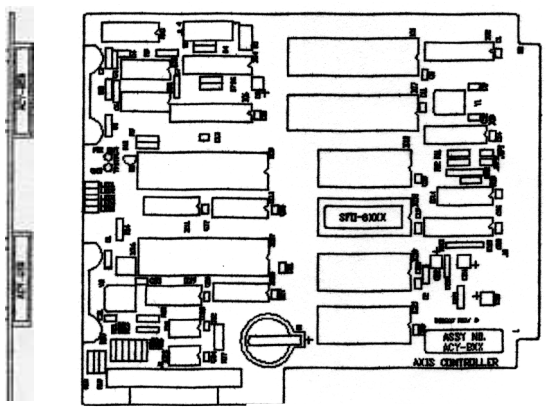
IB-11B009

MOTION CONTROL SYSTEM, MSC-850 OCTOBER 1990



ACY-850

ABSOLUTE

ENCODER

AXIS

CONTROLLER

INSTRUCTION BOOK

INDUSTRIAL INDEXING SYSTEMS, Inc.

1.0 INTRODUCTION

1.1 About This Instruction Book

This document is part in a series of books that support Industrial Indexing Systems MSC-850 Motion Control System. It provides product information about the ACY-850 Absolute Encoder Axis Controller. This is not a complete document. The ACY-850 Absolute Encoder Axis Controller is a modified version of the ACE-850 Encoder Axis Controller. Instruction Book IB-11B003 contains accurate information about both controllers. Information regarding the ACY-850 in this Instruction Book supersedes and supplements information in IB-11B003.

2.0 Product Overview

The ACY-850 Absolute Encoder Axis Controller shares position feedback information with the drive amplifier. The encoder is an absolute type which requires battery backup power. This power is supplied by the ACY-850 Absolute Encoder Axis Controller via a lithium battery cell. The absolute encoder is polled for absolute position information by the ACY-850 Absolute Encoder Axis Controller upon system intialization which eliminates the need for home finding routines.

2.1 Absolute Encoder

The absolute encoder is a separate component which must supply 1024 pulses per revolution. A query signal is driven by the ACY-850 Absolute Encoder Axis Controller upon executing a drive_on macroprogram command. The absolute encoder then responds by sending serial communications data down one encoder channel (J3 pins 12 and 15). Incremental data is then transferred upon completion of serial data transfer. The serial data represents integer turns position while the incremental data represents fractional turns data. More information can be found in the absolute encoder reference book supplied by its manufacturer.

The macroprogram code issues the drive_on command and must wait 2 seconds for this sequence to be completed.

The ACY-850 Absolute Encoder Axis Controller will assume a following error condition if problems were encountered querying absolute position data information. One or two retries may be appropriate.

2.2 Status and Fault Indicators

As mentioned a fault in querying the absolute data from the absolute encoder will cause the ACY-850 Absolute Encoder Axis Controller to assume a following error condition which illuminates the 'Error" LED.

3.0 SPECIFICATIONS

Feedback Device	
Line Count	1024 Pulses Per Rev.
Baud Rate	9600
Start Bits	1
Stop Bits	1
Parity	Even
Data Format	7 Bit ASCII
Battery Backup Supply	
DC Voltage	3
Battery Life	5 Years

4.0 PREVENTATIVE MAINTENANCE

The lithium battery cell should be replaced every 5 years.

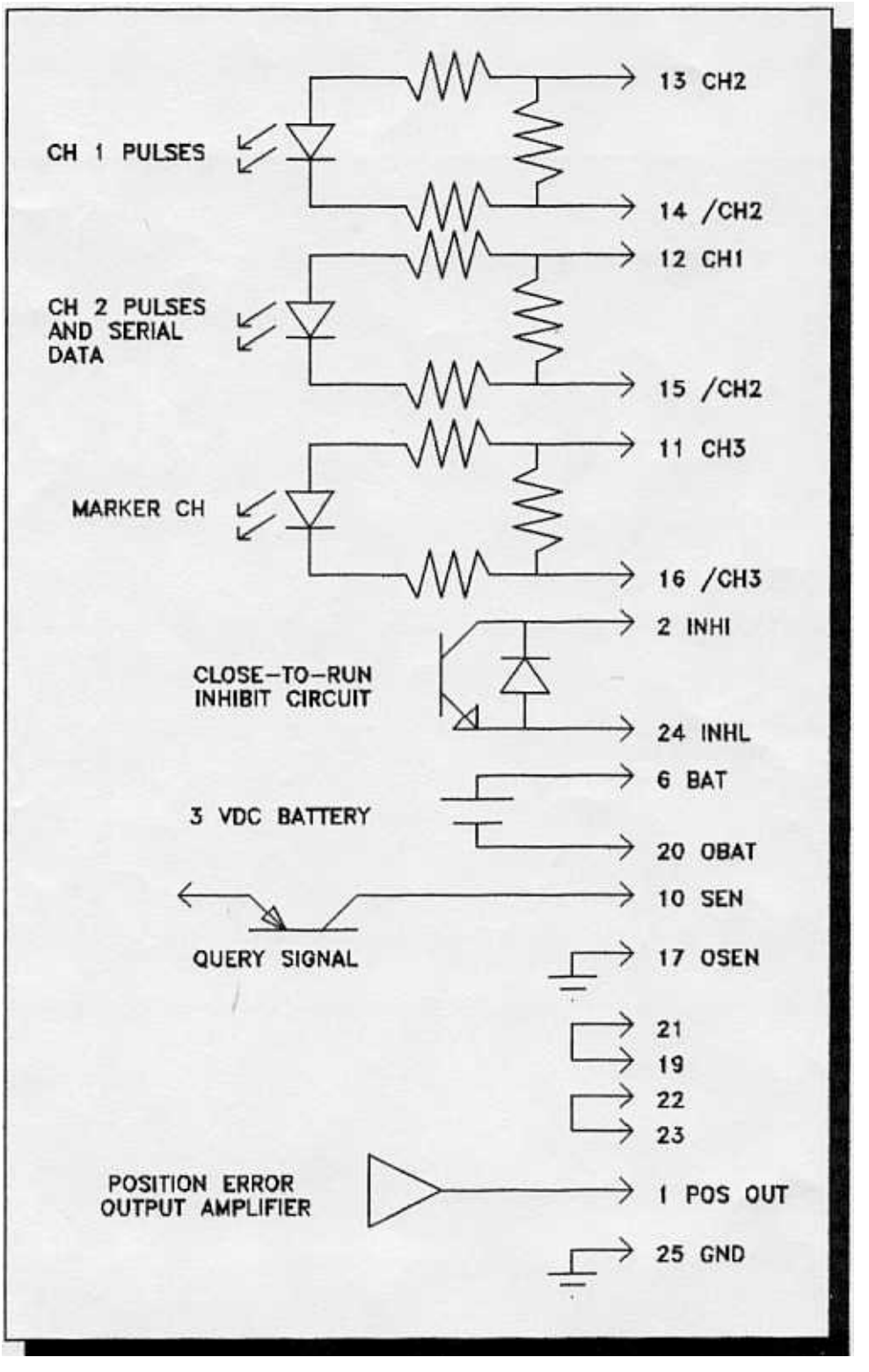


Figure 1; ACY-850 Controller, Electrical Connections

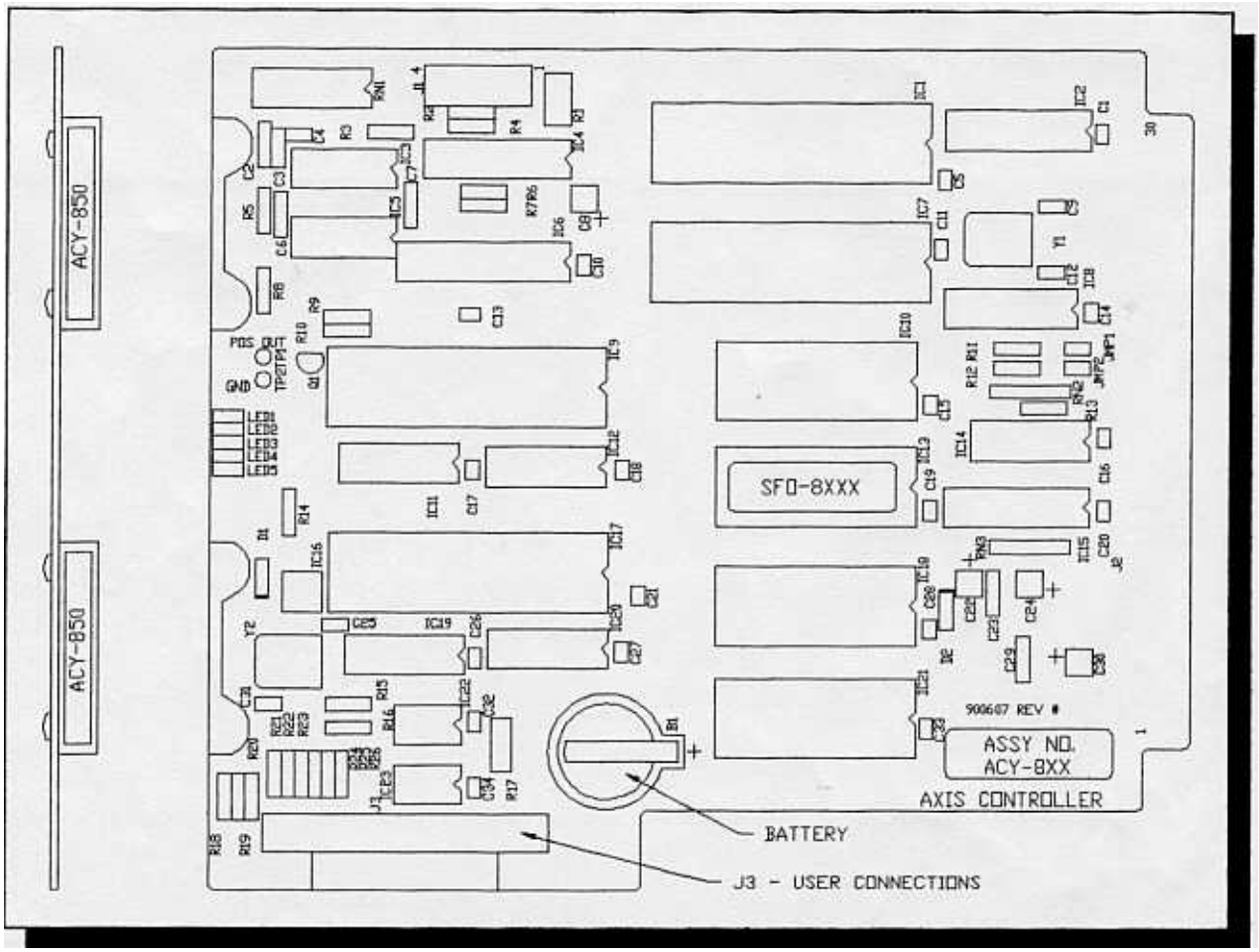


Figure 2; ACY-850 ABSOLUTE ENCODER AXIS CONTROLLER CARD

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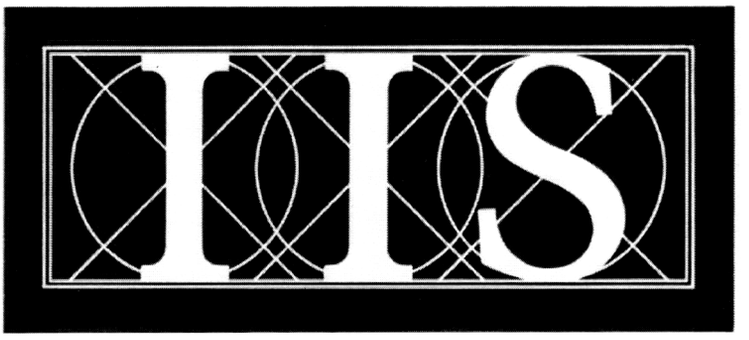

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