

# PowerGuard™

## Electrification Isolation Solutions



**CONDUCTIX**  
wampfler

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# PowerGuard™

**PowerGuard**, along with Conductix-Wampfler Power Interrupting Sections, are designed to provide safe maintenance zones for servicing overhead cranes and other mobile equipment. This specially engineered switch array is ideal for three-phase bar systems that use tandem collector assemblies. By employing both the Power Interrupting Sections and PowerGuard, the user can ensure that tandem collectors from adjacent cranes will never accidentally transfer live power into the maintenance zone. This is done by assigning a dedicated switch for the Power Interrupting Section's "buffer zone" which isolates it from the energized runway. A third switch then grounds the maintenance zone to make sure the maintenance person is safe while working on the crane.

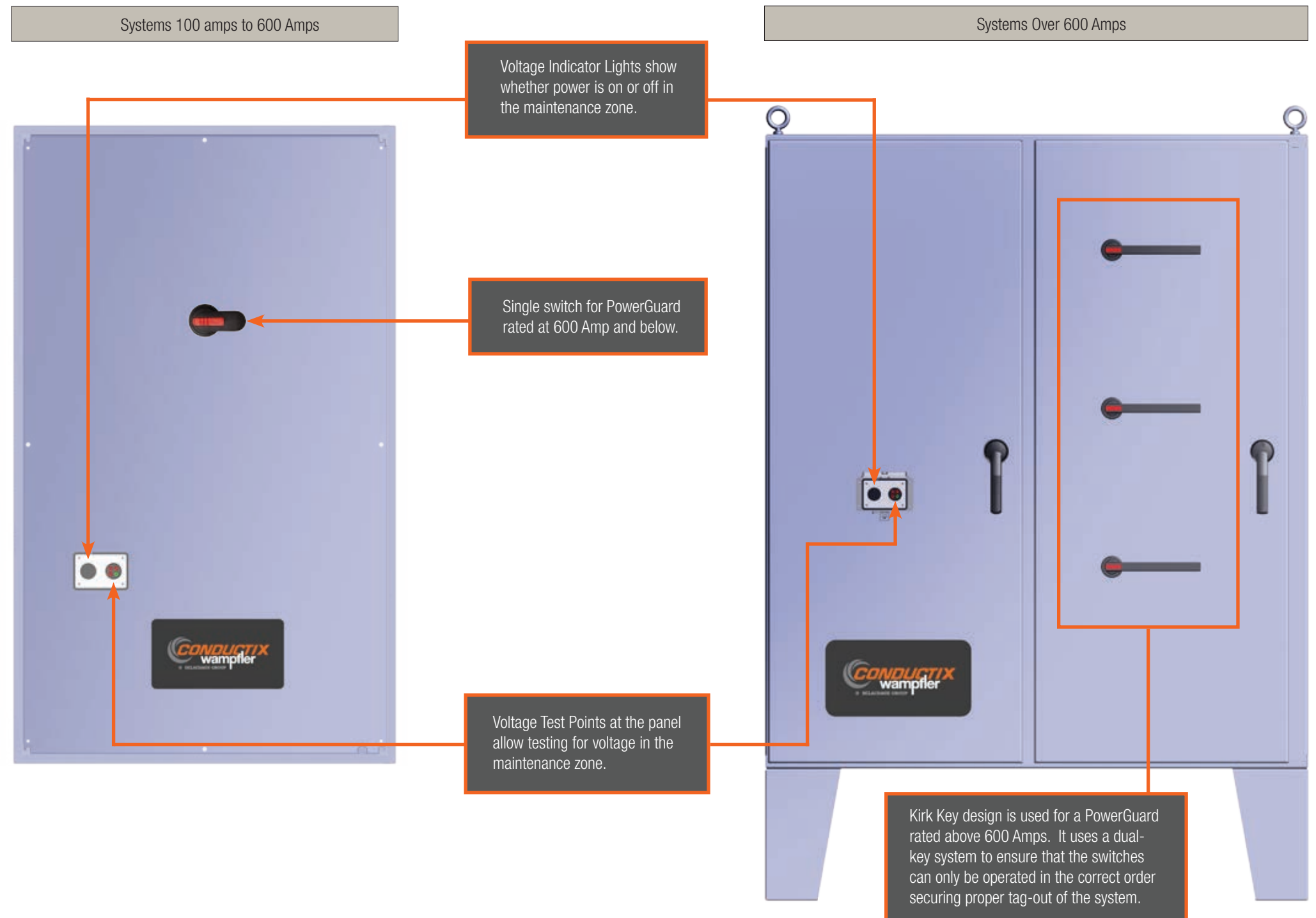
**PowerGuard** is easy to install and designed for ease of use and safety. A visual indicator on the front panel identifies when power has been removed from the maintenance zone. Voltage test points are also included that can be used to double-verify that power has been removed from the maintenance zone.

## Features

- Grounded maintenance zone
- Designed for the application
- Three switch sets for safe operation
- Single-handle or Kirk® Key design for error free operation
- Visual voltage indicator
- Voltage test points

## Benefits

- Dual-voltage indicators
- Personnel safety
- Simple switch operation
- Real maintenance zone isolation
- Complies with lock-out / tag-out procedures.

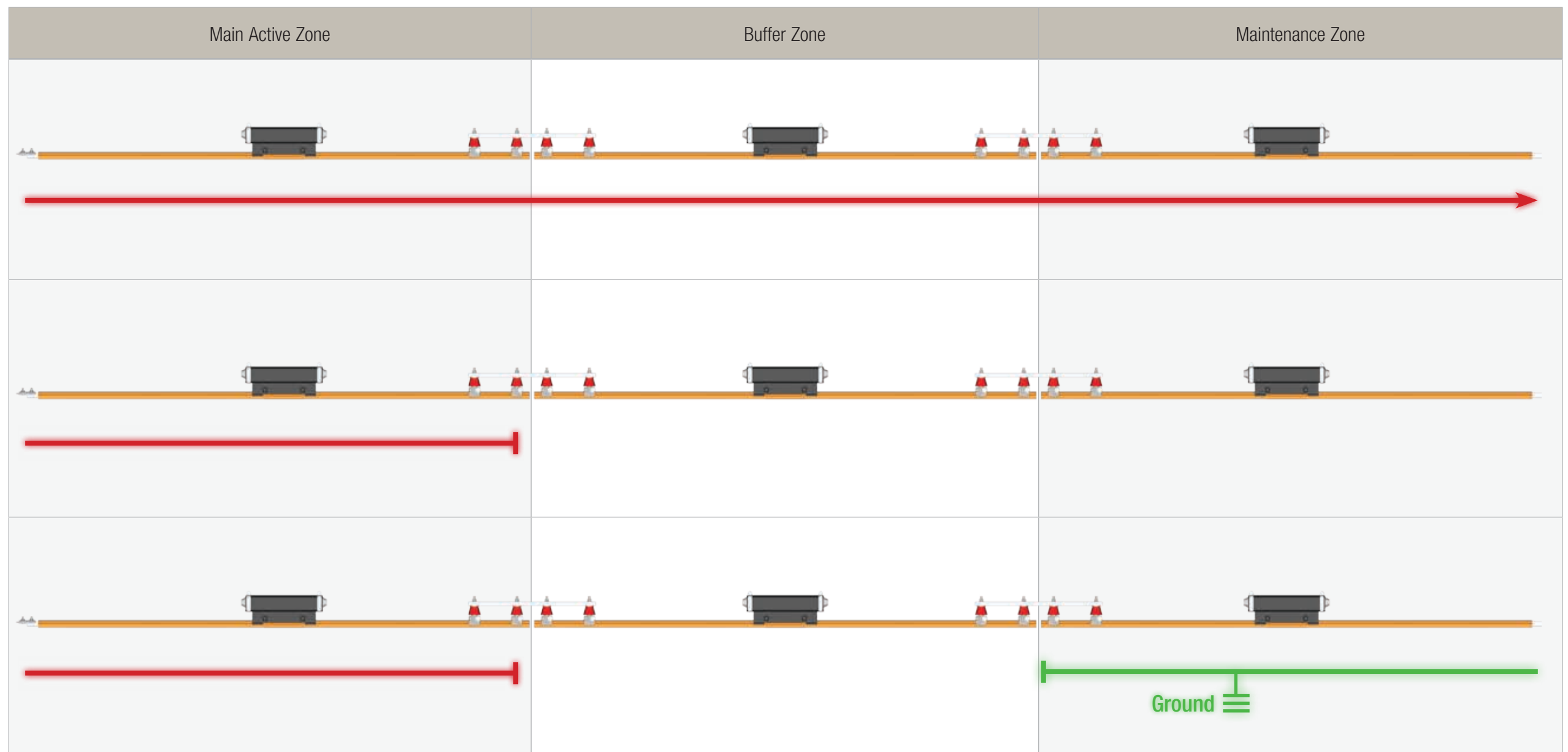


# How it Works

**Power Interrupting Sections (PIS)** create unpowered zones of conductor bar so that overhead cranes can be safely maintained. The PIS provide a buffer zone to prevent tandem collectors on adjacent cranes from creating a power bridge to the maintenance zone. PIS consist of three short sections of conductor bar with an air gap between each of section. Each of the three conductor bar sections has a power feed. The buffer zone is always the middle piece of conductor bar. Of the two remaining bar segments, one will be attached to the powered runway. The other will be attached to the maintenance zone. The location of the powered section and the maintenance section depends on whether the maintenance zone needs to be to the right or left.

For details on the Power Interrupting Sections for Safe-Lec 2 and Hevi-Bar II, refer to catalog CAT1003.

**Position 1** - Complete runway is powered.



**Position 2** - Power is removed from the buffer and maintenance zones.



**Position 3** - Maintenance zone is grounded.



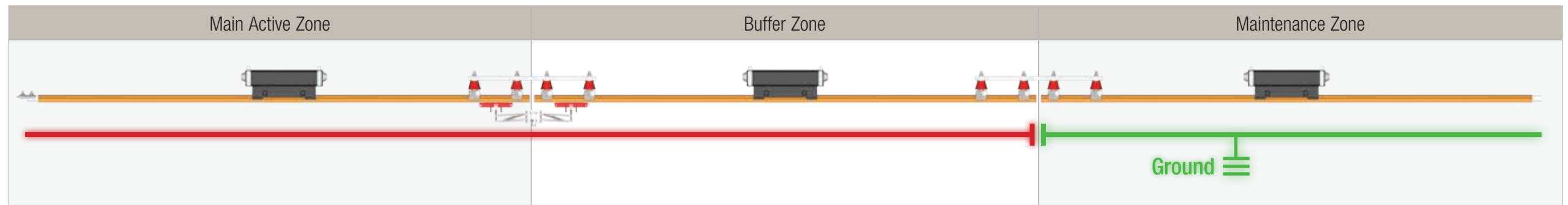
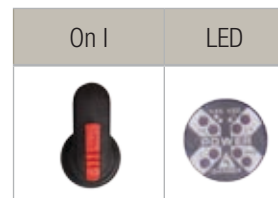
# Maintenance Zone Safety

If a tandem collector from an adjacent crane moves into an unpowered buffer zone, it will transfer power from the active runway to the buffer zone.

## Conductix-Wampfler Solutions

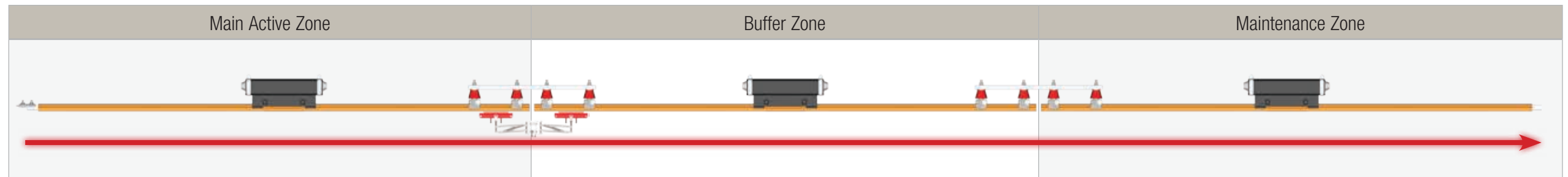
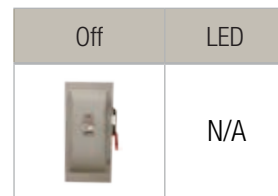
The Conductix-Wampfler PowerGuard is engineered to create true isolation of the maintenance zone. Even when power is bridged to the buffer zone, the maintenance zone will remain unpowered and grounded. This creates a safe and effective section for maintenance.

The length of the buffer zone is based on the use of one set of tandem collectors. If the vehicle requires more than one set of tandem collectors or the collectors being used are not standard, please contact Conductix-Wampfler for assistance.



## Off-the-Shelf Solutions

With other "off-the-shelf" solutions, the buffer zone and maintenance zone are tied together electrically at the switch. A tandem collector from an adjacent crane could inadvertently power the maintenance zone, making it unsafe and unusable.



# Sizing and Switch Operations

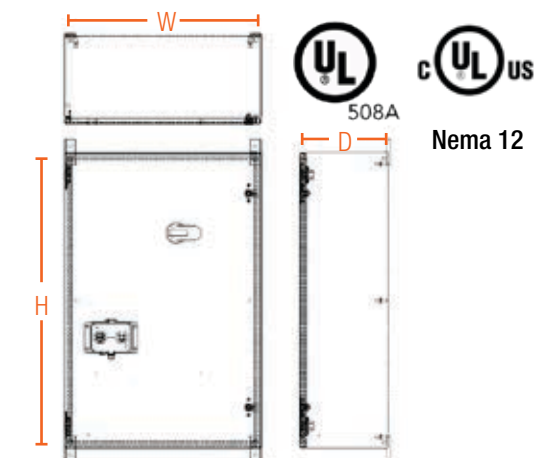
## How to Size a PowerGuard

Sizing the PowerGuard correctly is important to ensure that the resulting solution meets the customer's specific needs.

- **Option 1** Add together the maximum current draws (in amps) of all cranes that operate on the runway. Choose the switch with a current capacity that matches the total. If an exact match is not available, choose next highest amperage switch.
- **Option 2** If a system has an end maintenance zone, the PowerGuard can be sized based on the maximum current draw of all cranes that will be in the maintenance zone at a given time.

If multiple power feeds are used, and/or the maintenance zone will not be located at the end of the runway, please contact Conductix-Wampfler for assistance with selecting the correct PowerGuard.

Current Capacity (Amps)	Voltage	Part No.	H Dim. (in.)	W Dim. (in.)	D Dim. (in.)
100	600v	577418	36	24	10
200	600v	577400	60	36	12
400	1000v	577421	60	49	18
600	1000v	577422	72	61	18
800	1000v	577424	72	61	18
1200	1000v	577425	90	78	20
1600	1000v	577426	90	78	20



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