

# Laird™ Safe-E-Stop™ System

## Personal and Machine Safety Devices

### Mobility *where you need it.* Response *when you need it.*

The Laird Safe-E-Stop is designed to supplement and enhance hard-wired Emergency Stop systems with a SIL 3 rated wireless solution.

The Safe-E-Stop enhances safety by allowing an individual or group of operators to respond to an emergency situation without the delay typically associated with moving to a hard-wired e-stop station. In some cases, the closest machine mounted e-stop may be in the same danger zone created by the emergency. Rushing to the next available e-stop can be a hazard in itself, but also cost critical seconds to do so. Having an e-stop within reach during a crisis can save valuable seconds, potentially valuable equipment, and even lives.

With redundant safety relays, teams can work uninterrupted, knowing that they are secure and can focus on the task at hand. With both LED and LCD displays, the system provides status indications, when needed, and the EtherNet/IP port on the Machine Safety Device (MSD) can be used to fully report the status of the wireless E-Stops to operations personnel.

Up to five Personal Safety Devices (PSDs) can be linked to the MSD simultaneously, so a number of operators can work independently, or collaboratively, to oversee an operation. If an E-Stop on any of the linked PSDs is activated, the MSD commands a stop; all of the PSDs are immediately notified of the stop condition, and which PSD was responsible for the stop.

Additionally, the PSDs have visual and haptic (vibration) warning systems for conditions such as low battery and low RF signal; if one of the active PSDs moves toward the edge of its operating range (up to 100m) it alerts the user of the issue so that they can return to a location with stronger signal.

Using a wireless e-stop will allow your workers greater mobility while still protecting the investment in both personnel and machinery.



### FEATURES

- SIL 3 certification pending TUV

#### *Personal Safety Device*

- Twist release E-Stop switch
- Two-step Enable switch
- Status LEDs, LCD and haptic feedback
- Connectivity up to 100m from MSD
- Rechargeable Li-ion battery with a fourteen hour operating life and three to four hour rapid charge
- High impact red rubber bumper (other colors available on request)
- IP67 housing for water resistance

#### *Machine Safety Device*

- 15 addressable PSDs per MSD
- Up to five linked/active PSDs at any time
- Redundant E-Stop and communication loss safety relays, and dual safety inputs
- RF antenna port
- RJ45 EtherNet/IP port with AOP available
- 24V dc input power
- 24Vdc 8A safety relays

# Laird Safe-E-Stop System

## TECHNICAL DATA AND SPECIFICATIONS

### ELECTRONIC DATA

Functions	E-Stop, Link (activate), Unlink (deactivate), and dual-step permissive functions.
Digital Circuitry	Dual-processor self-monitoring safety technology
Communications	Black Channel secured
PSD Battery	Rechargeable Li-ion battery
Battery Life	>14h at 20° C; 100% constant use (after 500 cycles)
MSD Safety Relays rating	24Vdc 8A

### OPERATION AND INDICATION

E-Stop switch	Dual force guided contacts
Comm. Loss	Dual force guided contacts
PSD Buttons	1 dual-step permissive 1 request to link 1 request to unlink
STATUS/INDICATION	
PSD LEDs	4 status LEDs
MSD LEDs	4 status LEDs 4 Safety relay status
PSD / MSD LCD	Status reporting

PSD HAPTIC Operator alerting

### STANDARDS

Compliance	CE ISO 61508 SIL 3 TUV pending ISO 13850	Stop function Comm. loss function
------------	---	--------------------------------------

### MECHANICAL DATA

	PSD	MSD
Weight	Approx. 200g (8oz.)	
Dimensions (L x W x H)	138 x 65 x 54mm (5.4 x 2.6 x 2.1 in.)	162 x 109 x 61mm (6.4 x 4.4 x 3.5 in.)
Housing Material	High-impact polymer and rubber bumper	Polymeric
Housing protection rating	IP 67	IP30
Operating temperature	-20° to +60° C (-4° to +140° F)	-20° to +60° C (-4° to +140° F)
Vibration and shock	Vibration/impact and drop tested to 1m on concrete	Shock and vibration tested

### RF

Frequency Range & Power (subject to geographic approvals)	418MHz @ 10mW 433-434MHz @ 5mW 450-470MHz @ 10mW 868-869MHz @ 1mW 902-928 MHz @ 1mW
Antenna	PSD Internal MSD External

### ACCESSORIES

PSD Mounting	Open belt clip or holster belt clip
Battery charger	Processor-controlled fast (3 to 4 hour) charger; One-bay and six-bay versions available.
Labeling	Multi-colored logo sheet
MSD Secondary Enclosure	IP66 enclosure with back plate, DIN rail and three conduit holes (plugged)
110-240VAC to 24Vdc MSD Supply	DIN rail mount MSD power supply
Various accessories and Kits	Including Antenna mounts, cables, PSD belt clip, battery chargers, and manual.

United States  
+1.234.806.0018

Canada +1.514.908.1659

Europe +49.2161.6363.0

United Kingdom  
+44.1932.247511

Latin America  
+55.19.3115.5336

[www.lairdtech.com](http://www.lairdtech.com)

WACS\_DS\_Safe-E-STOP\_SEP17

Any information furnished by Laird and its agents is believed to be accurate and reliable. All specifications are subject to change without notice. Responsibility for the use and application of Laird materials rests with the end user since Laird and its agents cannot be aware of all potential uses. Laird makes no warranties as to the fitness, merchantability or suitability of any Laird materials or products for any specific or general uses. Laird, Laird Technologies, Inc or any of its affiliates or agents shall not be liable for incidental or consequential damages of any kind. All Laird products are sold pursuant to the Laird Technologies' Terms and Conditions of sale in effect from time to time, a copy of which will be furnished upon request. © Copyright 2017 Laird Technologies, Inc. All Rights Reserved. Laird, Laird Technologies, the Laird Technologies Logo, and other marks are trademarks or registered trademarks of Laird Technologies, Inc. or an affiliate company thereof. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird or any third party intellectual property rights.