FORD CASE STUDY

Executive Summary

Ford Motor Company identified a critical safety and operational gap on its automotive assembly lines: production workers needed the ability to stop the line immediately from any point along its length. Traditional point-based emergency stop (Estop) buttons left unavoidable gaps in coverage, and installing sufficient devices to eliminate those gaps was cost prohibitive and impractical. Rees responded by engineering a **cable operated emergency stop switch** system that enabled line stoppage from anywhere along a run of cable. Within months, Rees delivered a rugged, industrial grade prototype that met Ford's stringent safety and quality expectations. The solution was so successful that it was adopted across Ford assembly plants—and ultimately across multiple industries worldwide.

Client Overview: Ford Motor Company

Ford is one of the world's largest automotive manufacturers, operating high volume, high precision assembly plants with uncompromising standards for worker safety, product quality, and uptime efficiency. With complex, continuously moving production environments, Ford requires failsafe, intuitive safety systems that empower frontline operators.

Challenges

1. **Incomplete EStop Coverage Along the Line**
   Traditional hardwired emergency stop buttons were spaced at intervals, **creating gaps where workers could not reach an Estop quickly.** Closing those gaps by adding devices at short intervals would have required significant wiring, panel space, and hardware—driving up cost and complexity.

2. **Urgent Safety & Quality Risk Mitigation**
   Automotive assembly operations move fast. A delay of even seconds in stopping the line can increase the risk of injury, equipment damage, or compromised product quality. Ford needed a r**apid response solution** that operators could activate without hesitation, even under stress.

3. **High Development Cost vs. Uncertain Demand**
   At the outset, the request came from **a single Ford location for a relatively small use case.** Engineering a new device class represented a substantial R&D investment with unclear market adoption. The solution needed to be **scalable, durable, and commercially viable** should broader demand materialize.

Solution: Cable-Operated Emergency Stop Switch

Rees engineering teams collaborated closely with Ford to rethink line safety activation. In just a few months, the team developed a new category of industrial switching technology: **the cable operated emergency stop.**

How It Works

A cable runs the length of the assembly line (or conveyor). **Pulling the cable at any point trips the switch and stops the line immediately,** providing access to emergency control across long distances.

Designed for Harsh Industrial Environments

- Heavy-duty, die-cast aluminum housing for impact and environmental resistance.
- Gold coated contacts engineered for long electrical life and high reliability in demanding conditions.
- Configurable cable spans to match varying line lengths and plant layouts.

Human Centered Safety

The pull anywhere design reduces operator hesitation. Workers do not need to locate the nearest button—**the line is always within reach.**

Results & Impact

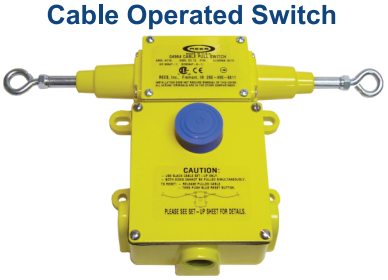
- **Rapid Delivery:** Prototype delivered in less than 9 months, accelerating Ford's ability to close a safety gap.
- **Positive User Acceptance:** Plant teams reported the solution aligned with their need for immediate, line wide access to an emergency stop.
- **Enterprise Adoption:** Following pilot success, Ford implemented cable switches across its assembly operations, improving consistency in safety response.
- **Cross industry Standard:** What began as a custom safety solution for Ford became a widely adopted industrial safety practice for conveyor based operations.
- **Platform for Innovation:** Rees leveraged the core design to create a family of specialized cable switch products for industry specific requirements.

Product Line Extensions Inspired by the Original Design

Building on the success of the Ford application, Rees expanded the cable-switch platform to serve additional environments:

VARIENT	KEY FEATURES	IDEAL APPLICATIONS
Food & Wash down Safe Cable Switches	Special coatings; stainless steel external hardware; corrosion resistance	Food & beverage processing; sanitary wash down zones
Explosion Proof Cable Switches	Housing and components rated for hazardous (classified) locations	Mining, paint rooms, combustible dust environments
BiDirectional Cable Switches	Activation from either direction over long spans	Extended conveyors in logistics, package handling, ecommerce fulfillment

Bi-Directional Cable Operated Switch



04964-204

This switch is activated by pulling the cable on either side. The switch can only be activated by pulling on the cable one side at a time (not simultaneously).

04944-900

This switch is particularly competent for use in Emergency Stop applications as well as for ordinary circuit control.

04944-900

This switch is particularly competent for ordinary circuit control but is not recommended for Emergency Stop applications

About Rees

Rees is a U.S. manufacturer of industrial safety control devices with decades of experience serving heavy industry, automotive manufacturing, material handling, and process environments. The company specializes in rugged, operator friendly solutions engineered for reliability under extreme conditions. Rees continues to enhance sensing, diagnostics, and connectivity options for its cableoperated safety systems, including integration into plantwide safety PLCs, predictive maintenance alerts, and extended cable life monitoring.