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Are We There Yet?

Dear Subscriber,



We're all geared up for MINExpo. In just four days we'll be meeting new customers, digging into all the new technology, and having a great time in Las Vegas, Nevada. We hope you're as excited as we are about the show and

we're looking forward to seeing you there.

In the past few weeks we've told you about three of the principles that CPI strives to achieve in our customers' applications -- Precision, Efficiency, and Reliability. These are principles we live by. Our credo. But there's one final principle we need to address, and it's the most important.

That principle is **Safety**.

At CPI, helping to ensure Safety through reliable components in all kinds of machine applications is our passion. Today, safety is a paramount concern, and that's why OEMs turn to CPI when specifying for safety-related applications.

If you have machine or equipment Safety concerns, by all means, see us at MINExpo or contact us as soon as possible. We're here to help you specify the most reliable components to improve the

safety of your equipment.

And speaking of Safety, have a safe trip. We'll see you at the Expo.

Sincerely,

Mac Stuhler
Vice President
Control Products, Inc.

SAFETY Solutions at MINExpo

"Sure, I can clear that bridge... OOPS!"

Dump Body Detection Switches Prevent Serious Accidents

Know your dump truck height? Of course you do, but not if the dump body is up. And that's when the accidents occur - when an operator is unaware of the raised dump body and drives under a low bridge or other structure. Then it's a major problem with serious and expensive repercussions.

For this and other reasons, leading manufacturers of heavy trucks and construction equipment use CPI E Series Limit Switches in critical applications, especially in harsh environments. Several major dump truck manufacturers have specified the E1092-540 switch for dump body down detection. They're the perfect solution for this important safety feature, as these are completely sealed and totally submersible industrial grade switches. And since the dump body detect switch activates a warning light rather than disabling operation, running dumps are still possible.



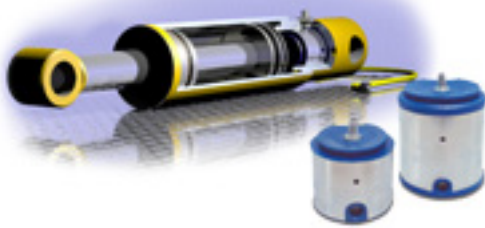
Now, thanks to consolidated production, the E1092-540 is available in reduced volumes to accommodate dealers, distributors, and small to mid-sized OEMs. This targeted distribution of our sealed limit switches answers many industry complaints of less robust automotive-grade switches failing after a short time in the field.

For more information on the bridge-saving E1092-540 follow links on the [CPI web site](#) for **WATERPROOF > LIMIT SWITCHES > E1 SERIES STAINLESS STEEL BRACKETS** or see them for yourself at MINExpo.

If you'll miss us at MINExpo, [drop us a line](#), or call us at 973-887-9400.

Electrohydraulics Brings Newfound Safety to Mobile Equipment

As time goes on, the technology supporting equipment automation is becoming smarter, more powerful, and less expensive. At the same time, Control Products is releasing a technology which represents the missing link for deploying closed-loop feedback in mobile hydraulics - an absolute, non-contacting, internally mounted position sensor for hydraulic cylinders. In the most general terms, automation relieves much of the stress and monotony for operators, thus reducing the likelihood of dangerous errors. Incorporation of preprogrammed functions such as return-to-dig, auto-dump, bucket leveling, and safety envelope definition doesn't only result in higher productivity, it can also eliminate mistakes which result in unintentional motion of the machine.



Systems on telehandlers monitor load position and keep it safely

horizontal, allowing operators to focus on moving the load. This dramatically reduces the possibility that the load will slide off the carrier. In some situations, operators or spotters will no longer have to be positioned in dangerous locations, as electronics provide the required position feedback remotely.

These are very exciting times for CPI, and we look forward to being a part of what the experts are referring to as a "digital revolution" in transportation and heavy equipment design. We are moving forward with our current applications in road paving equipment, military vehicles, agricultural and construction equipment. Mining is a new and critical industry for Control Products' applications. Visit us in Booth 1761, North Hall at MINExpo and see the world's only telescoping hydraulic cylinders with internal position sensing -- our ***Smart Cylinders***.

Want to enhance Safety while automating your equipment? See us at MINExpo or let us know about it, we'd like to help. [Drop us a line](#), call us at 973-887-9400, or visit us on the web at <http://www.cpi-nj.com>

High-Temperature Thermal Switches Help Keep Our Railways Safe



During the winter months, railroad switch heaters are essential to help minimize delays or accidents caused by misdirected trains. It is critical to keep switches open and operating properly on demand during snow, sleet, or ice storms.

These oil, gas, or electric powered switch heater units use a high-pressure blower to force an air stream around a combustion chamber to be heated, and into the switch area to keep it frost-free. This process involves combustible fuels and a real potential for danger exists. If the ignition system fails and the fuel does not ignite, the extremely volatile fuel would keep flowing and accumulating in the area - a disaster in the making for the next passing train.



To ensure Safety, the [Rails Company](#) of Maplewood, NJ uses [CPI's W1 thermal switches](#) to verify ignition when the switch heaters are called upon. If the fuel does not ignite, the CPI switch stops the flow, eliminating a very hazardous situation. The W1 Series Rod and Tube thermal switch is ideal for this application, as it is completely sealed, truly waterproof, and capable of withstanding temperature extremes with overshoots to 1,000°F. [Take a look](#) at this exciting application.

Technology for Safety is the best investment you can make. See us at MINExpo or let us know about it, we'd like to help. [Drop us a line](#), call us at 973-887-9400, or visit us on the web at <http://www.cpi-nj.com>

Worlds Only *Smart Cylinders* with Internal Position Sensing in Regular or Telescoping Configurations to be Displayed at MINExpo



Need accurate, repeatable, and virtually indestructible position sensing safely and securely contained inside a hydraulic cylinder? CPI has it. We'll be showcasing our **unique and easy to implement *Smart Cylinders* and *SL***

Series Sensors at MINExpo.

Smart Cylinders (telescoping and standard action) use internally mounted linear sensors to sense piston position. These sensors utilize a **patented technology** that couples the translation of the cylinder to a non-contacting sensor element. The installation method allows intelligent cylinder implementations to remain virtually unchanged, and can be easily integrated into a high-volume production environment. ***Smart Cylinders* and *SL Sensors*** have many advantages over rod-type sensors, including:

- No end-of-stroke dead zone
- Temperature has no effect on sensor repeatability
- Impervious to physical and environmental damage since the sensor resides completely and safely inside the cylinder
- No structure loss due to core drilling the rod
- One configuration can be used for any stroke length
- Virtually immune to shock, vibration, and physical impact
- CPI ***Smart Cylinders*** are indistinguishable from standard cylinders other than an M12 style connector on the endcap

Until the introduction of Control Products' ***Smart Cylinders* and *SL Series Sensors***, internal position sensing in telescoping cylinders was absolutely impossible. The unique design of the ***SL***



Sensor establishes accurate position up to 72" extension. And since one sensor works for any stroke length (within the maximum range), there is no need to inventory multiple models to accommodate different cylinders.

Control Products' **Smart Cylinders** are manufactured in 1" to 30" bores, with low, medium, and high pressure seals. Complete with shielded cables and signal conditioning, these are the cylinders you need for the easiest assembly and precise control.



And for those who prefer to implement their own intelligent equipment designs, **SL Position Sensors** are available.

Like **Smart Cylinders**, **SL Sensors** are ideal for mobile equipment and harsh-environment applications where rod-type sensors cannot survive. The **SL Sensor** built into a **Smart Cylinder** or your own

design is virtually indestructible, withstanding up to 50g shock and 5g vibration.

For more information about **Smart Cylinders** and **[SL Series sensors](#)**, visit us in Booth 1761, North Hall at MINExpo 2004. Or **[Drop us a line](#)**, call us at 973-887-9400, or visit us on the web at **<http://www.cpi-nj.com>**

Handy Thermal Switch Reference CD available at MINExpo

Finding the right thermal switch for your application just got a lot easier. CPI has developed a comprehensive, easily searchable CD-ROM, designed with the component specifier in mind. Complete with specifications, drawings, and application information, the CPI Thermal Switch CD-ROM contains a wide variety of thermal switches (set points 0 - 1,850°F and a broad array of mounting/probe configurations). You're sure to find what you are looking for. Stop by our booth (#1761, North Hall) and pick one up. And it doesn't cost a thing.



An Invitation from Control Products

Come See Us at MINExpo INTERNATIONAL® 2004



We'll be at Booth 1761, North Hall, and we'd love to see you there. Take a look at our line of smart cylinders, cylinder sensors, waterproof switches, plus ultra high temp and low temp thermal switches. Bring Us Your Challenges! Talk with us about your special needs and applications. And remember to pick up your free copy of the CPI Thermal Switches CD-ROM.

Sign Up for SensAbility - CPI's free e-mail newsletter

SensAbility was created for design engineers, production engineers, product managers, and anyone working with electrical switching and control applications. You're looking at the final of four special pre-Expo issues. If this issue was passed to you, and you would like to be a regular



subscriber to
SensAbility, please [click here](#).

We're looking forward to seeing you at MINExpo 2004!

Control Products, Incorporated
280 Ridgedale Avenue
East Hanover, New Jersey 07936-2394
973 887-9400
www.cpi-nj.com