

CPI®

Control Products, Inc.

SENSABILITY

PRECISION • EFFICIENCY • RELIABILITY • SAFETY

ISO 9000



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A Note From CPI



A Break From the Mainstream Press

Happy Thanksgiving, and welcome to the Fall 2008 issue of SensAbility. I'd like to take this opportunity to *not* talk about the things (two in particular) that we are all bombarded with every day, and to take a moment to reflect on a couple of other less sensational items, specifically changes to how business to business commerce is conducted.

Think about communications and information availability. Innovations have been so rapid over the last 10 years - heck, think back 20 years. (Some of us remember back 25 years saying, "How did we get by without the fax?")

A far from complete list of terms that didn't exist in 1983:

- Internet
- Search Engine
- Website

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- Email
- eBay
- Webinar.
- Windows! Remember DOS?

These all give us ready-access to information. It's all about right now. Immediate gratification has become the expectation - period. If a sales rep isn't available via cell phone, there is anxiety about lax customer service. (I think cell phones were called car phones in '83.) I miss some of the old school aspects of B to B commerce, like in-person meetings - way fewer of these are necessary today.

On the other hand, the tools we have to marry needs and product solutions are awesome. And, converting product solutions from concept to production is yet another area where we've enjoyed great advances.

At CPI, we are working hard to utilize all of the technological advances available to provide immediate access to unique switching solutions for our customers. Starting from our information-packed website, to rapid design and prototype turnaround via CNC machines, to the latest in-process test equipment, we enjoy the opportunity to utilize the latest technologies to bring **Precision, Efficiency, Reliability,** and **Safety** to our customers' products.

So, send an email , a fax, or go crazy and give us a call (we will actually answer the phone) - we're delighted to discuss your **limit switch, thermal switch,** and **linear position sensor** applications.

Sincerely,

A handwritten signature in black ink, appearing to read "Mac". The signature is stylized and fluid, with a long, sweeping underline that extends to the left.

Mac Stuhler
Vice President

Sensor Testing Update - Almost Ready for Primetime

No one will argue the value of a comprehensive test program for a new product. But when you talk about a truly ground-breaking invention, you can't be too thorough.



The test program for the [SL720](#) includes harsh cycling on a high-pressure test stand, actual in-application deployment, as well a battery of laboratory tests to confirm product capabilities, including shock/vibration resistance, resolution, repeatability, and temperature induced error.



Not surprisingly, the level of detail associated with such a product release is mind boggling. Throughout the testing, we have made refinements to various aspects of the system, to ensure that when engineers specify an [SL Series](#) product, there will be no concerns about product performance and reliability. Things like signal conditioner pin size optimization to ensure solid connections; refinement of the high-pressure interconnect so that fluid leaks never happen; millions of full-stroke cycles at high speed to review mechanical wear points - all examples of what keeps us up at night - we stay up late worrying about reliability so you, and your customers, won't have to.



This is a great example of upfront investment in diligence bringing real value to you.

Do you have an application for a hydraulic cylinder position sensor? Bring it to us.

Call +1 973 887-9400 or [drop us a line](#) and we'll make sure you get the right solution...

it's our sleep aid for you.

Trade Show Report



23rd world's leading trade fair
New Munich Trade Fair Centre
November 11-14, 2008



[International Precision Products](#), CPI's European selling arm will be displaying in Munich, November 11 - 14, at [Electronica 2008](#), the world's leading trade fair for Components, Systems and Applications.

This exciting show will feature; semiconductors, passives, electromechanical components, solutions for system peripheries, servo-technology, printed circuit boards, displays, sensor technology solutions, power supplies, electronic design and software.



Come visit [IPP](#) in Hall C3, Booth 129 - they will be featuring a wide array of thermal and limit switch solutions from CPI, as well as a demonstration of the [SL720 Linear Position Sensor](#).

This is the place to bring your harsh-environment limit switch challenges, or talk with IPP to specify the best thermal switch for your toughest applications.

Stop by and meet with the IPP sales engineers - and bring your thorniest challenges.

CPI Adds Global Spec to the Marketing Mix

As you, our readers, know, we at CPI have a very unique product offering. Hence, making our products more visible to customers who can really benefit from them is very important to us and establishing a presence in the right places is an ever-changing game.

In October, CPI joined with Global Spec, an online search engine serving the engineering, manufacturing and related scientific and technical markets.



Along with a powerful parametric search tool for virtually any type of component, Global Spec provides users with many other invaluable services like; product alerts, newsletter subscriptions, engineering news, and product announcements - all configured by you the user to fit your needs. One of the most critical aspects of Global Spec is that our products are placed in categories **by their engineers**, so users can be assured of the most relevant search results.

Global Spec has already helped many customers, who didn't know about us, to find the CPI solutions to their tough problems. If you [visit our Global Spec profile](#), you'll find a useful summary of our products and services, along with links to catalogs, product announcements, and technical articles.

If you are familiar with Global Spec, you'll be pleased to find us there now. If you are new to Global Spec, try it out. I'm sure you'll find what you are looking for. And, of course, always feel free to bring us your tough problems. The tougher the challenge, the more we thrive, so bring 'em on! Call +1 973 887-9400 or [drop us a line](#).

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Application Spotlight

High-pressure thermal switch brings safety to Keystone Drill



[Keystone Drill](#) manufactures a two stage high pressure (3000 psi) air compressor used in oil fields. The customer had experienced some explosions that were traced to the compressor's lubricating oil becoming "misted" in the compressor's air stream. During peak compressor loading the temperature of the compressed air would approach the oil's flash point to cause the explosion. The compressor is equipped with a "Murphy" gauge but due to the extreme pressures a pressure well was needed around the sensing unit. The pressure well slowed the reaction time which caused the system to be un-useable for the application.

CPI was contacted by Keystone's engineering department to solve this challenging problem. Using our in-house testing and development, we created a modification to one of our standard [AD](#) model switches. It was modified to handle the high pressures, ***without the use of a thermowell***, and by extending the sensing area of the probe from the mounting threads by about 3 inches.



By providing a thermal switch that did not require a thermowell, CPI provided a switch with a greatly reduced reaction time - and safe operation!

Do you have a tough challenge. Let us bring Control Products' **Precision - Efficiency - Reliability - Safety** and engineering skill to bear on it. Just call +1 973 887-9400 or [drop us a line](#).

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An Innovative Solution to an Extremely Demanding Application



The [Supacat HMT 400](#) is an open cab high-mobility military vehicle built under license from Lockheed Martin. Known for its very good all terrain capability, the vehicle is designed as a Special Forces vehicle, and for use in long-range reconnaissance applications. When called for an urgent operational requirement in warmer climates, the engines were overheating and sometimes breaking down.

Initially, Supacat designed a new cooling system which required two thermal switches; one to switch on a cooler at 90C, and another to warn the driver that the system had reached 120C. When the latter condition occurs, it is the decision of the driver/commander to carry on the mission, abort or carry on with a reduced demand on the engine. It turned out that there was a space constraint, and therefore only room for one thermal switch.





CPI's AD053 dual set point thermal switch provides two independent circuits was the solution they were looking for. And, since the [AD Series](#) has a proven track record on military vehicles, the customer was able to specify CPI with confidence.

Do you have switching challenges in extreme environments and tough situations? Bring them to us - that's what we thrive on (but we like easy ones too). Call +1 973 887-9400 or [drop us a line](#).

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Product Feature

Engineering - a Noble Profession

"Engineers apply the principles of science and mathematics to develop economical solutions to technical problems. Their work is the link between scientific discoveries and the commercial applications that meet societal and consumer needs." This is the definition provided by the Bureau of Labor Statistics. And, while the role engineering plays is critical to an economy's success, the engineering profession remains more of an unsung hero. When talking about product development, the excitement is at the extremes of the timeline - a lot of noise is made early in the game, when the scientific discovery takes place. And, once the new technology becomes commercially viable, the marketing geniuses are credited with marrying the fully developed capability with the needs of the marketplace. But there is a tremendous amount of diligence associated with commercializing products. While on the face, a product such as an industrial valve may seem simple, engineers will use the latest technologies to optimize the valve in terms of cost, performance, and reliability. Computer simulations, design reviews, qualification tests - all behind-the-scenes engineering activities which make the world go around.



Engineers can be found in every major industry, from aerospace to mining.



In 2006, engineers held about 1.5 million jobs, 37% in manufacturing, and 28% in professional, scientific, and technical services. These are the folks that power our country's manufacturing sector, which is so vital to our economy. While career opportunities in engineering continue to be on the rise, most of the employment growth will come from fast growing service industries. With starting salaries among the highest of all college graduates, let's hope manufacturing continues to attract the right stuff to keep US companies in the lead.

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Visit the SensAbility Archives.

With every issue of SensAbility we bring you industry-related news, product announcements and real-world applications that have brought **Precision, Efficiency, Reliability and Safety** to our customers. We've archived each issue of SensAbility on our website, www.cpi-nj.com. You can go [right to the archive page here](#).

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