



## 2-Day "Hands On" Industrial VFD Troubleshooting Seminar Norcross, GA - April 18<sup>th</sup> & 19<sup>th</sup>, 2012

### Attention Industrial AC Variable Frequency Drive Users:

One of the most **common** inquiries we get here at EMA Inc. is for training on AC Solid-State Motor Drives. Often it isn't cost effective to teach on-site schools for a small # of people. **Here is a VERY cost effective solution.**

**We're offering a 2-day, intensive seminar on Industrial AC Drives. (PWM)**

**Who should attend? ANYONE troubleshooting, maintaining, applying or operating AC Drives.**

You'll leave this school with a clear & practical understanding of solid-state AC drives, motors and the mechanical/electrical interaction which takes place. You'll learn to recognize classic drive trouble symptoms and quickly resolve common problems. This seminar could **easily** return your investment with just **one** instance of reduced downtime due to your increased knowledge. An electronic background will be helpful, but not essential.

We'll review the basic electrical laws and component operation you need to know.

~ DAY ONE ~

#### Safety

#### Drive Application Basics

- \*Horsepower/Torque
- \*Load Types
- \*Typical Applications, Pitfalls and Troubleshooting
- \*Harmonics and how it effects your equipment

#### Test Equipment and Measuring Methods

- \*Component Testing
- \*Voltage/Current Measuring Methods, Problems and Considerations of Non-sinusoidal Waveforms
- \*Oscilloscope Basics and Safety Considerations

#### Discrete Components and Typical Circuits Overview

- \*Passive Components (capacitors, diodes)
- \*Active Components (transistors, IGBT's etc.) and Associated Circuits
- \*Inductors, Transformers
- \*Electrical Laws

~DAY TWO~

#### AC Motors

- \*Construction & Theory of Operation (Induction)
- \*Connections & Testing
- \*Maintenance

#### AC Drives

- \*Construction & Theory of Operation (PWM)
- \*Braking Types (Dynamic, DC Injection, Line Regenerative)
- \*Programming

\*User Interface (I/O)

\*Drive, Motor, and Load Data

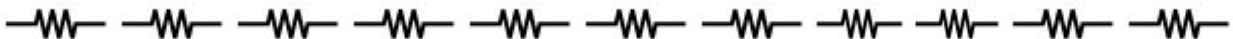
- \*Faults & Troubleshooting
- \*Visual & Test Equipment Diagnosis
- \*Typical Application Problems
- \*Maintenance

\*Harmonics and how it effects your equipment

#### Final Review and Open Question Session.

Space is limited. Please call Kristin and reserve your seat(s) today.

# (800) 848-2504



Please fill out the form below and fax back to (770) 448-4823

Company Name: \_\_\_\_\_

Billing Address: \_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email Address: \_\_\_\_\_

Name of Attendee(s): \_\_\_\_\_  
\_\_\_\_\_

## \$695.00 / Person

*Cost covers tuition, School Materials and lunch both days.*

Students are encouraged to bring their own Multimeters to the seminar.

Classes start promptly @ 8:00AM  
and finish @ 4:30PM

*In order to assure registration, all class fees must be received prior to the scheduled seminar date.*

I would like to be informed of future classes: \_\_\_\_\_ (✓)

**An EMA representative will contact you for payment.**

#### "Cancellation Policy:

EMA reserves the right to cancel a scheduled class at anytime due to low enrollment. In this situation the student will be asked to reschedule or the tuition cost will be refunded. EMA is not liable for any charges incurred by the customer (i.e.-airline, hotel, and rental car) due to cancellation. Payment is required at the time of registration.

Cancellation fee for customers: if canceling within 1 week of the scheduled class is 100% of the total.

Please call (770) 448-4644 to unsubscribe from our mailing list

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