

## Overview

The ACM1004 provides MODBUS® networking capabilities for up to four Regal Beloit (GE) ECM Motors.

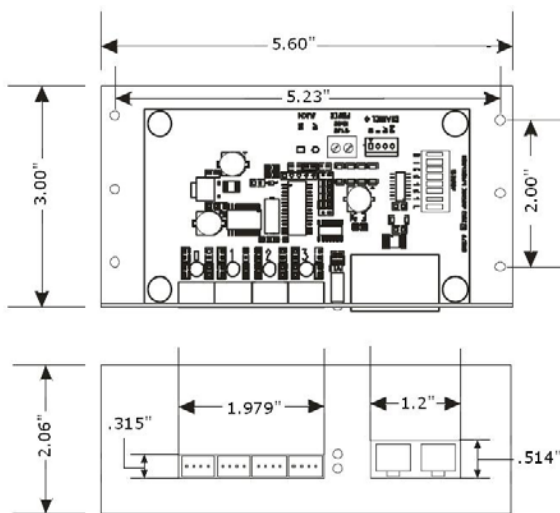
They are fully compatible with AirCare’s plug-and-play MODBUS® system. Each motor is independently controllable from an AirCare Console™ or other MODBUS® controller.

ECM from Regal Beloit (GE) is a high efficiency brushless DC motor which is popular in high-performance air-moving applications.

## Specifications

- Controls multiple GE ECM 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

## Mechanical Drawing



## Product Description

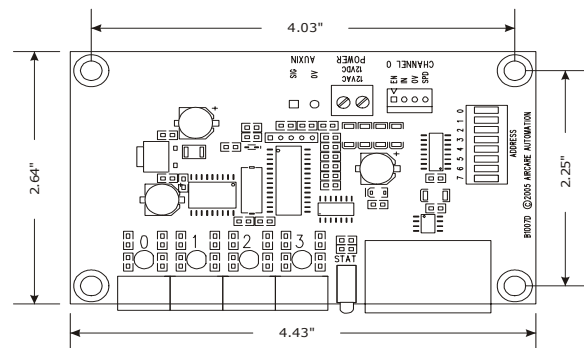
The ACM 1004 is powered from the MODBUS network (**requires AirCare Network power supply ACM 1005, ACM 1008, or bus power through the RJ45 connection**). ACM1004 supports MODBUS® RTU protocol over RS485. The baud rate is fixed at 9600, 8, n, 1.

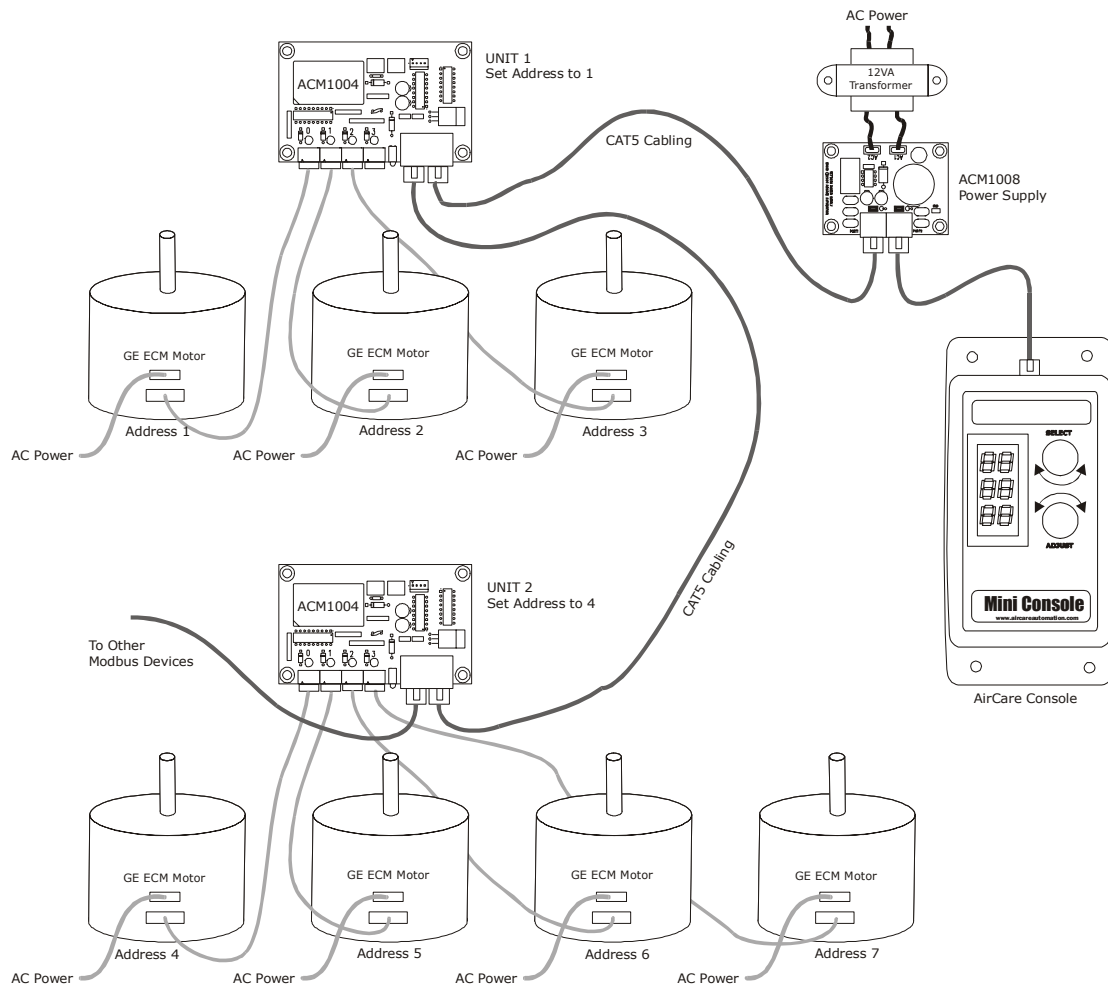
The ACM1004 assigns one MODBUS address (ID) for each controlled motor. ACM1004 supports up to four motors (addresses).

Two RJ45 jacks provide IN/Out connections for network cables. Thus, like the AirCare VariPhase™, the ACM1004 can be daisy chained to the AirCare Console.

When power is applied, the ACM1004 checks for valid motor control connections. The ACM1004 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 ACM1004 supplies the required PWM control signals to each ECM and captures the rpm (speed) feedback signal supplied by the ECM motor. This feedback is available through MODBUS® - Register 6.





### ACM 1004 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

8 ACM 1004 can be powered by each ACM 1005 or ACM 1008

Mating connector for AMC 1004:  
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.