

ALP-130 and ALP-430 Auxiliary Logic Power Supply Installation Manual



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Customer Service

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When you call, please be at your computer, have your documentation in hand, and be prepared to provide the following information:

- Product version number, found by choosing About from the **Help** menu.
- The type of controller or product you are using.
- Exact wording of any messages that appear on your screen.
- What you were doing when the problem occurred.
- How you tried to solve the problem.

Need on-site help? EMERSON Motion Control provides service, in most cases, the next day. Just call EMERSON's technical service center when on-site service or maintenance is required.

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Document Conventions

Manual conventions have been established to help you learn to use this manual quickly and easily. As much as possible, these conventions correspond to those found in other Microsoft Windows documentation.

Menu names and options are printed in bold type: the **File** menu.

Dialog box names begin with uppercase letters: the Axis Limits dialog box.

Dialog box field names are in quotes: "Field Name".

Button names are in italic: *OK* button.

Source code is printed in Courier font: Case ERMS.

In addition, you will find the following typographic conventions throughout this manual.

This	Represents
bold	Characters that you must type exactly as they appear. For example, if you are directed to type a:setup , you should type all the bold characters exactly as they are printed.
italic	Place holders for information you must provide. For example, if you are directed to type <i>filename</i> , you should type the actual name for a file instead of the word shown in italic type.
ALL CAPITALS	Directory names, file names, key names, and acronyms.
SMALL CAPS	Non-printable ASCII control characters.
KEY1+KEY2 example: (Alt+F)	A plus sign (+) between key names means to press and hold down the first key while you press the second key.
KEY1,KEY2 example: (Alt,F)	A comma (,) between key names means to press and release the keys one after the other.

Safety Instructions

General Warning

Failure to follow safe installation guidelines can cause death or serious injury. The voltages used in the product can cause severe electric shock and/or burns, and could be lethal. Extreme care is necessary at all times when working with or adjacent to it. The installation must comply with all relevant safety legislation in the country of use.

Qualified Person

For the purpose of this manual and product, a “qualified person” is one who is familiar with the installation, construction and operation of the equipment and the hazards

involved. In addition, this individual has the following qualifications:

- Is trained and authorized to energize, de-energize, clear, ground and tag circuits and equipment in accordance with established safety practices.
- Is trained in the proper care and use of protective equipment in accordance with established safety practices.
- Is trained in rendering first aid.



Warning

For the purpose of this manual and product, “Warning” indicates death, severe personal injury or substantial damage CAN result if proper precautions are not taken.



Caution

For the purpose of this manual and product, “Caution” indicates minor personal injury or property damage CAN result if proper precautions are not taken.



Note

For the purpose of this manual and product, “Note” indicates information about the product or the respective part of the manual which is essential to highlight.



Epsilon Only

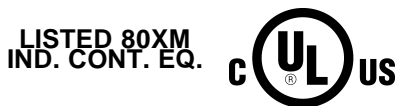
For the purpose of this manual and product, the “Epsilon” symbol indicates information about the Epsilon drive specifically.

***E_N* E Series Only**

For the purpose of this manual and product, the “*E_N*” symbol indicates information about the E Series drive specifically.

Throughout this manual, the word "drive" refers to an Epsilon or E Series drive.

Underwriters Laboratories Listed



The ALP-130/-430 are marked with the “UL Listed” label after passing a rigorous set of design and testing criteria developed by UL (UL508C). This label indicates that the UL certifies this product to be safe when installed according to the installation guidelines and used within the product specifications.

The “conditions of acceptability” required by UL are:

- The ALP-130 ambient temperature must be 40° C (104° F) or less.
- The ALP-430 ambient temperature must be 50° C (122° F) or less.

CE Declaration of Conformity



The ALP-130/-430 (Auxiliary Logic Supply) is marked with the “Conformite Europeenne Mark” (CE mark) after passing a rigorous set of design and testing criteria. This label indicates that this product meets safety standards when installed according to the installation guidelines and used within the product specifications.

Declaration of Conformity

Manufacturer's Name: EMERSON Motion Control

Manufacturer's Address: 1365 Park Road
Chanhassen, MN 55317
USA

Declares that the following products:

Products Description: Drive Accessories

Model Number: RSR-2 and ALP-430

Conforms to the following product specification:

The products herewith comply with the requirements of the Low Voltage Directive (LVD) 73/23/EEC. These products are considered components and as such, the EMC Directive (89/336/EEC) does not apply.

Supplementary information:

This electronic drive product is intended to be used with an appropriate motor, electrical protection components and other equipment to form a complete end product or system. It must only be installed by a professional assembler who is familiar with requirements for safety and electromagnetic compatibility ("EMC"). The assembler is responsible for ensuring that the end product or system complies with all the relevant laws in the country where it is to be used. Refer to the product manual for installation guidelines.



August 18, 1999

Bradley Schwartz/ VP Engineering

Date

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Declaration of Conformity

Manufacturer's Name: EMERSON Motion Control

Manufacturer's Address: 1365 Park Road
Chanhassen, MN 55317
USA

Declares that the following products:

Products Description: E Series Digital Servo Drive

Model Number: EN-204, EN-208 and EN-214

System Options: This declaration covers the above products with the ALP-130 Backup Logic Power Supply and EC1-44 Screw Terminal Interface.

Conforms to the following product specification:

Electromagnetic Compatibility (EMC):

EN 55011/1991 Class A Group 1, CISPR 11/1990 Class A Group 1

EN 50082-2/1995: IEC 1000-4-2/1995; EN 61000-4-2, 4kV CD
IEC 1000-4-3/1995; EN 61000-4-3, ENV 50140/1993, 80% AM, 10V/m @ 3 m
IEC 1000-4-4/1995; EN 61000-4-4, 2 kV ALL LINES
IEC 1000-4-8/1993; EN 61000-4-8, 30 A/m
ENV 50141/1993, 80% AM, 10V, 15-60 MHz
ENV 50204/1995, Pulse, 900 MHz, 50% DTY, 200 Hz

Supplementary information:

The products herewith comply with the requirements of the Low Voltage Directive (LVD) 73/23/EEC and EMC Directive 89/336/EEC

This electronic drive product is intended to be used with an appropriate motor, electrical protection components and other equipment to form a complete end product or system. It must only be installed by a professional assembler who is familiar with requirements for safety and electromagnetic compatibility ("EMC"). The assembler is responsible for ensuring that the end product or system complies with all the relevant laws in the country where it is to be used. Refer to the product manual for installation guidelines.



December 2, 1997

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Date

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Introduction

Auxiliary Power Supply



Note

ALP's are intended for use with E Series drives only.

ALP-130

The ALP-130 supplies enough logic power for one E Series drive with any function module (FM). It comes with the hardware necessary for mounting to most DIN rail mounting tracks and includes the screw terminal plug connectors to mate with the auxiliary supply receptacle on the drive and the drive end connector kit and includes a ALPC-xxx cable to mate with the receptacle on the drive.



Note

The ALP-130 is considered a Class 2 device. As such, there is not a connection for PE on the ALP-130. Protect Class 2 refers to any equipment in which protection against electrical shock does not rely on basic insulation only, but in which additional safety precautions such as double insulation or reinforced insulation are provided, there being no provision for protective earthing or reliance upon installation provisions according to EN 50178.

ALP-430

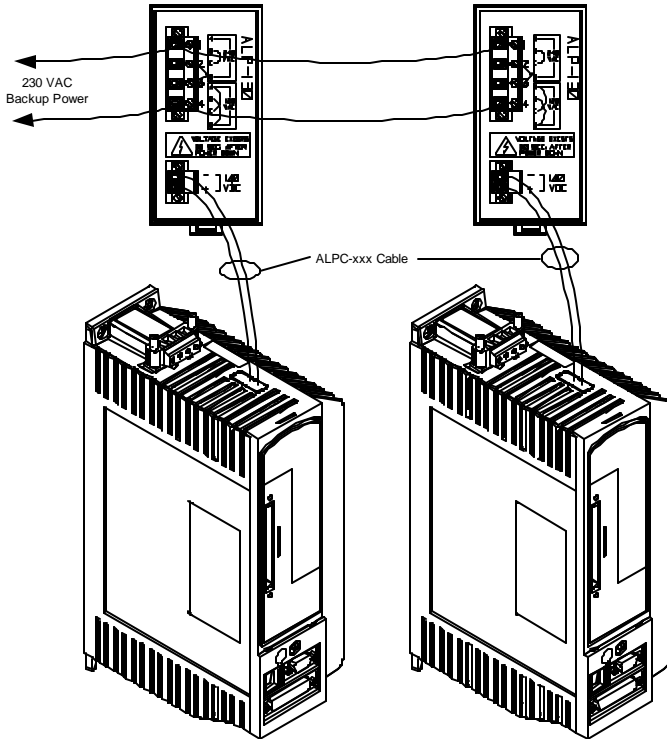
The ALP-430 has four isolated power supply outputs to provide enough logic power for up to four E Series drives with function modules. It comes with the hardware necessary for mounting

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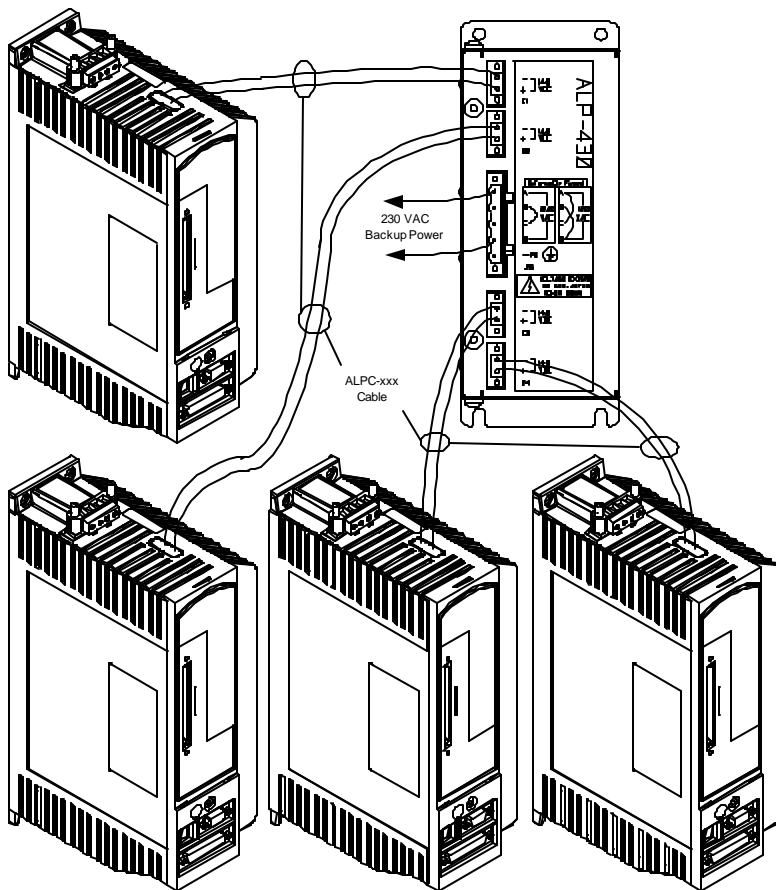
to most mounting tracks or enclosures and includes the screw terminal plug connectors to mate with the auxiliary supply receptacle on the drives and the drive end connector kit and includes four (4) ALPC-xxx cables to mate with the receptacle on the drive.

Installation

ALP-130 Wiring Example



ALP-430 Wiring Example



Installation Procedure

Follow the wiring diagrams below for the ALP-130/-430 installation and fusing.

Use #16 to 18 AWG, 600V, insulated, stranded wire for AC in and DC out wiring.

The ALP-130 and ALP-430 package includes the cable assembly that mates with the 2-position header(s) on your drive(s).

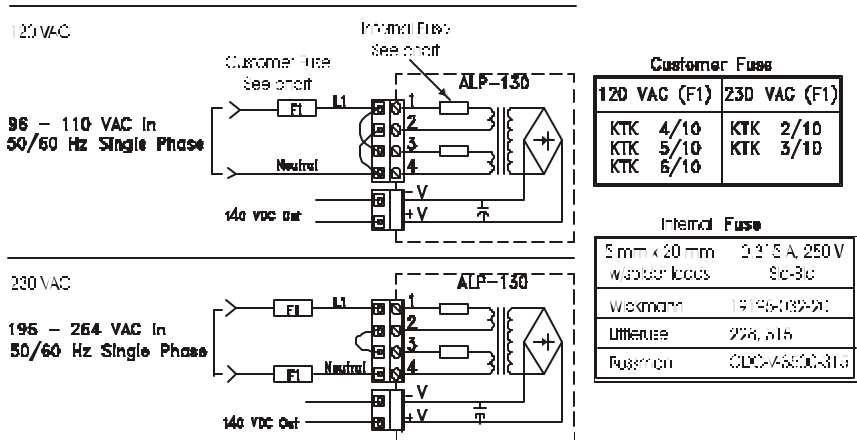


Figure 1: ALP-130 Connections and Internal Wiring Diagram

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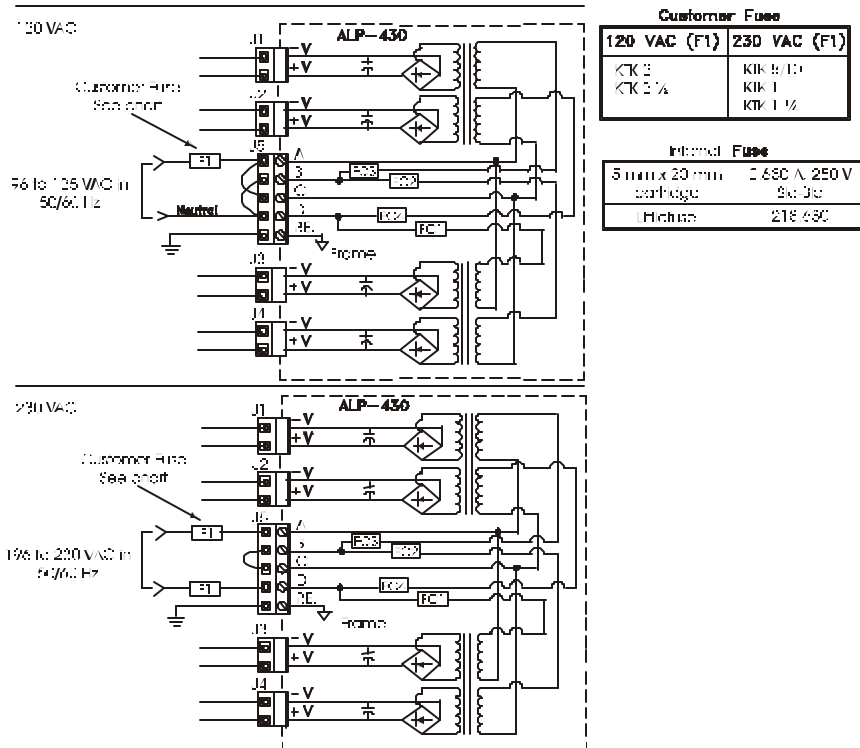


Figure 2: ALP-430 Connections and Internal Wiring Diagram

ALPC-xxx Cable Installation Instructions

The ALPC-xxx cable is designed to connect an auxiliary logic power supply such as the ALP-130/430 to the E Series drive. It includes a 2-position plug that mates with the 2-position header (J3) on your E Series drive and flying leads that connect to the auxiliary logic power supply.



Note

This manufactured cable must be used in order to maintain the UL Listing on the drives and on the ALP-130/430 power supplies.



Note

Refer to the “ALP-130 and ALP-430 Auxiliary Power Supply Installation Manual” (P/N 400514-01) for power supply installation instructions.

1. Break out the plastic knock-out tab in the J3 location on the top of the drive.
2. Plug the connector end of the ALPC-xxx cable into the two position receptacle in the J3 location.
3. route the cable to the power supply (i.e., ALP-130/430), cut it to length, and connect the wires as shown below.

Red wire goes to +V
Black wire goes to -V

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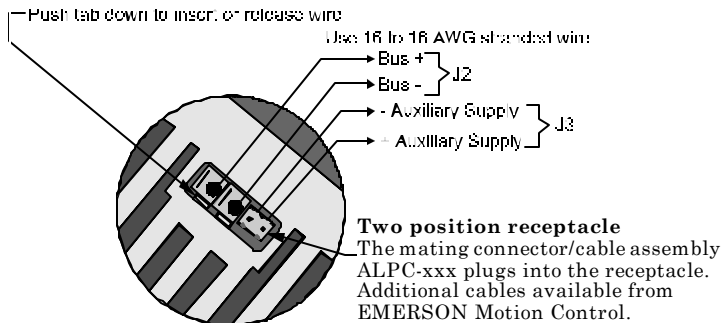


Figure 1: Signal Description with the New Style Two Position Receptacle in the J3 Location

All drives serial numbers 9747 and lower and some drive serial number 9748 or higher, use a spring terminal for J3 rather than a header. These drives will not use the ALPC-xxx cable. See drawing below for connection descriptions for this type of drive.

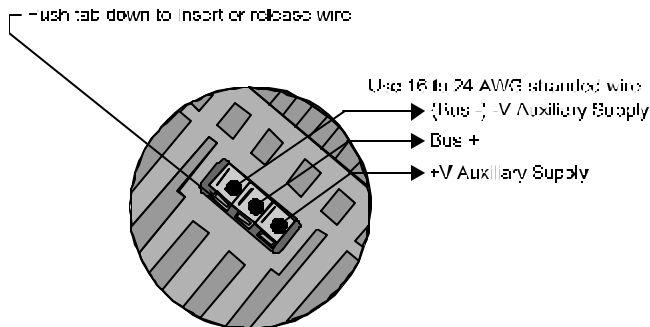


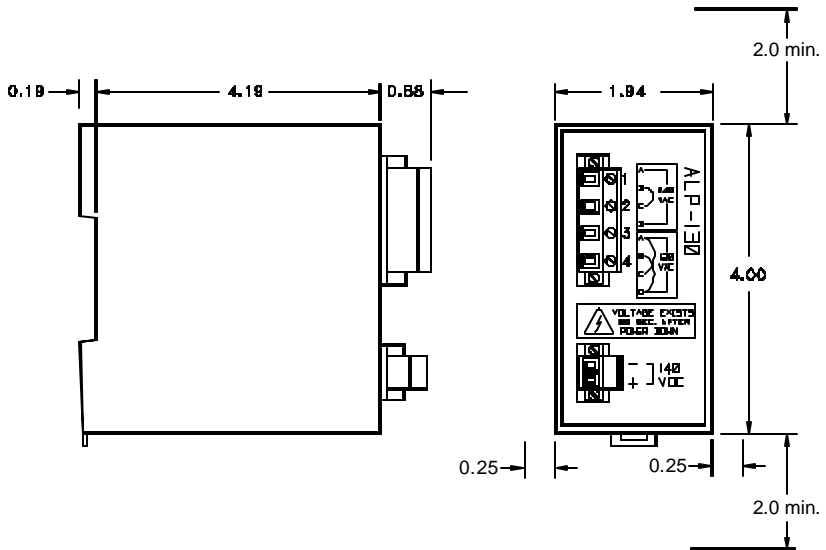
Figure 2: Signal Description with the Original Design Spring Terminal in the J3 Location

Specifications

Power Supply Specifications

Model	Input	Output	IP	Rated Ambient Temperature	Weight
ALP-130	115/230 VAC 40 Watts	140 VDC 30 Watts	20	50° C (122° F)	1.6 lbs (.07 kg)
ALP-430	115/230 VAC 130 Watts	140 VDC (4) x 20 Watts	20	50° C (122° F)	7.7 lbs (3.5 kg)

ALP-130 Dimensions



ALP-430 Dimensions

