILY INJURY</u>, INCLUDING DEATH IN EXTREME CASES.**

1. Always operate the control within the prescribed voltage limits.

2. Do not parallel multiple motors off the same control.

3. Under no circumstances must a phase output from the control be connected to anything other than a passive inductive/resistive motor load. See product manual for minimum inductance requirements.

4. Excessive speed and current can destroy some DC brushless motors and possibly injure the user. Check the motor manufacturer's specifications to ensure the maximum current and voltage output for your control model does not exceed their limitations.

5. External methods are advisable to limit both the top speed and travel motion of the motor and its load. Whenever the drive is disabled for any reason, the motor is placed into a free/spinning coast mode.

6. Do not remove any connectors from the control while the motor is operating.

7. Follow precautionary guidelines in this manual with regard to proper installation of the test interface.

8. Do NOT operate the drive near of flammable or explosive materials. Do NOT use the drive in environments where it is likely to be exposed to strong and/or frequent static discharge.

9. Verify ALL wiring BEFORE applying power to the drive, test interface, and motor. Motor may RUN AWAY or oscillate uncontrollably if improperly wired.

10. Motor shaft should be uncoupled and free to rotate without coming in contact with user or any stationary object.

2 Basic Setup

2.1 ACS100, 200, and 300 Series:

Item	Description	Setting
(S1) DIP switch	Open: Allows pass through connections J1 to P1	Open
(S2) Rest/Enable	Reset Drive	Reset
(S3) Direction	Adjusts Direction of Step command input	*Up: Forward
(S4) Step Potentiometer	Adjusts speed of Step command input	Fully CCW
(S5) Run/Standby	Place drive in Run or Standby	Standby
(S6) AN1+ Potentiometer	Adjusts 0 - +5Vdc into Analog Input 1	Fully CCW
(S7) DIP switch	Open: Allows pass through connections J2 to P2	Open
(S8) AN2+ Potentiometer	Adjusts 0 - +5Vdc into Analog Input 2	Fully CCW

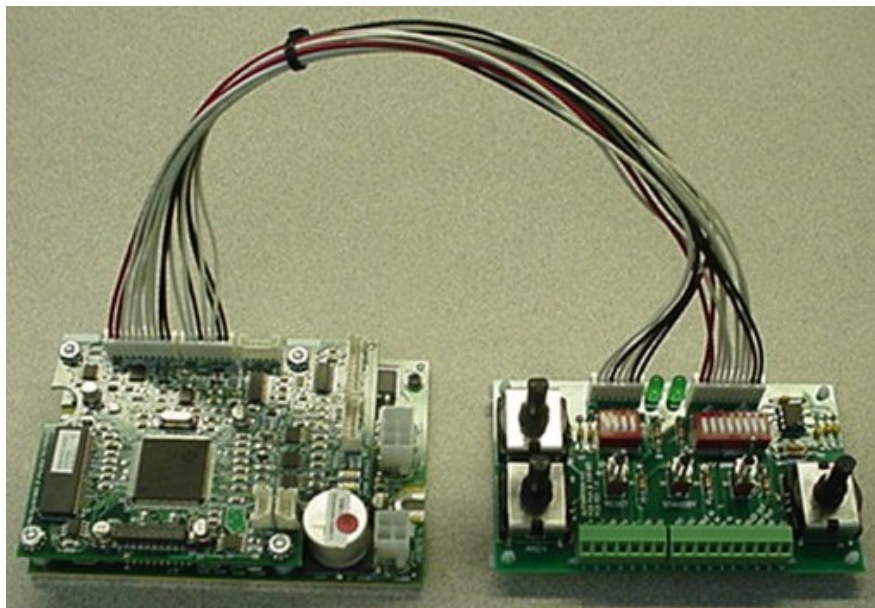*Reference the instruction "Up" as the text is viewed right side up.

Figure 1

1. Connect wire harness part number 1002119 for the ACS100, 200, or 300 as follows, *see figure 1 above*.
   a. Digital I/O: Quick Start I/O P1 to ACSxxx J1
   b. Analog I/O: Quick Start I/O P2 to ACSxxx J2.

2. Verify that all switches are set to the appropriate setting, *see table above.*

3. Note: *ACSxxx products supply their own +5VDC to the Quick Start I/O board*.

2.2   ACE500 Series:

Item	Description	Setting
(S1) DIP switch	Open: Allows pass through connections J1 to P1	Open
(S2) Rest/Enable	Reset Drive	Reset
(S3) Direction	Controls brake input "Up turns brake on"	*Down: N.C
(S4) Step Potentiometer	Adjusts speed of Step command input	Fully CCW
(S5) Run/Standby	Place drive in Run or Standby	Standby
(S6) AN1+ Potentiometer	Adjusts 0 - +5Vdc into Analog Input 1	Fully CCW
(S7) DIP switch	Open: Allows pass through connections J2 to P2	Open
(S8) AN2+ Potentiometer	Adjusts 0 - +5Vdc into Analog Input 2	Fully CCW

*Reference the instruction "Down" as the text is viewed right side up.
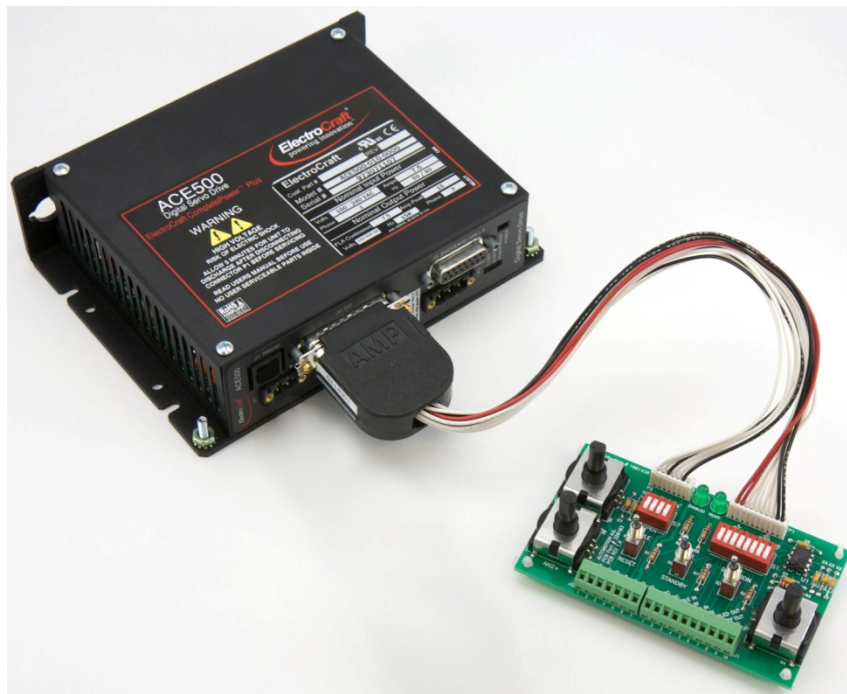

Figure 2

1. Connect wire harness part number 1002170 for the ACE500, *see figure 2 above.*

2. Verify that all switches are set to the appropriate setting, *see table above.*

3. Apply DC voltage to the Quick Start I/O interface:
    a. J1 pin 1/2:   +5VDC.
    b. J1 pin 9/10:   Common return

2.3   ACE1000 Series:

Item	Description	Setting
(S1) DIP switch	Open: Allows pass through connections J1 to P1	Open
(S2) Rest/Enable	Reset Drive	Reset
(S3) Direction	Controls brake input "Up turns brake on"	*Down: N/C
(S4) Step Potentiometer	Adjusts speed of Step command input	Fully CCW
(S5) Run/Standby	Place drive in Run or Standby	Standby
(S6) AN1+ Potentiometer	Adjusts 0 - +5Vdc into Analog Input 1	Fully CCW
(S7) DIP switch	Open: Allows pass through connections J2 to P2	Open
(S8) AN2+ Potentiometer	Adjusts 0 - +5Vdc into Analog Input 2	Fully CCW

*Reference the instruction "Down" as the text is viewed right side up.
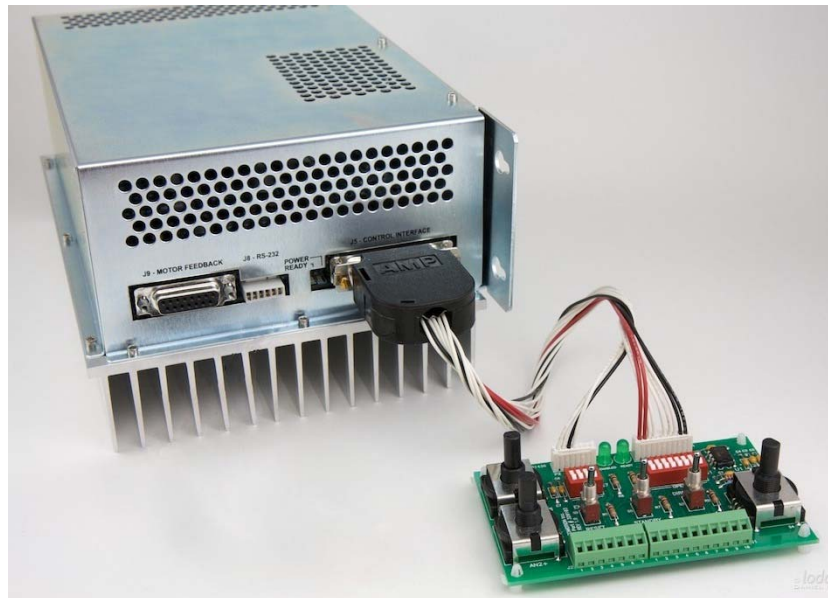

Figure 3

1. Connect wire harness part number p/n: 1002117 for the ACE1xxx, *see figure 3 above.*

2. Verify that all switches are set to the appropriate setting, *see table above.*

3. Apply DC voltage to the Quick Start I/O interface:
    a. J1 pin 1/2:   +5VDC.
    b. J1 pin 9/10:   Common return
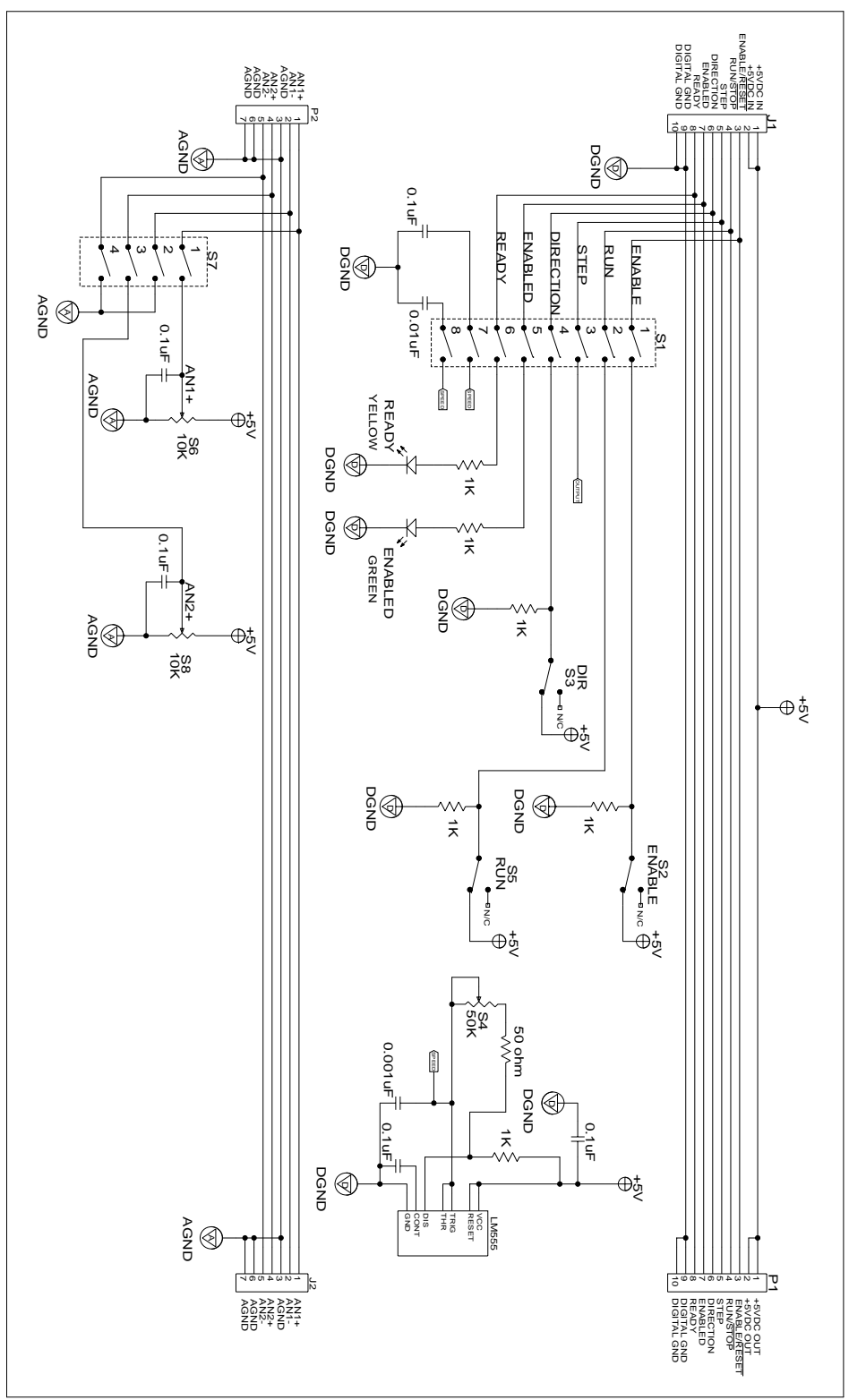
Quick Start I/O Users Guide
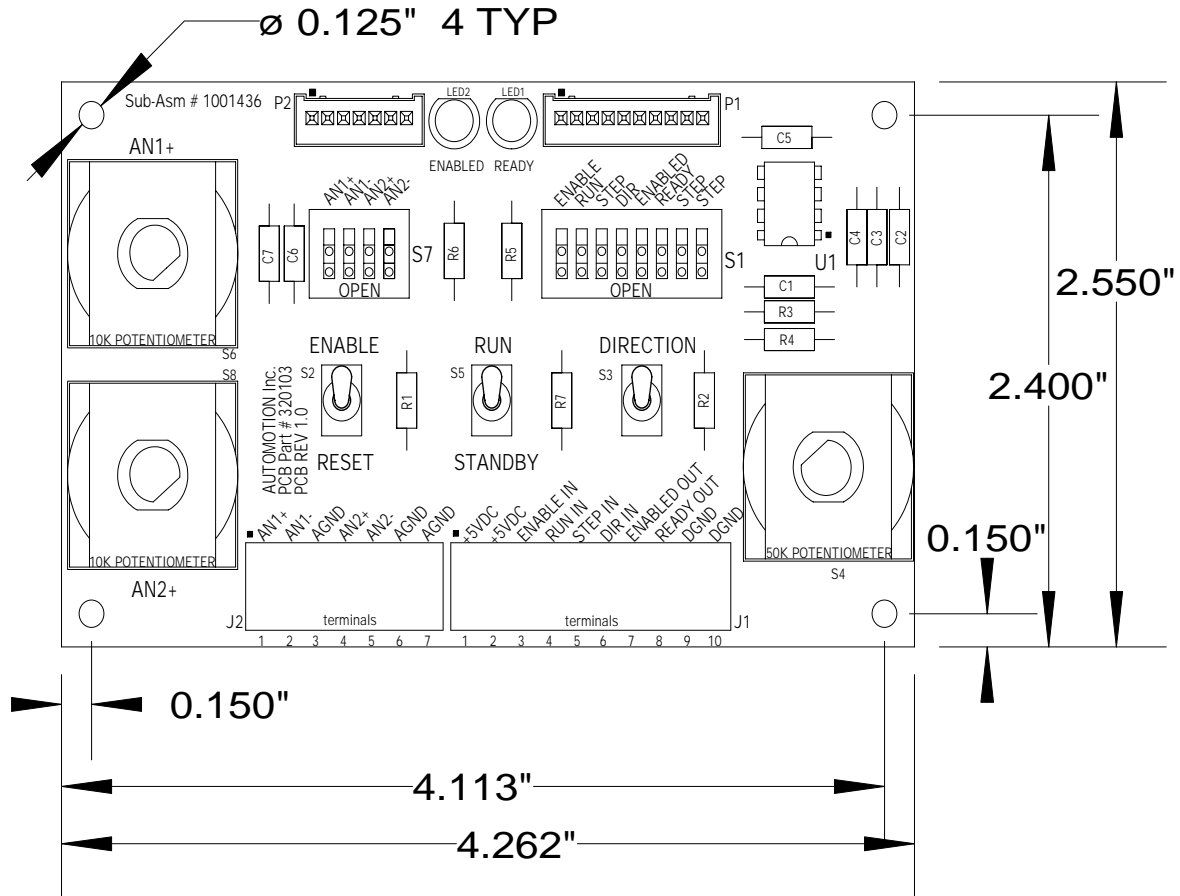
3   Schematic

Figure 2

4   Dimensions

Figure 3