

U.S. SENSOR Corp.

UNSENSORED

SPRING 2005

U.S. Sensor's New Web Site

by Roger Dankert



of you may not realize that U.S. Sensor was among the first of the thermistor manufacturers to host a website, back in early 1996. We realized early on that having a dominant presence on the Internet was critical to help us meet our company's sales and profit goals. We continue to invest in paid advertising through numerous search engines to guarantee our visibility to those who

search for our product categories. Over the past nine years we made numerous improvements to our site both in selection of products featured and in its user friendliness. We're very excited about our latest offering and we hope you will be too. Remember to bookmark www.ussensor.com and check back regularly!



We at U.S. Sensor are pleased to announce that our newly redesigned website is on-line. Many

**THERMISTORS
RTD's
PROBES
ASSEMBLIES**

*PRECISION
INTERCHANGEABLE
THERMISTORS*

*GLASS
ENCAPSULATED
THERMISTORS*

*EPOXY
ENCAPSULATED
THERMISTORS*

*SURFACE MOUNT
THERMISTORS*

*INRUSH CURRENT
LIMITING
THERMISTORS*

RTD's

*TEMPERATURE
AVERAGING PROBES*

*LIQUID IMMERSION
PROBES*

*MICRO-MEDICAL
PROBES*

*HIGH TEMPERATURE
PROBES*

*FOR
TEMPERATURE
MEASUREMENT
AND CONTROL*

Spotlight on U.S. Sensor Representative Mr. Fred Massarelli, President/Electron Marketing Corp

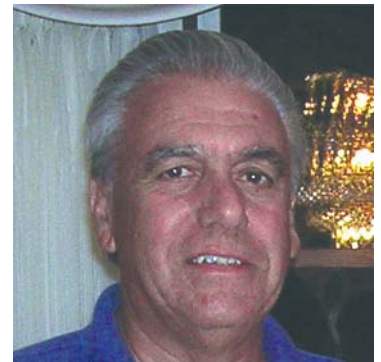
by Teri Wilfong

Fred Massarelli was born and raised on the west side of Chicago and has a Degree in Science with a major in Marketing Management from Triton College. He served in the U.S. Army and was honorably discharged in 1969. After leaving the Army, Fred worked as a field sales representative for a circuit board company and later as a regional sales manager for Chicago Miniature Lamp Company. In 1978, after working for a manufacturer's representative of electronic components in the Northern Illinois/Wisconsin territory, Fred founded Electron Marketing Corp (EMC). EMC began in a dockside office at the DutchBoy Paint Company in Northfield, Illinois with one phone line and the U.S. Mail as the only sources of communication. Over the next two years the company prospered and in 1981 EMC moved to a larger facility in Des Plaines. In 2003, EMC relocated to its current site in

Schaumburg. Fred successfully guided the company through the challenging and ever changing business climate during the past 10 years and today EMC remains a strong and highly respected company.

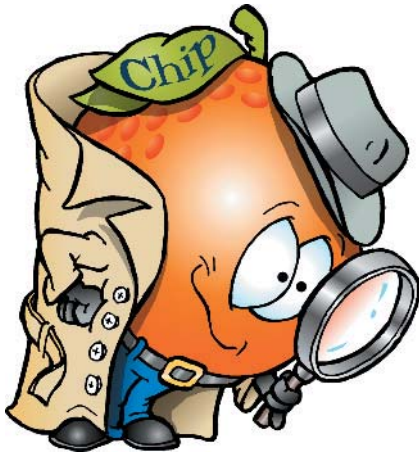
Fred has been happily married to his wife Carol for 38 years. They have two daughters, Brenda and Nicole, one grandson and a new granddaughter on the way. Brenda and Nicole handle the inside sales duties at EMC while Fred, Mark Kalemba and Chris Martin take care of the outside sales.

Fred enjoys playing golf, cooking and spoiling his grandson. When time allows, he likes to visit the southwest desert areas of Arizona and Las Vegas though his favorite trip in recent years was to Italy. Fred enjoyed the authentic Italian cuisine, the courteous people he met and the spectacular sights of Venice and San Marino. Since U.S. Sensor's association



with EMC began in November 2002, Fred and his team have far exceeded our expectations. Fred's commitment to customer service, as well as his knowledge of our product capabilities and the Northern Illinois/Wisconsin territory, has been instrumental to U.S. Sensor's growth. Fred is truly an exceptional individual and we look forward to a long and enjoyable relationship with him and EMC





In the last issue of *UNSENSORED*, we covered Maximum Operating Temperature and Maximum Power Rating. Today we will look at Stability and Long Term Aging.

The stability and ruggedness of modern thermistors place them in a category that is equal to or superior to SPRT'S and PRT'S as a calibration standard. This is particularly true due to the thermistors ability to withstand physical shocks associated with every day handling. And, it is also true of the electrical characteristics with the thermistor exhibiting low annual drift and very high resistance change per degree. Both U.S. Sensor and NBS (NIST) have conducted studies with similar results that show thermistors can be produced with typical drift of only 0.001°C to 0.002°C per year. While Stability is a measure of a thermistors abil-

ity to retain specified characteristics after being subject to [typical] environmental or electrical stresses, Long Term Aging is the effect of exposing the thermistor to harsh electrical or environmental conditions over long periods of time.

U.S. Sensor subjects its high accuracy thermistors to a special Long Term Aging Process to minimize long term drift. This process provides the customer with a stable, reliable, and rugged calibration standard for use in the -40° to 150°C temperature range.

In the next issue of *UNSENSORED* we will examine specifications specific to Inrush Current Limiting Thermistors.



Thermistor Assemblies for Appliance Applications

by Dan Dankert



U.S. Sensor designs and manufactures a wide variety of thermistor assemblies for the appliance industry. Appliance applications that utilize temperature sensors include refrigerators, dish washers, coffee makers, deep fryers and toasters to name a few. Unique environmental conditions in appliance applications require temperature sensing probes and assemblies to withstand extended temperature cycling, extreme temperatures, high humidity and provide precise temperature measurement. U.S. Sensor engineers have many years of experience in designing temperature sensors for these demanding applications. New to U.S. Sensor's extensive line of temperature sensors is

the ability to manufacture overmolded probe assemblies. These overmolded sensors are low cost and designed specifically to endure extreme environmental conditions such as humidity and condensation. The overmolded assemblies also feature our glass encapsulated thermistor elements, which due to their method of manufacturing, result in an extremely stable device with excellent long term stability. Advantages of thermistors over "older" bi-metallic type thermostats include better accuracy, lower cost and higher reliability.

In a toaster, the thermistor controls the temperature of the bread so that every slice is subjected to the same

thermal cycle resulting in uniform toasting of every slice. For a coffee maker application, the sensor controls the brewing temperature of the coffee to the ideal brewing temperature ($\sim +200^{\circ}\text{F}$) for optimum taste. New modern refrigerators now feature separate temperature controlled drawers that can be set to the ideal storage temperature for fruits, vegetables and meats. The freezer and refrigerator compartments can be precisely controlled using thermistors as well.

These are a few of the specific appliance applications that use U.S. Sensor thermistor assemblies. Please contact a U.S. Sensor applications engineer to discuss your specific temperature sensing application.



OUR MISSION IS

“TOTAL QUALITY COMMITMENT”

by continuing to build

A PARTNERSHIP WITH OUR EMPLOYEES BY PROMOTING TEAM EFFORT, COMMUNICATION AND EMPOWERING THEM TO DO THEIR BEST, AND BY CREATING AN OUTSTANDING WORK ENVIRONMENT THROUGH INNOVATIVE SPC CONCEPTS AND METHODS WHICH, BY OUR COMPANY'S SUCCESS, FOSTERS SELF ADVANCEMENT.

A PARTNERSHIP WITH OUR CUSTOMERS, SALES REPRESENTATIVES AND DISTRIBUTORS BY PROVIDING EXPERT ENGINEERING AND SALES SUPPORT AS WELL AS ON-TIME DELIVERY OF THERMISTORS, PROBES AND ASSEMBLIES WHICH EXCEED THEIR QUALITY AND PERFORMANCE REQUIREMENTS.

A PARTNERSHIP WITH OUR VENDORS BY CLEARLY COMMUNICATING OUR HIGH EXPECTATIONS OF SERVICE AND PRODUCT QUALITY THEREBY INSURING OUR ABILITY TO PROVIDE THE SAME TO OUR CUSTOMERS.

A PARTNERSHIP WITH OUR COMMUNITY BY PROVIDING EMPLOYMENT OPPORTUNITIES AND BY BEING RESPONSIVE TO IMPORTANT CIVIC ISSUES.

“OUR GOAL IS TO BE THE BEST THERMISTOR MANUFACTURER IN THE WORLD, WITH A STRONG COMMITMENT TO MEETING OR EXCEEDING CUSTOMER REQUIREMENTS, AND CONTINUALLY IMPROVING THE EFFECTIVENESS OF THE QUALITY MANAGEMENT SYSTEM”

2003 National Sales Meeting



Teri Wilfong presents Bill and Doris Schaer of Temper Technical Sales, the 2003 “Sales Representative of the Year” award during the 2004 sales meeting



Roger Dankert presents Bill and Joanne Riehle of Pro Team Construction the “Supplier of the Year” award.



Standing L to R: Lori Anastasiou, U.S. Sensor Corp., Bruce Sievers, Guest Speaker, Bill Riehle, Pro Team Construction, CA, Harry Abramson, Electronic Salesmasters, OH.

Seated L to R: Julie Dankert, U.S. Sensor Corp., Roger Dankert, U.S. Sensor Corp., Joanne Riehle, Pro Team Construction, CA.



Standing L to R: Scott Wilfong, U.S. Sensor Corp., Teri Wilfong, U.S. Sensor Corp., Bruce Sievers, Guest Speaker, Robert Somerville, U.S. Sensor Corp., Ann Somerville, U.S. Sensor Corp.

Seated L to R: Martin Saklad, HMC Inc., Paul Mansour, EI Sales, MN, Brad Butler, EI Sales, MN.



Standing L to R: Ellen Pansing, Midtec Associates, KS, Matt Pansing, Midtech Associates, KS, David Jadrnych, Electronic Salesmasters, OH, Bruce Sievers, Guest Speaker, Jess Harper, EPM Corp., FL, Troy Nichols, Marketing Technologies, MD.

Seated L to R: Dan Dankert, U.S. Sensor Corp., Kristin Dankert, U.S. Sensor Corp., Cathy Reynolds, Marketing Technologies, MD.



Standing L to R: Randy Wittman, U.S. Sensor Corp., Bruce Sievers, Guest Speaker, Sue Lewis, U.S. Sensor Corp., Tom Lewis, U.S. Sensor Corp.

Seated L to R: Cubby Wittman, U.S. Sensor Corp., Bob Campbell, U.S. Sensor Corp., Luann Campbell, U.S. Sensor Corp.

2003 National Sales Meeting



Standing L to R: Frank Roso, Comptech Sales, TX, John Rowell, Comptech Sales, TX, Randall Crosser, U.S. Sensor Corp., Bruce Sievers, Guest Speaker, Chris Carrao, Unity Sales, IN.
Seated L to R: Doris Schaer, Temper Tech. Sales, OR, Bill Schaer, Temper Tech. Sales, OR, Michelle Carrao, Unity Sales, IN.



Standing L to R: Letty Gonzalez, U.S. Sensor Corp., Bill Peak II, Murcota, CP&F, NC, Ruben Gonzalez, U.S. Sensor Corp., Bruce Sievers, Guest Speaker, Pat Long, Omega Ltd, CO, Roger Long Omega Ltd, CO.
Seated L to R: Ephraim Morales, Comptech Sales, TX, Phil Jones, Electronic Salesmasters, OH, Dave Modafferi, LD Allen, NY.



Standing L to R: Chris Martin, Electron Marketing, IL, Tom Ryan, Electronic Salesmasters, OH, Bruce Sievers, Guest Speaker, Denny Nguyen, U.S. Sensor Corp., Karen Penazek, Compass Marketing, AZ, Wayne Penazek, Compass Marketing, AZ.
Seated L to R: Mark Kalemba, Electron Marketing, IL, Jeff Cybulski, Unity Sales, IN, Linda Cybulski, Unity Sales, IN.



Standing L to R: John Deimel, U.S. Sensor Corp., David Weatherford, Comptech Sales, TX, Bruce Sievers, Guest Speaker, Bob Foertsch, Win-Cor Electronics, NJ, Ben Roesch, Win Cor Electronics, NJ.
Seated L to R: Fred Massarelli, Electron Marketing, IL, Ed Reichert, HMC Inc., CA, Bill Law, HMC Inc., CA, Jack Winkler, Marketing Technologies, MD.

U.S. SENSOR Corp.

1832 W. Collins Ave., Orange, CA 92867
 Tel. (714) 639-1000 • Fax (714) 639-1220

www.ussensor.com

Contacts

Sales & Customer Service:

Teri Wilfong Vice President Sales
 Mike Dobson Sales Manager
 Theresa DiLalla Customer Service
 Kathy Ingham Customer Service
 Edna Vargas Customer Service

Engineering:

Roger Dankert President
 Dan Dankert Vice President Engineering

Quality:

Randall Crosser Quality Assurance Manager

Accounting:

Elizabeth Thess Controller

Extension

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 106
 107
 130
 109

Extension

105
 119

Extension

116

Extension

102

email

teriwilfong@ussensor.com
mikedobson@ussensor.com
theresadilalla@ussensor.com
kathyingham@ussensor.com
ednavargas@ussensor.com

email

rogerdankert@ussensor.com
dandankert@ussensor.com

email

randallcrosser@ussensor.com

email

elizabeththess@ussensor.com