

Overview

The ACM1004 provides MODBUS® networking capabilities for up to four GE ECM Motors.

They are fully compatible with AirCare’s plug-and-go MODBUS® system. Each motor is independently controllable from an AirCare Console or other MODBUS® controller.

EMC from General Electric is a high efficiency brushless DC motor which is popular in high-performance air-moving applications.



Specifications

- Controls multiple GE ECM motors
 - ACM1002 up to 2 motors
 - ACM1004 up to 4 motors
- Simple connections
 - 4 pin MTA for each monitor
 - RJ45 for network
- LED diagnostics
 - Board Status
 - Network Traffic
 - Motor Status (4)
- MODBUS® RTU Protocol
- RS485 9600, 8 n, 1
- Open-frame PCB with standoffs
- 0-50°C operating temperature
- 4.28" x 2.65" x 1.0"
- Powered from Bus or with local AC/DC supply

Product Description

The ACM 1002/4 is powered from the MODBUS network (**requires AirCare Network power supply ACM 1005, ACM 1008, or similar**). ACM1002/4 supports MODBUS® RTU protocol over RS485. The baud rate is fixed at 9600, 8, n, 1.

The ACM1002/4 assigns one MODBUS address (ID) for each controlled motor. ACM1002 supports up to two motors, and the ACM1004 supports up to four.

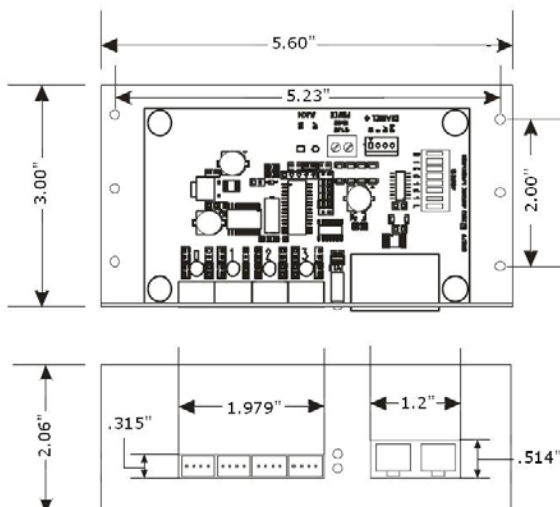
Two RJ45 jacks provide IN/Out connections for network cables. Thus, like the AirCare VariPhase™, the ACM1002/4 can be daisy chained to the AirCare Console.

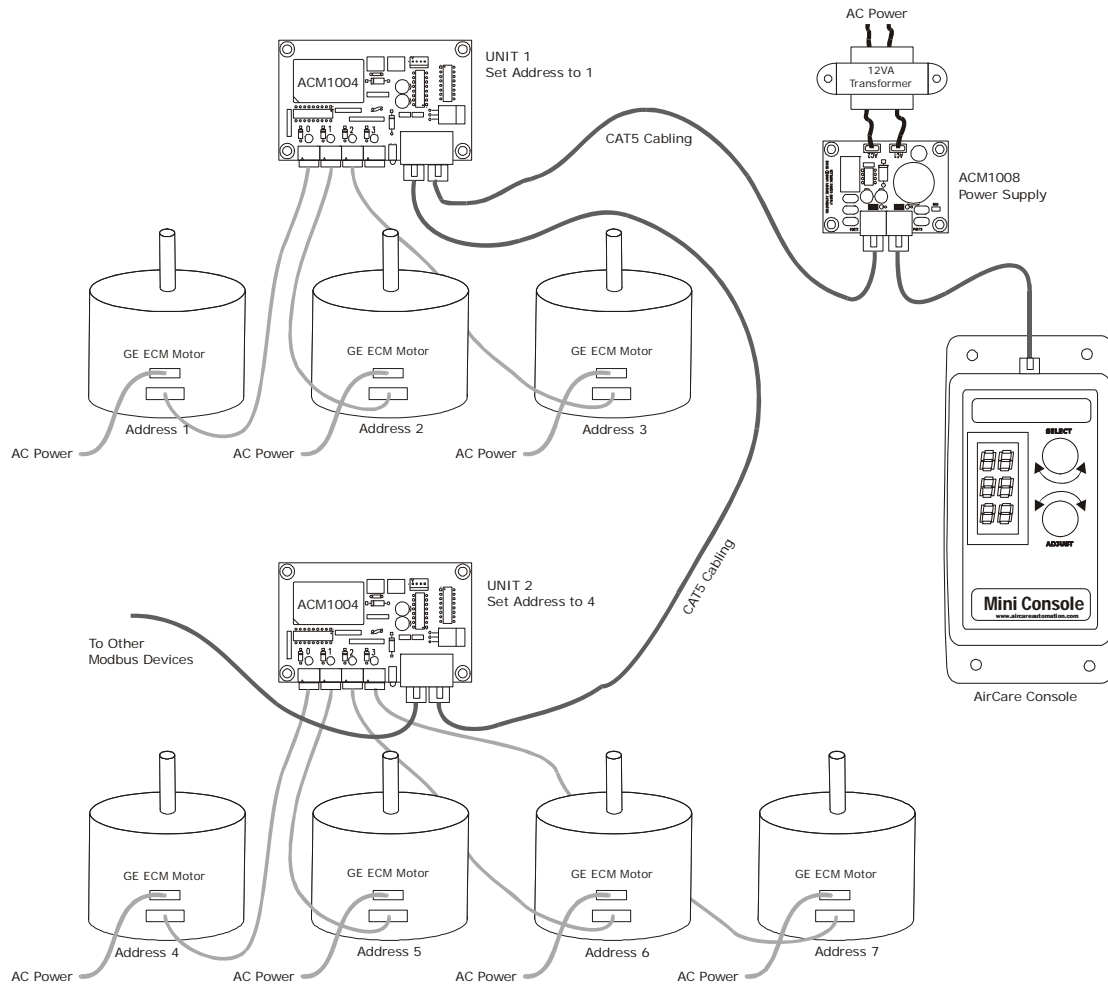
When power is applied the ACM1002/4 checks for valid motor control connections. The ACM1002/4 occupies one MODBUS® address for each motor it detects.

The MODBUS® address of the first motor (connected to channel 0) is set using the binary coded address DIP switch. If four motors are connected, the ACM1004 will occupy the base address and the next three consecutive addresses.

The ACM1002/4 supplies two control signals to each ECM and also accepts a speed feedback signal. Current motor speed can be read from MODBUS® Register 6.

Mechanical Drawing





ACM 1002/4 to ECM Control Wiring

Signal Name	Function	ECM Name	ECM Pin and Color
SPD	PWM speed signal to motor	PWM	9 Red
EN	Enable signal to motor	G	16 Black
OV	Common Ground	C2 OUT	3,8 Green
IN	Feedback signal from motor	OUT+	15 White

10 ACM 1004 or 16 ACM 1002 can be powered by each ACM 1005 or ACM 1008

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Mating connector for AMC 1002/4:
AMP MTA 640442-4

Mating connector for GE-ECM:
Housing- AMP 1-480763-1
Contact- AMP 350537-1

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ECM™ is a trademark of General Electric Inc.

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