
Standex
Electronics
PARTNER | SOLVE | DELIVER®
Standex Reed Switches Deliver Reliable Solutions in Demanding Agricultural Applications

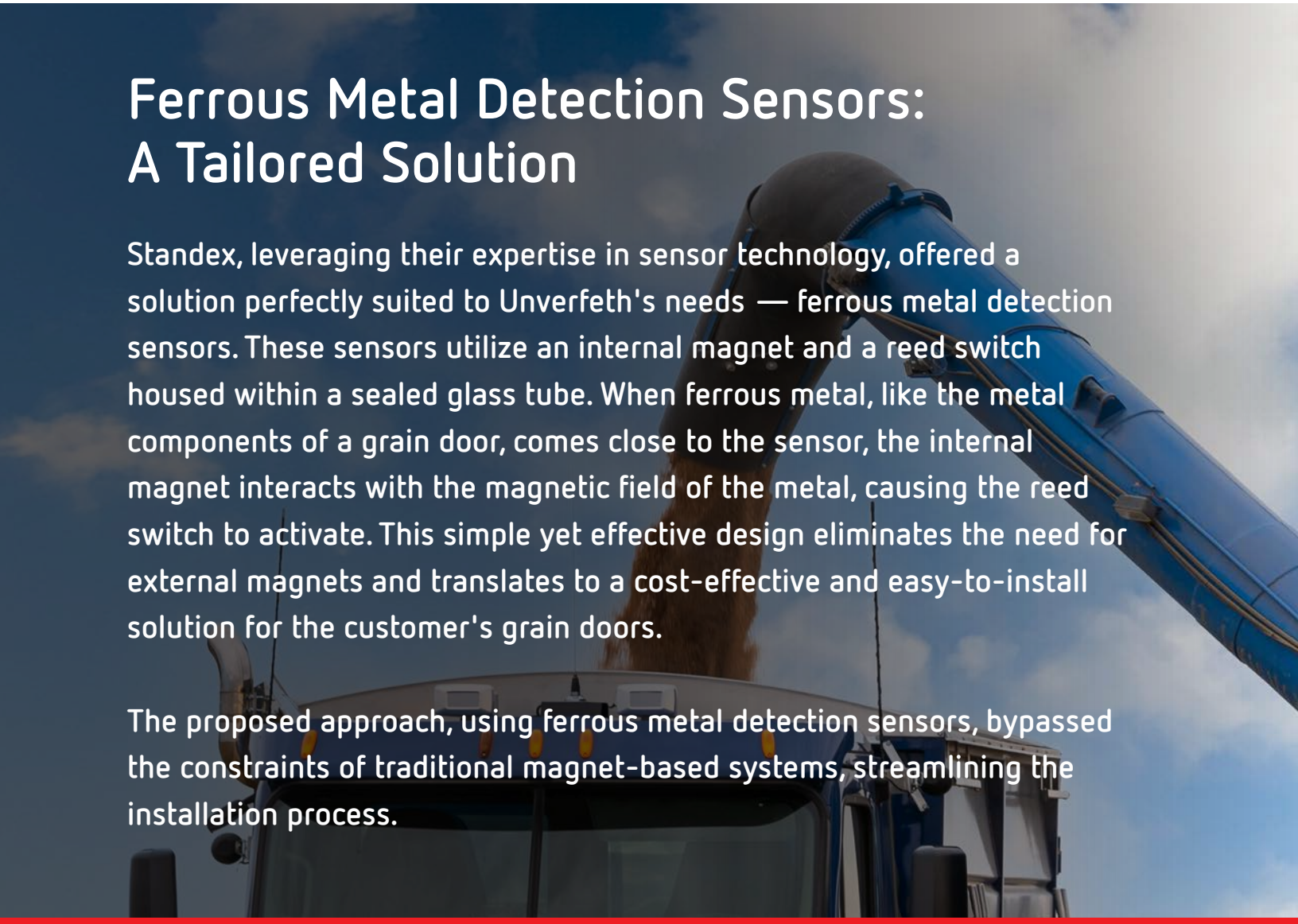
Precise sensors are essential components in agricultural equipment to optimize performance. Even the slightest error in functionality can have negative ripple effects.

The need for precise positioning and accurate monitoring of key criteria is critical for agricultural machinery. Standex Electronics offers a solution: two core products — reed sensors and Hall Effect sensors — that detect the presence of magnetic fields, enabling these functions in agricultural equipment.

Reed sensors, known for their simplicity and durability, are a cost-effective choice for large, industrial applications. These passive devices use magnetic fields to trigger the internal reed switch which provides an on/off output and requires no external power, making them ideal for harsh environments or extreme temperatures. The straightforward design of reed switches offers high reliability and resistance to shock and vibration, making them well-suited for demanding agricultural machinery.

The Need for Accurate Grain Flow

The customer, a key player in the agricultural equipment industry, sought a robust sensor solution for their grain doors. The challenge was to accurately pinpoint four distinct door positions — open, closed, and two intermediate stages — to optimize grain flow control during loading and ensure overall proper operation. However, the customer needed a cost-effective solution that was easy to install. Additionally, design constraints restricted the use of traditional magnet-based sensors leading to Standex recommending one of their ferrous metal detection sensors.



Ferrous Metal Detection Sensors: A Tailored Solution

Standex, leveraging their expertise in sensor technology, offered a solution perfectly suited to Unverfeth's needs — ferrous metal detection sensors. These sensors utilize an internal magnet and a reed switch housed within a sealed glass tube. When ferrous metal, like the metal components of a grain door, comes close to the sensor, the internal magnet interacts with the magnetic field of the metal, causing the reed switch to activate. This simple yet effective design eliminates the need for external magnets and translates to a cost-effective and easy-to-install solution for the customer's grain doors.

The proposed approach, using ferrous metal detection sensors, bypassed the constraints of traditional magnet-based systems, streamlining the installation process.

Optimizing Grain Door Detection

By combining sensor technology expertise with a deep understanding of agricultural equipment needs, Standex and the customer worked collaboratively to engineer an accurate and cost-effective grain door detection solution. This collaboration resulted in:

Enhanced Precision and Efficiency

The customer gained a reliable system for accurate grain door position detection across four stages: open, closed, and two intermediate positions. This not only improved user experience but also optimized loading processes by allowing precise control of grain flow based on door position.

Cost-Effective, Streamlined Installation

The collaborative solution met the customer's parameters by using economical reed sensors and simplifying the installation process. The customer determined they could use four Standex sensors to meet their requirements rather than a single more expensive sensor technology.

Uninterrupted Operation

The power-independent nature of the reed sensors guaranteed they retained position information even during power cycles, ensuring consistent performance. This was an advantage that eliminated other sensor technology that would lose their output during power cycling.

A Collaborative Approach to Innovation

Standex made its commitment to innovation clear by presenting multiple custom solutions utilizing both reed and hall technologies allowing the customer to select their preferred sensing solution. The customer didn't need to spend time educating a new vendor on their specific requirements, as Standex engineers were already well versed in the unique needs of industrial agricultural equipment.

This successful partnership demonstrates the value of collaborative problem-solving to deliver high-performance solutions in the agricultural industry.

PARTNER | SOLVE | DELIVER®

Standex Electronics

Standex Electronics
Worldwide Headquarters
4150 Thunderbird Lane
Fairfield, OH 45014 USA
+1.866.STANDEX (782.6339)
info@standexelectronics.com

Agile Americas (NH)
+1.800.805.8991
info@agilemagco.com

Minntronix Americas (SD)
+1.605.884.0195
productsales@minntronix.com

Northlake Americas (WI)
+1.262.857.9600
sales@northlake-eng.com

Renco Americas (FL)
+1.800.645.5828
sales@rencousa.com

StandexMeder Europe (Germany)
+49.7733.9253.200
salesemea@standexelectronics.com

StandexMeder Asia (Shanghai)
+86.21.37606000
salesasia@standexelectronics.com

Standex Electronics India (Chennai)
+91.98867.57533
salesindia@standexelectronics.com

Standex Electronics Japan (Kofu)
+81.42.698.0026
sej-sales@standex.co.jp

IATF 16949 CERTIFIED · ISO 9001 CERTIFIED · ITAR · NIST · AS9100 CERTIFIED

standexelectronics.com