

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

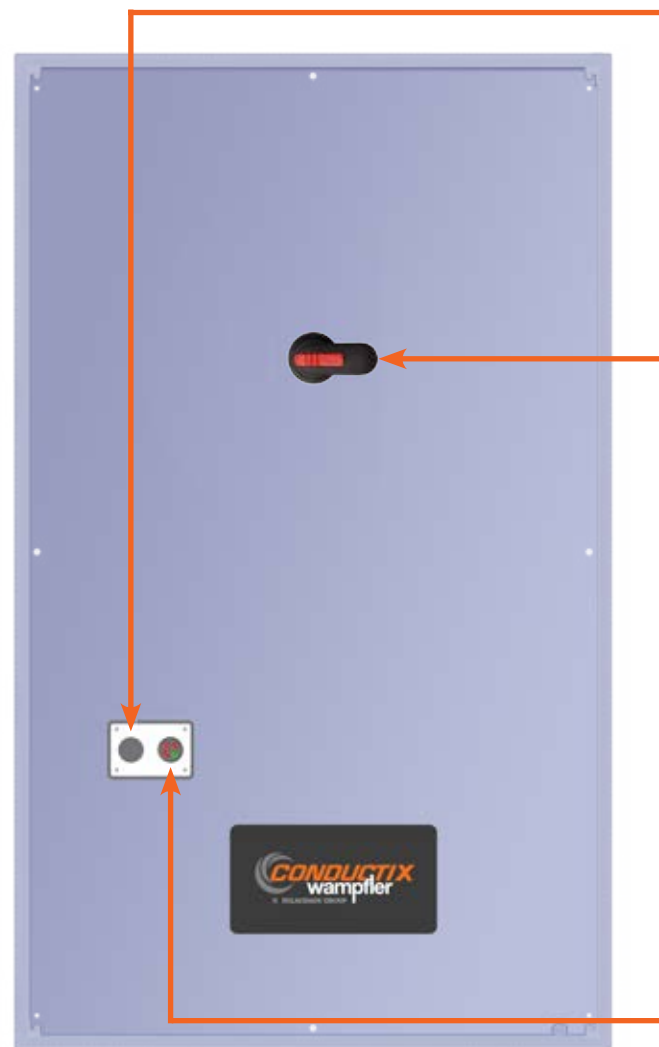
- Grounded maintenance zone
- Designed for the application
- Three switch sets for safe operation
- Single-handle or Kirk® Key design for error free operation
- Visual voltage indicator
- Voltage test points

Benefits

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



Systems 100 amps to 600 Amps



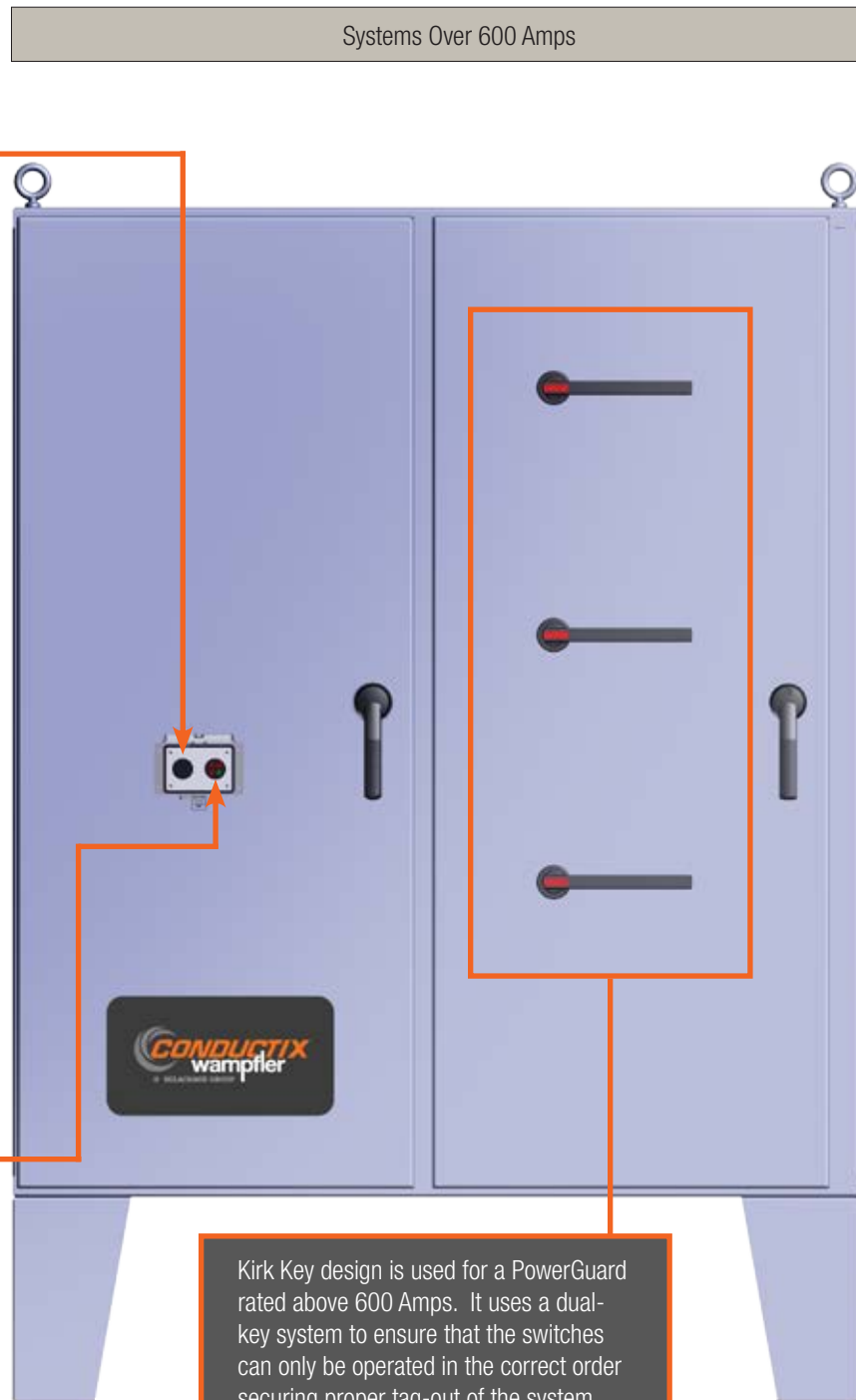
Systems Over 600 Amps

Voltage Indicator Lights show whether power is on or off in the maintenance zone.

Single switch for PowerGuard rated at 600 Amp and below.

Voltage Test Points at the panel allow testing for voltage in the maintenance zone.

Kirk Key design is used for a PowerGuard rated above 600 Amps. It uses a dual-key system to ensure that the switches can only be operated in the correct order securing proper tag-out of the system.



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.

Position 1 - Complete runway is powered.



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



Position 3 - Maintenance zone is grounded.



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

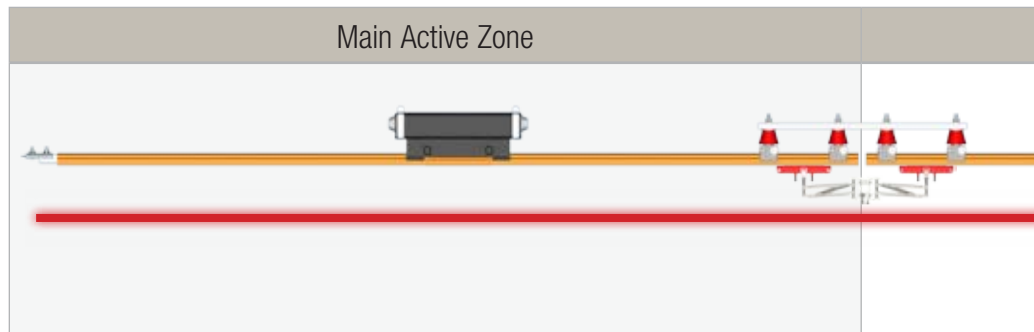


Maintenance Zone Safety

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.

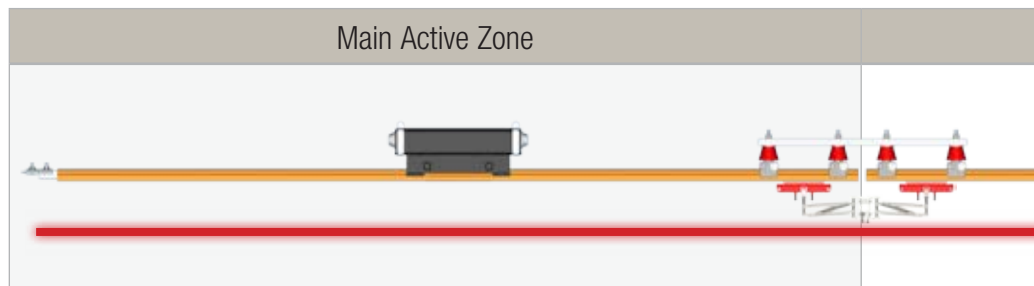
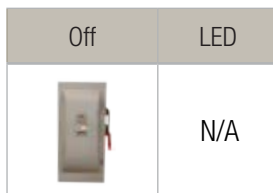
Conductix-Wampfler Solutions

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.



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

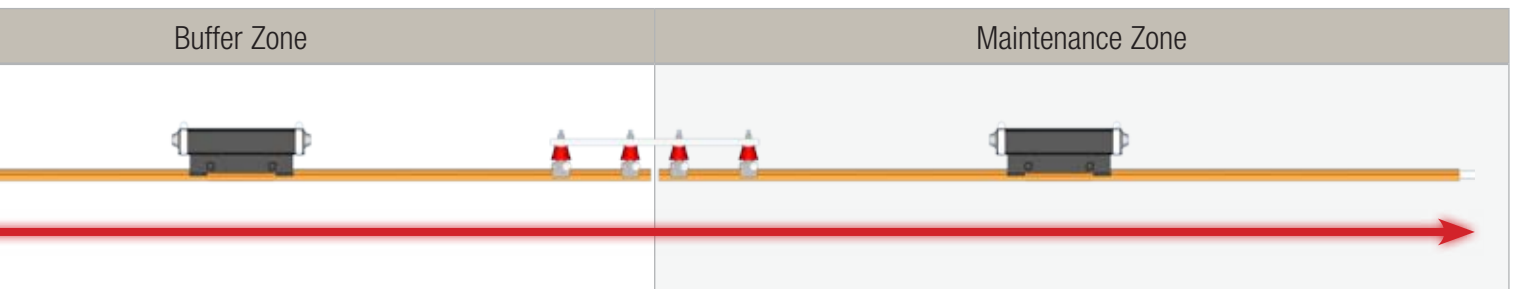
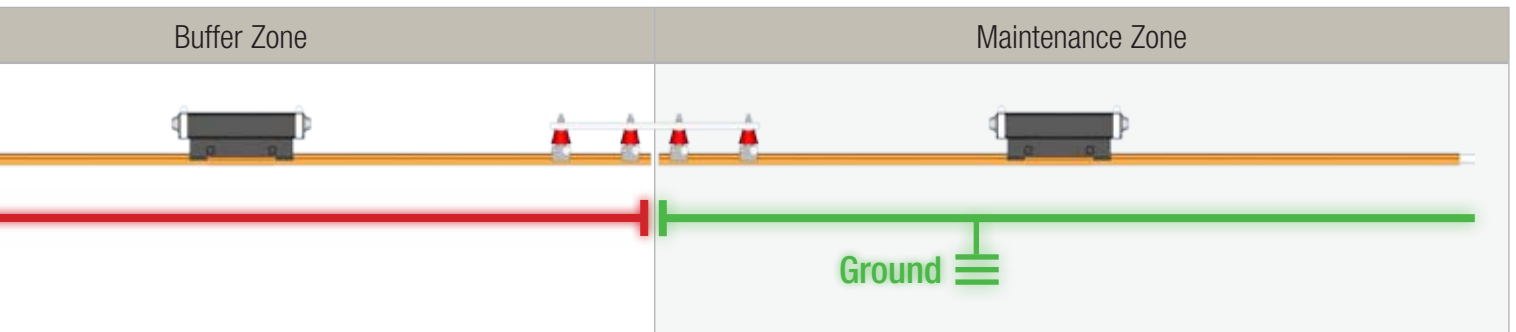
How to Size a PowerGuard

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

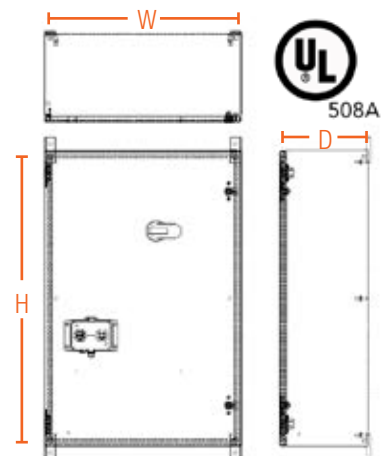
- **Option 1** Add together the maximum current draws (in amps) of all cranes that operate on the runway. Choose the switch with a current capacity that matches the total. If an exact match is not available, choose next highest amperage switch.
- **Option 2** If a system has an end maintenance zone,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

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.



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



www.conductix.us

USA / LATIN AMERICA

10102 F Street
Omaha, NE 68127

Customer Support
Phone +1-800-521-4888

Phone +1-402-339-9300
Fax +1-402-339-9627

info.us@conductix.com
latinamerica@conductix.com

CANADA

1435 Norjohn Court
Unit 5
Burlington, ON L7L 0E6

Customer Support
Phone +1-800-667-2487

Phone +1-450-565-9900
Fax +1-450-851-8591

info.ca@conductix.com

MÉXICO

Calle Treviño 983-C
Zona Centro
Apodaca, NL México 66600

Customer Support
Phone (+52 81) 1090 9519
(+52 81) 1090 9025
(+52 81) 1090 9013

Fax (+52 81) 1090 9014

info.mx@conductix.com

BRAZIL

Rua Luiz Pionti, 110
Vila Progresso
Itu, São Paulo, Brasil
CEP: 13313-534

Customer Support
Phone (+55 11) 4813 7330

Fax (+55 11) 4813 7357

info.br@conductix.com

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