
# The Value of Safety

*A position for emergency stop systems*

## Take a moment to consider the value you would place on a viable and economical way to address the following three issues that threaten your industrial businesses today

*Personal injury and damage to equipment that affects production efficiency*

*OSHA fines and litigation payouts*

*Damage to your brand reputation and its associated value*

Unexpected... by definition something that has not been foreseen, clearly if it had been foreseen you would have already taken action to put in place systems or procedures to prevent the possibility in the first place; life, however is not quite so predictable. The more complex an operation or facility is, the more likely the unexpected will happen at some point.

In industry, you protect against accidents by installing guards, procedures, using personal protective equipment, safety systems and so on, but there is always a balance set between operational efficiency and safety, based on the assumption that procedures will be followed, guards will not be defeated, protective equipment always worn and systems will not fail.

Reality shows that while progress has been made, gaps still remain, the unexpected happens and there is, as a consequence, and likely room for improvement.

Almost all plant and machinery that incorporates a hard-wired Emergency Stop switch has two remaining risk factors, these are accessibility and speed of response.

- Accessibility because the Hard-Wired E-Stop switch is not necessarily going to be at hand when the arising emergency is happening, furthermore the nearest and possibly only E-Stop may even lead the user toward the source of the danger.
- Speed of response because in the moment of the impending emergency the time taken to get to a hard-wired E-Stop can make the difference between successful intervention and accident already happened.

### The cost of accidents

OSHA fines increased by more than 80% in August of 2016; this increase was long overdue and are intended to force companies to take accident prevention seriously. Fines can run into the hundreds of thousands and any way to help prevent the unexpected turning into a reportable accident should be considered seriously.

Accident rates vary by industry sector but as a general rule heavy industry has an accident rate of around 5% of the work force and mid-level industry around 3%, also around 74% of accidents happen during routine job activities.

Aside from the fines your company will pay OSHA, loss of workers recovering from injury and cost of litigation for workplace accidents have also increased and need to be considered as a cost of doing business.. These costs are far from insignificant and for a company that also has a high dependency on brand recognition or, conversely, would be severely damaged by a safety incident associated with the brand, damages to income can be long lasting and extensive.

### A viable and economical answer: the Safe Wireless E-Stop System

Evolution of wireless system architecture and design has created wireless solutions that meet the requirements for third party SIL3 safety approval. This is achieved with high reliability high diagnostic coverage hardware and software coupled with deterministic RF communication methods that are in essence very similar to that of EtherNet/IP CIP Safety and PROFIsafe.

Laird™ has applied these advanced design methods and created the Safe-E-Stop™ wireless emergency stop system, which allows:

- Faster response to dangerous situations with instant access to an E-Stop switches that workers carry with them and are always available, eliminating delays in halting an emergency situation.
- Minimal worker motion by eliminating the need to move to a fixed position E-Stop that may be in a hazardous location while also reducing possible fall accidents while rushing to a fixed station.
- Improved worker safety through the avoidance of cabled E-Stop trip hazards and constraints, enabling work away from environmental hazards such as heat, dust, chemicals, etc.
- Increased uptime and productivity with control where it is best utilized, allowing dynamic work cells so the process can be streamlined, rather than where it is easiest to hard-wire.

## Simple Implementation

Integrating a Laird Safe-E-Stop system into your operation is simple and can be implemented in only a few hours, in most cases.

1. Mount the Machine Safety Device (MSD) in a convenient location near the workers and connected to a suitable power outlet

2. Wire the E-Stop Safety relays in series with the existing hard-wired system and an antenna mounted.

3. Assign and link up to five Personal Safety Devices (PSDs) with workers and with the MSD

Now, the system is ready for action.

## Clear Direction

The immediate benefits defined above and low cost of implementation make this supplemental solution an easy decision for most applications that already have a hard-wired E-Stop system in use.

Your business will see the benefit of

1. A likely reduction in personal injury and damage to equipment
2. A consequential reduction of reportable accidents and reduction in OSHA fines and litigation payouts resulting from preventable injury.
3. A better protected brand reputation and its associated value as a result of improved safety.

With Laird Wireless Automation and Control solutions you can be assured your workers will have the best solutions available that place them in the best vantage point to complete their task, safely and efficiently. With more than 70 years of experience we deeply understand your business - we live your business - and, in turn, design solutions to optimize productivity while reducing the potential for incidents.

Contact Laird at 234.806.0019 or your authorized Rockwell Automation distributor today for more information on the Laird Safe-E-Stop.


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WACS-PAP-ESTOP FEB17