# VOLUME 1 ISSUE 4 SUMMER 2003

### **ProxSwitch P800**

Limit Switch Style Proximity Sensor

A new inductive sensor designed to detect shaft speed, shaft position, gate position or object presence is now available. This simple and reliable sensor is totally sealed and approved for dust hazard area use, Class 2 Division 1. Based on the standard rectangular DIN style, the unit is available with two types of output, relay or NPN/PNP transistor. The relay output unit can be supplied with any voltage from 12 to 240 VAC, DC, and the

transistor output version accepts 10 to 30 vdc. Two LED's show input status and output pulses, allowing simple set-up and adjustment. The P800 can be installed using a custom fabricated mount or can be used with the Patented Whirligig Mounting System for shaft speed monitoring.



Totally sealed and incorporating a 1/2" NPT conduit entry, the unit is ideally suited to wet or humid applications.

Installed

w/Whirligig

## News Flash

Former CIA Director to Speak at AFIA Conference (See page 3)

729 Sabrina Drive East Peoria, Illinois 61611 USA

Telephone 309-698-5611 Facsimile 309-698-5615 Email 4B@go4B.com Please call for in-depth product information, or visit our website at

www.go4b.com

#### **Employee Profile**

Johnny Wheat B.ENG, M.I.E.E.



Johnny Wheat Vice-President of Electronic Products

Johnny Wheat, 4B Vice-President,

has a Bachelors Degree in Engineering from Sheffield Hallam University and is a Member of the Institute of Electrical Engineers. He is a UK native who was transplanted to the US in 1992.

Although engineering is his background, he enjoys the challenge of sales. "Being involved from product conception through design, testing, marketing, sales, and installation provides great satisfaction."

When work permits, Johnny enjoys studying the collisions of small spherical objects on a green cloth (Pool and Billiards). Time for other hobbies is limited due to the ongoing renovation of his 1908 Uplands area home, which he shares with his wife Patty, and son Justin.

#### **CEEJAY'S CORNER**

#### Air Related Problems - comments by Chris Robinson - SVP

Air or air pressure can be a significant problem in the performance of a bucket elevator. This can be associated with the "Fanning" effect of elevator buckets within the casing, air pressure caused by other equipment or elevator design and product compatibility.

Most problems regarding air can be broken down into two types: Those primarily relating to the product being handled. Those primarily relating to equipment.



Of these, the most likely scenario the user will encounter is that the product being elevated is incompatible with the design of the bucket elevator. Materials such as Flour, Rice Hulls, Portland Cement and some Meals are so low in density or their particles are so fine that they tend to aerate very easily. When this tendency is combined with the moving parts of an elevator, the results can be difficulty in loading at the elevator boot or discharge inefficiencies in the elevator head.

Generally, there is a solution to most of these situations, and it may include venting the bucket, changing the bucket style, altering the belt/chain speed and possibly modifying the elevator casing.

Problems associated with other equipment can be more difficult to solve than those directly associated with the elevator. It is really a case of elimination, start with the bucket elevator and make certain the design is suitable, then move to "upstream" equipment then "downstream" equipment.

Typical upstream problem areas can be Mixer Dump Hoppers or Surge Bins, Dust Systems and Feeders. Downstream problems may arise from Chutes or Spouts, Storage Bin Vents and Processing Machinery.

If you believe that you may have Bulk Material Handling problems associated with a Bucket Elevator, please contact us for our free Engineering Service.

NOTE: If you did not have an opportunity to read the previous issue of Scoop, back issues are available by contacting Mark Middleton at (309) 698-5611 or visit us at <a href="http://www.go4b.com">http://www.go4b.com</a>

#### RECAP — 19th International Fuel Ethanol Workshop & Trade Show

On June 16-19, 2003, 4B Components, Ltd. exhibited at the Ethanol Industry's Largest most Comprehensive Tradeshow in Sioux Falls, SD. The workshop & tradeshow was centered on incorporating practical applications and research into the design of future ethanol plants.

The International Fuel Ethanol Workshop & Trade Show is designed to provide the ethanol industry with the latest information on technology and service for improving production, product yield and operations of an ethanol facility using grain, sugarcane, cellulosic material and many other biomass feedstocks.

4B Components, Ltd. has supplied various equipment to the Ethanol Industry including Watchdog "Elite" Bucket Elevator & Conveyor Monitoring Systems, Bearing Temperature Monitors, Bin Level Indicators, High Temperature Encoders, Speed Monitors and also Elevator Buckets, Belting and Forged Conveyor Chain.



#### **COMPANY SPOTLIGHT**

#### MEIER SALES & ENGINEEERING, INC.



Al Meier Meier Sales & Engineering

"Meier Sales and Engineering have been doing business with 4B Components LTD. for fourteen years, and we feel that 4B products are second to none. It's all about satisfied customers today, believe me, that is why we continue to buy the 4B products. The people we work with at 4B are "top notch!" They handle our service needs without delay when a problem occurs. I can state emphatically that 4B is a first class company, which is attributed to their dedication and knowledge in the industry."

Meier Sales has been in business for approximately fifteen years, and our primary functions are in the grain, feed and flour sectors, but also service industrial applications. Our staff consists of six sales people, Al Meier, Jeanette Meier, John Meier, Fritz Fleischhacker, Ken Peterson and Donna Moraz. We are proud to associate ourselves with 4B Components, and remember, You want it, I got it, You need it, I get it. Meier Sales and Engineering is located in St. Paul, Minnesota, in the heart of the grain and milling industry.

For more information, contact Al Meier at:

Meier Sales & Engineering

1821 University Street, Suite 186N

St. Paul, MN 55104

**Phone:** (651) 659-0608 -or- Fax (651) 917-6438

#### SPARKY'S SHOCKERS



**Johnny Wheat** Vice-President of Electronic Products



#### **Question:**

I have many slide gates in my plant and I sometimes have problems with the potentiometer positioning system. Do you have a more reliable positioning system, which would be easier to maintain?

#### **Answer:**

For gate positioning we have an excellent maintenance free solution. The 4B Rotech Heavy-duty Shaft Encoder with Quadrature output incorporates two sensors. One sensor provides count information and the other sensor provides direction of rotation information. The unit can either be connected to

a PLC or wired directly to a quadrature counter to display percent (%) gate open or closed. With 360 targets for each shaft revolution the unit can typically provide gate position accuracy to 0.015". Single bolt connection to the rotating shaft allows for quick and simple installation. And with no internal parts to wear out, the 4B Rotech Encoder provides years of maintenance free operation.

Send your questions through our website www.go4b.com or email Johnny at jwheat@go4b.com. Although we can't print them all, we will reply to all questions.



## Thomas Twetten, former Deputy Director of Operations, C.I.A. To Speak At AFIA Conference in Arizona on Nov.8, 2003.

Thomas Twetten, former Deputy Director of Operations for the U.S. Central Intelligence Agency. His topic will be: The Future of U.S. Intelligence in the Aftermath of 9/11.

Thomas Twetten retired from the Central Intelligence Agency in 1995, after serving thirty-four years in its clandestine services. Mr. Twetten rose through the Agency's ranks to become the Deputy Director for Operations, a position commanding the nation's overseas clandestine intelligence collection. Mr. Twetten boldly redirected intelligence resources to support U.S. efforts in Eastern Europe, the Middle East, and in fighting international narcotics trafficking, terrorism, and the proliferation of weapons of mass destruction. Listen as Mr. Twetten outlines security issues for our future.



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