

## Compliance

UL Recognized Component, 508c



Product Type . . . . . Aries AR-04CE, AR-08CE, and AR-13CE

The above equipment conforms with the protection requirements of Council Directive 89/336/EEC (EMC Directive) as amended by Directive 92/31/EEC on the approximation of the laws of the Member States relating to Electromagnetic Compatibility when installed, operated, and maintained as intended. Also, the above equipment conforms with the requirements of Council Directive 73/23/EEC (Low Voltage Directive) as amended by 92/59/EEC, and CE Marking Directive 93/68/EEC, provided the installation requirements described in the *Aries-ACR Drive/Controller Hardware Installation Guide* are met, when installed, operated, and maintained as intended.

In accordance with IEC 61800-3:1997 (adjustable-speed electrical power drive systems) this product is of the restricted sales distribution class which meets the needs of an industrial environment when installed as directed. However, further measures may need to be taken for use of the product in a domestic environment.

The installation requirements are detailed in the Information supplied with the equipment. The equipment is sold only to competent system builders.



## Safety Warning!



High-performance motion control equipment is capable of producing rapid movement and very high forces. Unexpected motion may occur especially during the development of controller programs. **KEEP WELL CLEAR** of any machinery driven by servo motors. Never touch any part of the equipment while it is in operation.

This product is sold as a motion control component to be installed in a complete system using good engineering practice. Care must be taken to ensure that the product is installed and used in a safe manner according to local safety laws and regulations. In particular, the product must be positioned so that no part is accessible while power may be applied.

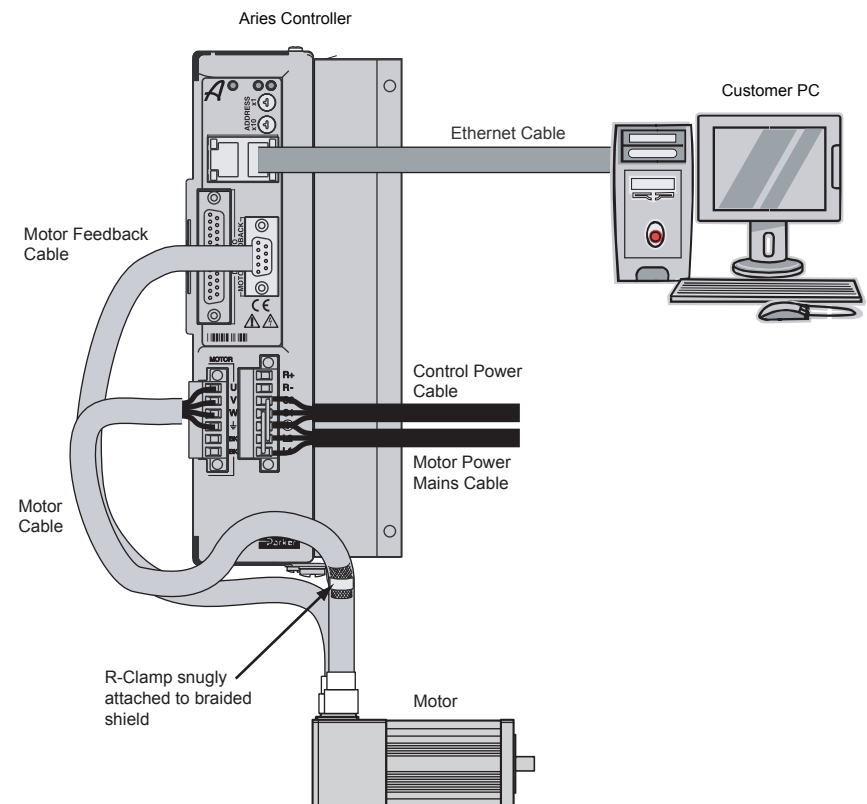
This and other information from Parker Hannifin Corporation, its subsidiaries, and authorized distributors provides product or system options for further investigation by users having technical expertise. Before you select or use any product or system, it is important that you analyze all aspects of your application and review the information concerning the product in the current product catalog. The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, safety, and warning requirements of the application are met.

If the equipment is used in any manner that does not conform to the instructions given in this user guide, then the protection provided by the equipment may be impaired.

# Aries Controller

## Quick Reference Guide

Aries AR-04CE, AR-08CE, and AR-13CE Servo Drive/Controllers



Electromechanical Division  
Parker Hannifin Corporation  
p/n 88-028905-01A  
Effective: October 2007

<http://www.parkermotion.com>



## I/O Connector

Signal	Pin
Input 0+	1
Input 0-	14
Input 1+	2
Input 1-	15
Input 2+	3
Input 2-	16
High-Speed Input 4+	4
High-Speed Input 4-	17
High-Speed Input 5+ (or Aux Enc A+)	5
High-Speed Input 5- (or Aux Enc A-)	18
High-Speed Input 6+ (or Aux Enc B+)	6
High-Speed Input 6- (or Aux Enc B-)	19
Input 3+	7
Input 3-	20
Reserved (future 5V)	8
Reserved (future GND)	21
Output 32+	9
Output 32-	22
Output 33+	10
Output 33-	23
Output 34+	11
Output 34-	24
Output 35+	12
Output 35-	25
Not used	13

NOTE: Box surrounding pins indicates a requirement for twisted-pair wiring.

## Motor Feedback Connector

Signal	Pin
ENC Z+/DATA+	1
ENC Z-/DATA-	2
DGND	3
+5 VDC (250mA max)	4
+5 VDC (250mA max)	5
DGND	6
ENC A-/SIN-	7
ENC A+/SIN+	8
Hall 1/SCLK+ *	9
Thermal+	10
Thermal-	15
ENC B-/COS-	11
ENC B+/COS+	12
Hall 2/SCLK- *	13
Hall 3	14

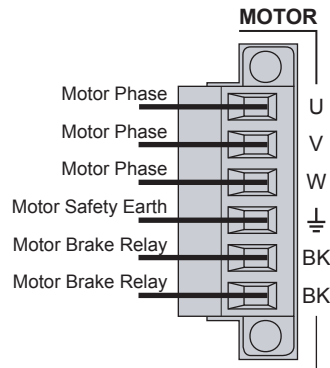
\*When using the SinCos protocol, pins 9 and 13 require twisted pair wiring.

## Ethernet Connector

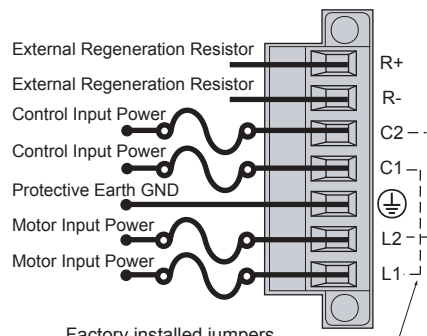
Signal	Pin
RX+	1
RX-	2
TX+	3
Not used	4
Not used	5
TX-	6
Not used	7
Not used	8

Ethernet Cable: Use braid over foil twisted-pair wiring (straight or crossover).

## Output Power Connector



## Mains Power Connector



Factory installed jumpers

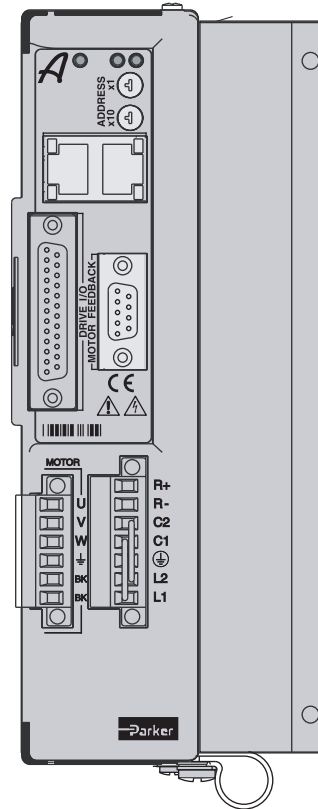
- C1 to L1
- C2 to L2

Remove jumpers to use separate control and motor mains AC power input.

## Fuse Information

Aries Controller has no internal fuses. For safety, you must provide a fuse in each of the AC input lines. See the installation guide for detailed fuse information.

# Aries Controller



## Power Supply

120/240 VAC, 50-60Hz, single phase

## Warning!

- You must connect the unit's protective conductor terminal, marked with the earth symbol  $\oplus$ , to a reliable system Protective Earth.
- The unit's connector strip terminals are at hazardous voltages when power is applied to the Aries Controller, and up to several minutes after power is removed. Lower voltages may still be present for several minutes after power is removed.
- During normal operation, these high voltage terminals must not be accessible to the user.

## Ethernet Status LEDs

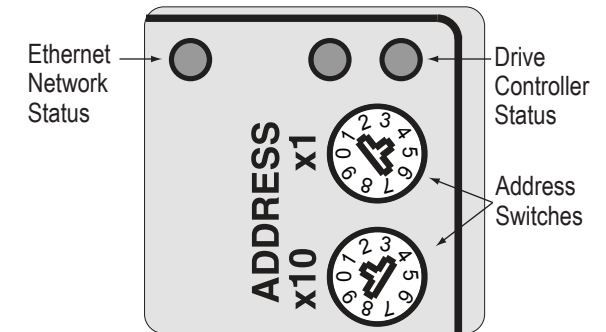
LED	State	What it means
Ethernet Link/Activity	Off	No Ethernet link detected
	Yellow	Ethernet link established; no activity
Ethernet Speed	Yellow, flashing	Ethernet link established and active
	Off	Ethernet 10Mbps
	Green	Ethernet 100Mbps

## Ethernet Network Status LED

LED State	What it means
Off	Reset or not active
Green	TCP connection on Port 5002 or 5006
Red	UDP connection on Port 5003
Red/Green	Alternating; UDP & TCP connection active

## IP Address Switches

The unit's IP address is 192.168.100.xx, with the last octet xx set with the rotary decimal switches. For example: to set to 14, rotate x10 switch to 1 and x1 switch to 4. Valid range is 01 to 99; 00 is not valid. (Set the IP address of your PC to 192.168.100.yyy, where yyy  $\neq$  xx.)



See the Aries Controller Hardware Installation Guide, Chapter 4, for more information on how to set IP addresses for the Aries Controller and PC.

## Drive Controller Status LEDs

LED State—Left	Right	What it means
<b>Drive Enabled</b>		
Off	Green	Enabled
Yellow (flashes in Regen)	Green	Regeneration active
Yellow/Green (alternating)	Green	Autorun mode
<b>Drive Disabled</b>		
Off	Red	No faults, or Ethernet boot (8 sec)
Yellow	Off	Motor control boot (4 sec)
Yellow	Red	No bridge power
Yellow & 1 Green flash	Red	Bridge fault
Yellow & 2 Green flashes	Red	Feedback fault
Yellow & 3 Green flashes	Red	Thermal fault
Yellow & 4 Green flashes	Red	Other fault

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