

# SureSwitch Multi-Volt contactor

*A single-phase contactor certified for A2L refrigerants, designed for residential air conditioning and light commercial refrigeration applications.*



The SureSwitch Multi-Volt contactor from White-Rodgers provides 5x the standard contactor life, ensuring lower long-term costs by avoiding downtime and product loss.

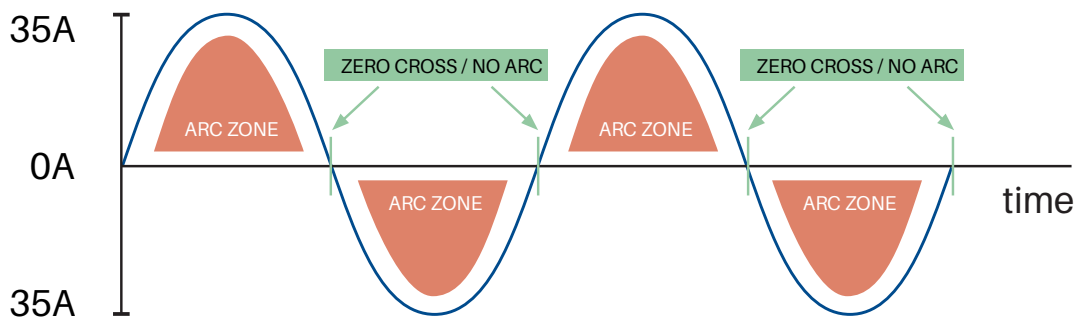


### Smarter switching

When motors are switched, the resulting electrical arc and heat cause damage to relay contacts. Over time these contacts become pitted and burned. The larger the load, the larger the arc, which results in contactor damage.

Traditional electromechanical contactors switch randomly and typically switch in the arc zone. The SureSwitch switches in the zero cross-zone when there is no arc to avoid contact damage.

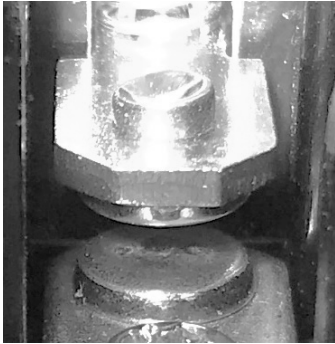
### Alternating current (amperage) sine wave



SureSwitch provides consistent zero cross switching for extended contactor life.

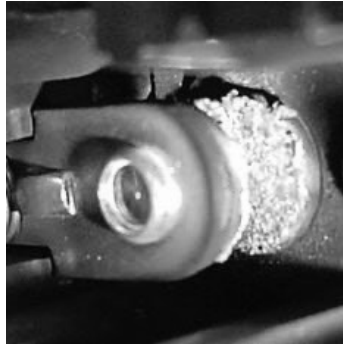
## Traditional contactors vs. White-Rodgers SureSwitch

The SureSwitch uses an innovative light sensor inside the relay to indicate arcing. The microprocessor modifies the switch time to minimize the arc and creates a unique opening and closing algorithm to achieve consistent Zero Cross Switching. SureSwitch contacts show no damage after 1-million cycles.



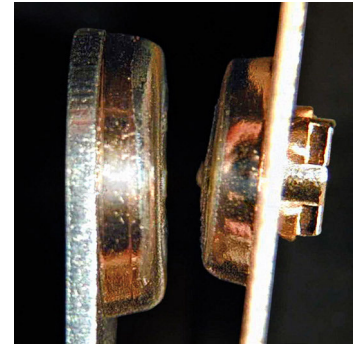
**TRADITIONAL CONTACTORS**

*New*



**TRADITIONAL CONTACTORS**

*after 300k cycles*



**SURESWITCH CONTACTORS**

*after 1,000,000 cycles*

### Did you know?

An external sensor can be connected to the SureSwitch microcontroller to allow OEM custom fault protection and recovery.



### Smarter system control

The SureSwitch microprocessor accepts sensor inputs that allow custom algorithms to resolve application-specific problems.

For example, an abnormal temperature reading will trigger the SureSwitch to signal an alert. Innovative predictive current-based algorithms will indicate which parts are degrading or require service.

White-Rodgers is the leader in custom designed electronic control solutions for HVAC and refrigeration. Let us help solve your application challenges.

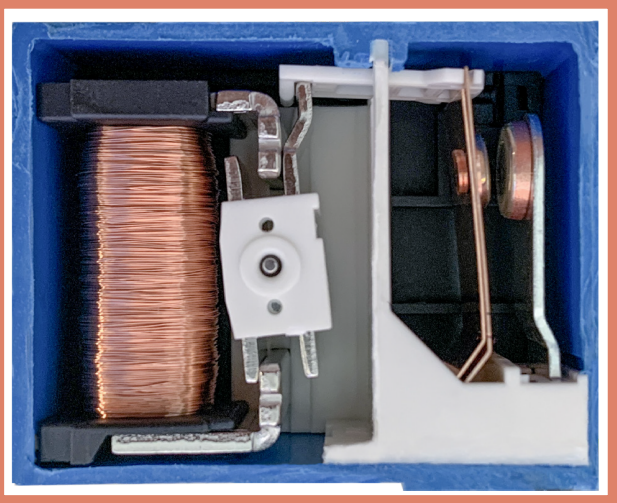
**Note:** For up to 5 ton / 40A single phase applications

*A completely enclosed switched contact provides customer peace of mind and low GWP solutions.*

*Completely-enclosed contacts*



*Latching mechanism contacts*



*Only SureSwitch offers a latching relay in a sealed environment that ensures contact points won't chatter - even at low voltage and prevents pests and debris from damaging the contacts.*

**Preventing callbacks is key to maintaining reputations.**

In warmer climates, ants are drawn to the hum and frequency of the contactor. The pests get caught in the contacts and mechanism, making the unit inoperable. Many service calls are due to a bad contactor, and once a failure occurs, it will likely fail again if the contactor isn't sealed.

SureSwitch offers the only completely enclosed switched contact to keep out pests and debris and is backed by a five-year limited warranty.

The SureSwitch also uses a latching switch mechanism that minimizes noise by ensuring the contact points won't chatter, even at low voltage.

As regulatory changes continue to push toward low GWP refrigerants, many traditional contactors may not meet necessary safety requirements. The SureSwitch multi-volt contactor is certified for A2L refrigerants.



## Selectable compressor protection

The SureSwitch compressor protections were developed and approved for Copeland Compressors.



### **Brownout protection:**

The SureSwitch control automatically determines the line voltage and sets a brownout voltage limit to protect compressors from stalling at low voltages.



### **Random start delay:**

After a brownout, the Sureswitch will delay start up between 5 to 90 seconds to allow the power grid to stabilize.



### **Short cycle timer:**

At power up, or after the compressor is de-energized, the next call for cool will be delayed for three minutes to prevent compressor damage due to rapid cycling.

**Note:** These features can be turned off if other system controllers are equipped with these functions.

## What is a Multi-Volt coil?

The SureSwitch Multi-Volt has both a 24VAC coil and a 120/208/240VAC coil. For line voltage systems, this allows for voltage changes without changing the contactor or related wiring. It provides cost savings through reduced inventory by stocking just one single phase contactor for all loads under 40 amps.

### Specifications

#### Electrical ratings

Line voltage input ..... 120/208/240 VAC, 50/60 Hz  
Full load amperes ..... (FLA) 40A  
Locked rotor amperes .....(LRA) 200A  
Low voltage coil ..... 24 VAC, 50/60 Hz  
Line voltage coil..... 120/208/240VAC, 50/60 Hz  
Brownout/Reset voltage ..... 180 VAC / 190 VAC

#### Operating temperature range

-40° to 158F° (-40° to 70° C)

#### Humidity range

5 to 95% relative humidity (non-condensing)

#### Dimensions

2-3/4"W x 2-3/8"H x 3-7/8"L

#### Agency

UL Recognized to UL60730-1

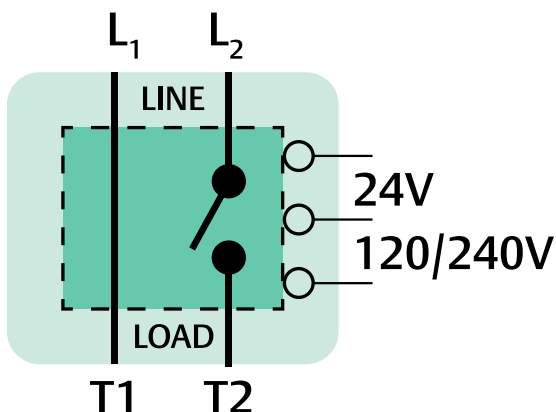
UL Certified to LZGH2/8 for A2L refrigerants

UR/CUR file number SA 1984

### OEM options

- Available in multiple mounting designs
- Voltage specific or Multi-Volt coils options
- Sensor inputs and algorithms
- Customer specific labeling and plastic colors
- Terminal / Binding Post / Lug options
- Compressor protections and delay times
- Alert outputs and LED codes

*Contact us about adding design features specific to your application.*



For more information



SureSwitch applications

Multi-Volt coil design for air conditioning, heat pump and refrigeration applications.



Outdoor condensing units



Air conditioners & heat pumps



Islands



SureSwitch Multi-Volt contactor  
**49M11-843**



Reach-in cases



Open merchandisers



Ice machines

The image shows a large wall with vertical slats. The word "COPELAND" is written in large, bold, black letters across the wall. To the right, there is a blue wall with the text "ENGINEERED FOR SUSTAINABILITY" in gold, slanted letters.

# COPELAND

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SUSTAINABILITY

## *About Copeland*

Copeland, a global provider of sustainable climate solutions, combines category-leading brands in compression, controls, software and monitoring for heating, cooling and refrigeration. With best-in-class engineering and design and the broadest portfolio of modulated solutions, we're not just setting the standard for compressor leadership; we're pioneering its evolution. Combining our technology with our smart energy management solutions, we can regulate, track and optimize conditions to help protect temperature-sensitive goods over land and sea, while delivering comfort in any space. Through energy-efficient products, regulation-ready solutions and expertise, we're revolutionizing the next generation of climate technology for the better.

To learn more, visit  
[copeland.com/white-rodgers](https://copeland.com/white-rodgers)

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