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*Magnetostrictive technology offers resistance to shock and vibration...*

**MTS SENSORS' LINEAR POSITION SENSORS PROVIDE  
HIGH SPEED, DURABILITY IN METAL FORMING**

CARY, N.C. (May 6, 2008) – MTS Systems Corp., Sensors Division's Temposonics® linear-position sensors provide high speed, accuracy and durability in the harsh environment of metal forming and shearing press applications. The magnetostrictive sensors are embedded inside the hydraulic cylinders controlling movement of the machine platens that press the metal into sheet form. Most customers choose the MTS sensors because they need a solution that offers high performance and superior repeatability for many operations where high vibration and shock loads exist.

“Today, as manufacturers and users demand better part quality, repeatability and shorter cycle times, our sensors are favored because of their high resolution and responsiveness,” said Temposonics Marketing Manager, Matt Hankinson. “Our highspeed R-Series SSI position sensors are fast and accurate, making them an ideal choice for a wide range of industrial machinery applications, including metal forming.”

## MTS SENSORS FAST AND DURABLE IN METAL FORMING, P. 2

The R-Series' superior response and accuracy result in higher machine performance and part quality. The rugged, reliable construction results in reduced maintenance and down time, while high shock and vibration tolerance and superior EMI and noise immunity ensure trouble-free operation. The sensors also enable customers to store pre-set configurations for a wide variety of sheet metal shapes and sizes, reducing startup and changeover times.

Using the new smart sensor product platform, MTS is able to provide a superior performance and capability set in the R-Series SSI sensor along with improved reliability and durability, all in a smaller package and at a lower cost.

The SSI output of the R-Series sensor product is fast, with an optional data update rate of 250  $\mu$ sec synchronized with an external control clock, regardless of stroke. MTS' proprietary synchronization technology guarantees the most accurate position output while minimizing inherent system-related delays to produce smooth, precise control. MTS also offers two additional output options for the SSI sensor – one that measures the difference between two position magnets and one that measures velocity.

The R-Series SSI product features position sensing resolution as low as 1 micron (0.00004 in) which can be adjusted at the factory or in the field. For most applications the standard RH (rod-style typically used in hydraulic cylinders) and RP (profile extrusion-style for easy machine mounting) sensors are used with the standard-type sensor magnets. However, for higher accuracy requirements, an internal linearization option is available to improve the sensor's non-linearity specification within +/- 20  $\mu$ m. Even better sensor accuracy is available, (+/- 10  $\mu$ m), when using a special proprietary magnet matched to the sensor.

Temposonics hydraulic-style sensors are pre-configured at the factory by model code designation. For most applications, no adjustments are required for normal sensor installation and operation, but if sensor parameters need to be changed on-site, the sensors are easy to program using one of three options – handheld or cabinet-mounted pushbutton programmers or PC software programming kits depending on the user's needs.

### **MTS SENSORS FAST AND DURABLE IN METAL FORMING, P. 3**

Using external serial communication for monitoring and programming, there is no need to open the sensor's electronics housing. Furthermore, simple diagnostic feedback like "normal operation OK", "missing magnet" or "supply voltage out of range" are indicated by built-in, dual-colored LEDs easily seen on the end of the sensor. Serial communication and the status LEDs ensure the sensor electronics remain factory-sealed to maintain the highest product reliability possible.

Some machines use encoders for measurement, which make them much more fragile and vulnerable to harsh operating conditions. The magnetostrictive technology employed by MTS Temposonics sensors eliminates wear and guarantees the best durability and output repeatability.

For more information on Temposonics Sensors, please contact: MTS Systems Corp, Sensors Division, 3001 Sheldon Drive, Cary, NC 27513. Phone: (919) 677-0100. E-mail: [info@mtssensors.com](mailto:info@mtssensors.com) or visit their web site at <http://www.mtssensors.com>.

MTS Sensors, a division of MTS Systems Corp., is the global leader in the development and production of magnetostrictive linear-position and liquid-level sensors. Based on MTS' patented Temposonics® technology, the Sensors Division is continually developing new ways to apply magnetostrictive sensing technology to solve critical applications in a variety of markets worldwide. With facilities in the U.S., Germany and Japan, MTS Sensors Division is an ISO 9001 certified supplier committed to providing innovative sensing solutions that deliver customers with reliable, cost effective sensing devices.