

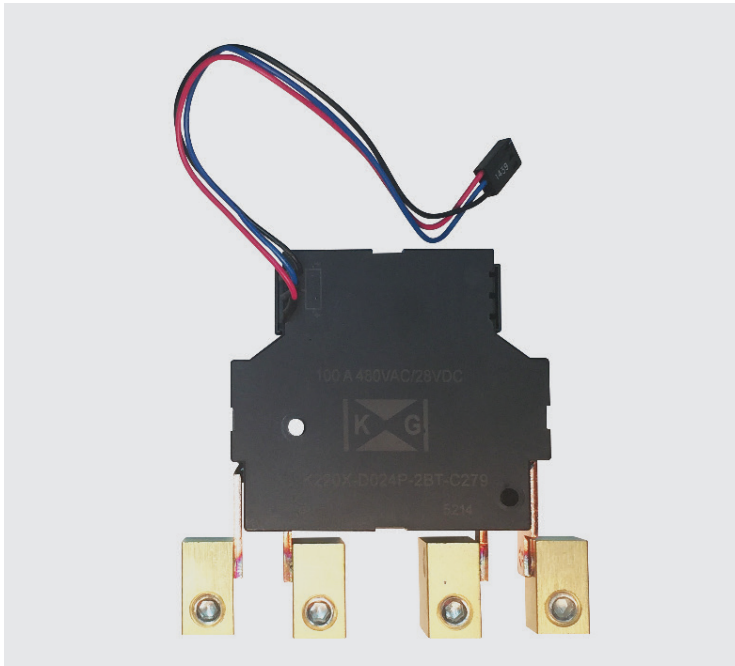


***TRANE***®

# Load Shedding Product Catalog

Generator installation problem solvers  
through Smart Load Management

## Relay Types



### Magnetic Relays

- Small footprint, typically a quarter of the size of 100 & 200 Amp contactors
- Magnetic toggle is virtually silent in operation, no heat, humming or buzzing and never electrically held in either position
- Available in 1, 2, 3 or 4 relay models
- Available from 20 to 200 Amps in single and 3 phase configurations
- Control input can be dry contacts, 24 or 120 Volts AC. Can emulate a normally open or normally closed relay



### Open Frame Relay

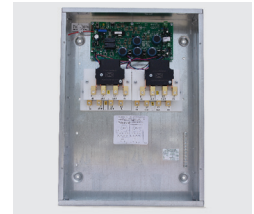
- Dual contacts provide normally closed and normally open circuits
- Virtually silent operation, no heat, humming or buzzing when using normally closed contacts
- Available in double pole for circuits up to 50 Amp capacity
- 24, 120 Volts AC and 12 Volts DC coil voltages available



## Load Shedding Relays from 30-200 Amp Compatible with ANY generator or transfer switch

### 20-200 Amps Magnetic Latching Relays

Universal load dropping/regulating relays are designed to work independently as a load dropping system, or interface seamlessly with any generator transfer switch load management controller. Magnetic latching relays are extremely reliable and offer silent operation eliminating the humming, buzzing, heat and high failure rate associated with traditional contactors. Enclosures are available in NEMA 1 and NEMA 3R ratings with groundbars and knockouts where applicable. All panels include UL listed components and UL 508 A listed as an assembly. Now available in stainless steel cans.



### Stand Alone Load Management Controller

4, 8 and 12 channel load management controllers. Monitors generator load with CT inputs for accurate regulating. Easy to program from front panel display, no PC required. Works with single and three phase circuits. Can be used for both managing and dropping loads during a utility outage. Will regulate low voltage circuits and AC circuits at the same time.



### 50 Amp Normally Closed Relay panels

Normally closed relays are designed to work with **Kohler®** or any generator, transfer switch or load shedding controller that uses normally closed signal output. Enclosures are available with 1, 2, 3, or 4 normally closed relays with 24, 120 Volt AC and 12 Volt DC coil. Enclosures are available in NEMA 1 and NEMA 3R ratings with groundbars and knockouts where applicable. All panels include UL listed components and UL 508 A listed as an assembly. Now available in stainless steel cans.



## Residential

### Make Two Wire Sense Transfer Switches work with Two Wire Start Generators

#### KGC-1 Converter Overview

The KGC-1 converts a 240 Volt sensing transfer switch to a 2 wire start transfer switch.

The interface provides the necessary voltage sensing, timing functions and switching circuits required for automatic operation. This allows a 2 wire start generator to be installed without having to change the transfer switch or wiring between the transfer switch and generator.

#### How it works

When utility power fails, the KGC-1 will pause for 5 seconds to ensure an actual power outage has occurred. The KGC-1 will then initiate a 2 wire generator start signal, starting up the generator. After a 15 second warm up period the KGC-1 will confirm generator voltage is within acceptable levels and will then output the generator transfer signal.

When utility power is restored and remains stable for more than 2 minutes the controller will automatically transfer the load back to utility and signals the generator to turn off after cool down.



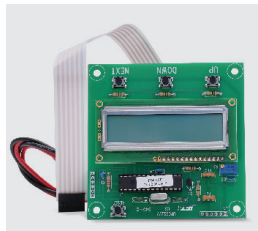
**KGC-1 Transfer Switch Converter**  
240 Volt sensing Transfer Switch to Two Wire Start Generator Converter



## Residential / Commercial Stand Alone Universal Generator Load Management Panel with Latching Relays



**LS-10114CX** Self-contained 4 circuit load management panel with (4) 100 Amp magnetic latching relays



Easy to use 3 button programming module with LCD display



Includes dual CT's for precision Load Management control

### Features

- Universal load shedding system works with ANY generator or transfer switch in managing 4 circuits from 20 to 100 Amp each and up to 2 HVAC systems using low voltage circuits
- Field programmable using installer programming tool
- Utilizes CT inputs for precision load management and to reduce the possibility of overloading generators
- Program adjustments include: generator available amperage, start up delay, amperage of each load
- Utilizes Magnetic Latching Relays eliminating the normal humming, chattering and heat associated with contactors
- Available in a variety of enclosure configurations including NEMA 1, NEMA 3R and Stainless Steel
- Compact flush mount version fits inside of studs and **optional** flush mount cover extends 3/4" past edge of can on all 4 sides for finished walls
- 5 year warranty on Magnetic Latching Relays

### Specifications

#### Electrical

|                                      |                          |
|--------------------------------------|--------------------------|
| Rated load at 277 Volts              | 120 Amps                 |
| Max. continuous operating AC voltage | 480 Volts                |
| Insulation resistance                | 1,000 MΩ at 500 Volts DC |

#### Dielectric strength:

|                           |                      |
|---------------------------|----------------------|
| Coil to contact           | 4,000 VAC for 1 min. |
| Across open contacts      | 2,500 VAC for 1 min. |
| Maximum switching current | 120 Amps             |
| Maximum switching power   | 27,700 VA            |

#### UL 508 A:

|   |          |
|---|----------|
| Ith                                     | 160 Amps |
| Maximum hp at 240 Volts AC single phase | 15 hp    |

#### IEC-60947:

|                        |                |
|------------------------|----------------|
| AC1 load               | 150 Amps       |
| AC3 load 200-240 Volts | 30 kW/105 Amps |

#### Mechanical

|                            |                                     |
|----------------------------|-------------------------------------|
| Connection terminal        | Mechanical lugs                     |
| Operation temperature (°C) | -40 to +85                          |
| Enclosure type             | NEMA 1, 3R                          |
| Warranty                   | 5 years on Magnetic Latching Relays |

## Stand Alone Programmable Load Management Controllers

### LSC Series 4, 8 & 12 Load Management Controllers



**LSC-04**  
4 Load Controller - Single Phase



**LSC-08**  
8 Load Controller - Single or Three Phase



**LSC-04X**  
4 Load Expander - Works with LSC-08

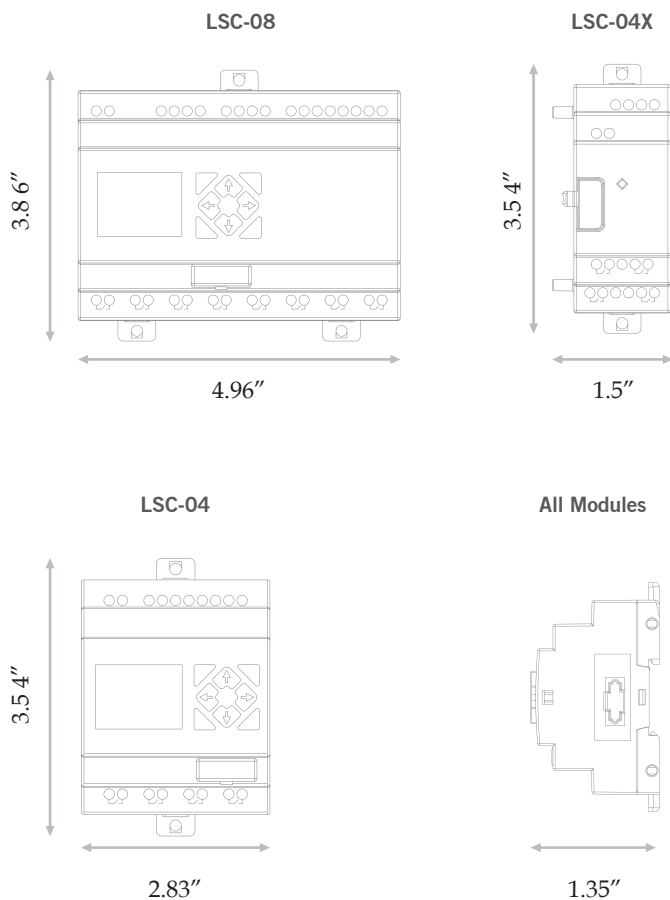
## Features

- Robust programming features allow for customization to meet almost any application
- Uses CT's to read the generator's actual current and accurately manage loads to prevent overloading --CT's sold separately--
- Field programmable with front panel controls, no laptop or programming tool required
- Works with any size of generator or transfer switch. Available in single and three phase models
- Available in 4, 8, and 12 load configurations. Each load can be independently controlled or locked out
- Small dinrail mount footprint allows for installation in most transfer switches
- Easy to use, entire program can be set up in 5 minutes or less
- Works with low voltage and AC voltage circuits at the same time to maximize efficiency

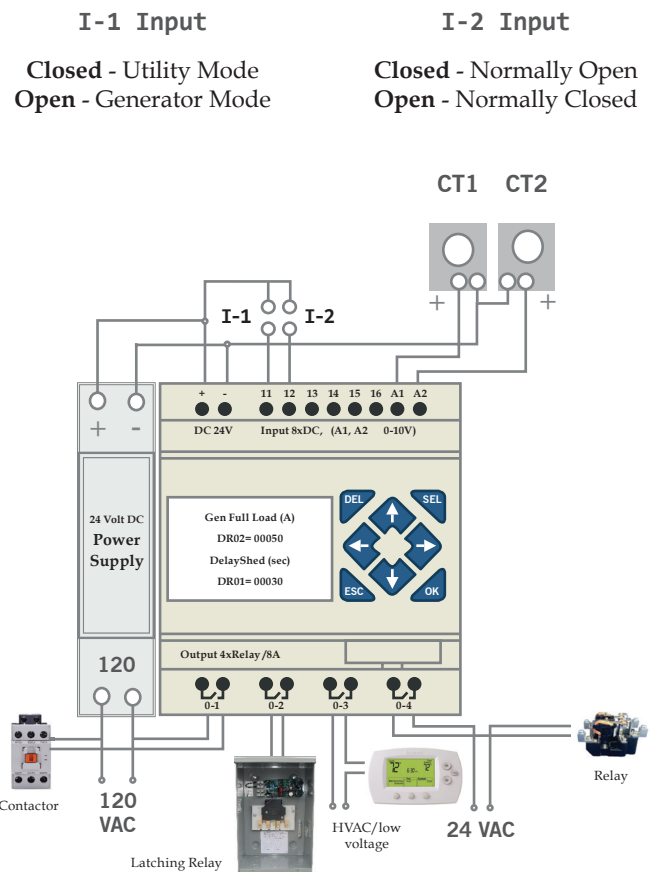
## Specifications

|                            |                                   |
|----------------------------|-----------------------------------|
| Input Voltage              | 120 VAC with 24v DC power supply  |
| Number of control relays   | LSC-04=4, LSC-08=8, LSC-08+04X=12 |
| Display                    | 4 line, 16 character LCD          |
| Program interface          | 8 programming keys                |
| Memory Type                | Retentive flash memory            |
| Analog Inputs              | 10-bit, 0-10v DC                  |
| Terminal Wire Size         | 26-16 gauge wire                  |
| Control Relay              | SPST 8 Amp resistive load         |
| Operation Temperature (°C) | -40 to +85                        |
| Module Mounting            | Din-rail                          |
| Agency Approvals           | cUL, CE, UL                       |

## Dimensions



## Typical Control Devices



## Program Settings

|                            |              |
|----------------------------|--------------|
| Generator Full Load Amps   | 0-1000 Amps  |
| Start Up Delay             | 0-10,000 Sec |
| Full Load Amps Relay 1-12  | 0-1000 Amps  |
| Delay Between Load Restore | 0-10,000 Sec |
| In-Rush Delay              | 0-10,000 Sec |
| Active Open Circuit        | On-Off       |
| Active Closed Circuit      | On-Off       |
| Generator Actual Amps      | Monitor Only |
| Relay Status               | Monitor Only |





## Residential / Commercial

### Latching Relay Panels for LSC 08/12 Controllers

#### Features

- Directly connects to any Kohler®, Generac® or Cummins® load shedding module - even the new Generac® low voltage board - to control circuits from 20 to 100 Amps each
- Utilizes Magnetic Latching Relays, eliminating the normal humming, chattering and heat associated with contactors
- Available in NEMA 01, NEMA 3R and Stainless Steel
- Available in 1, 2 and 4 relay configurations
- Compact Flush Mount version fits inside of studs and **optional** flush mount cover extends 3/4" past edge of can on all 4 sides for finished walls
- 5 year warranty on Magnetic Latching Relays



LS-101X4LX

#### Specifications

##### Electrical

|                                      |                          |
|--------------------------------------|--------------------------|
| Rated load at 277 Volts              | 120 Amps                 |
| Max. continuous operating AC voltage | 480 Volts                |
| Insulation resistance                | 1,000 MΩ at 500 Volts DC |

##### Dielectric strength:

|                           |                      |
|---------------------------|----------------------|
| Coil to contact           | 4,000 VAC for 1 min. |
| Across open contacts      | 2,500 VAC for 1 min. |
| Maximum switching current | 120 Amps             |
| Maximum switching power   | 27,700 VA            |

##### UL 508 A:

|   |          |
|---|----------|
| Ith                                     | 160 Amps |
| Maximum hp at 240 Volts AC single phase | 15 hp    |

##### IEC-60947:

|                        |                |
|------------------------|----------------|
| AC1 load               | 150 Amps       |
| AC3 load 200-240 Volts | 30 kW/105 Amps |

##### Mechanical

|                            |                                     |
|----------------------------|-------------------------------------|
| Connection terminal        | Mechanical lugs                     |
| Operation temperature (°C) | -40 to +85                          |
| Enclosure type             | NEMA 1, 3R                          |
| Control input              | 120 VAC, 24 VAC or dry contacts     |
| Warranty                   | 5 years on Magnetic Latching Relays |



## Residential / Commercial 100 & 200 Amp Single Phase Magnetic Latching Relays



**LS-101X1BX** Single 100 Amp latching relay in 12x8x6" 3R enclosure



**LS-201X1BX** Single 200 Amp latching relay in 20x14x6" 3R enclosure

### Features

- Universal load managing relays work with ANY generator, transfer switch or control circuit to manage loads
- Load dropping automatically removes loads when utility power is lost, and reconnects loads after a 5 minute delay when utility power is restored and needs no control board
- Utilizes Magnetic Latching Relays, eliminating the normal humming, chattering and heat associated with contactors
- Available in NEMA 3R enclosures and Stainless Steel
- 5 year warranty on Magnetic Latching Relays

### Specifications

| Electrical                           | 100 Amp                  | 200 Amp                  |
|--------------------------------------|--------------------------|--------------------------|
| Rated load at 277 Volts              | 120 Amps                 | 200 Amps                 |
| Max. continuous operating AC voltage | 480 Volts                | 480 Volts                |
| Insulation resistance                | 1,000 MΩ at 500 Volts DC | 1,000 MΩ at 500 Volts DC |
| <b>Dielectric strenght</b>           |                          |                          |
| Coil to contact                      | 4,000 VAC for 1 min      | 4,000 VAC for 1 min      |
| Across open contacts                 | 2,500 VAC for 1 min      | 2,500 VAC for 1 min      |
| Max. switching current               | 120 Amps                 | 240 Amps                 |
| Max. switching power                 | 27,700 VA                | 55,700 VA                |

### UL 508 A

|                                      |          |          |
|--------------------------------------|----------|----------|
| Ith                                  | 160 Amps | 240 Amps |
| Max. hp at 240 Volts AC single phase | 15 hp    | 30 hp    |

### IEC-60947

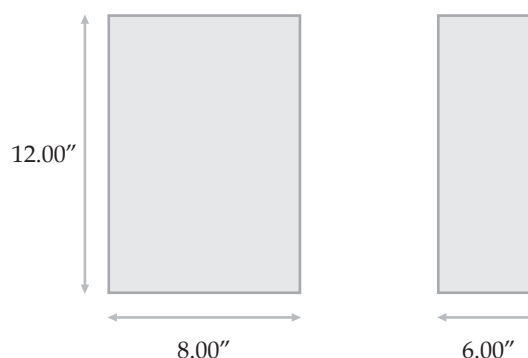
|                        |                |                |
|------------------------|----------------|----------------|
| AC1 load               | 150 Amps       | 300 Amps       |
| AC2 load 200-240 Volts | 30 kW/105 Amps | 60 kW/210 Amps |

### Mechanical

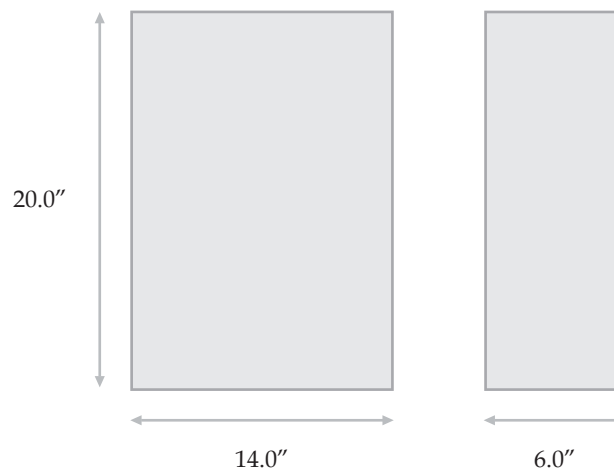
|                            |                                     |                                     |
|----------------------------|-------------------------------------|-------------------------------------|
| Connection terminal        | Mechanical lugs                     | Mechanical lugs                     |
| Operation temperature (°C) | -40 to +85                          | -40 to +85                          |
| Enclosure type             | NEMA 1, 3R                          | NEMA 3R                             |
| Control input              | 120 VAC, 24 VAC or dry contacts     | 120 VAC, 24 VAC or dry contacts     |
| Warranty                   | 5 years on Magnetic Latching Relays | 5 years on Magnetic Latching Relays |

### Dimensions

#### LS-101X1BX



#### LS-201X1BX





## Residential / Commercial

### 100 & 200 Amp 3 Phase Magnetic Latching Relays

#### Features

- Universal load managing or load dropping relays work with ANY generator, transfer switch or control circuit to manage loads
- Load dropping automatically removes loads when utility power is lost, and reconnects loads after a 5 minute delay when utility power is restored
- Utilizes Magnetic Latching Relays, eliminating the normal humming, chattering and heat associated with contactors
- Available in NEMA 3R enclosures and Stainless Steel
- 5 year warranty on Magnetic Latching Relays

#### Specifications

| Electrical                           | 100 Amp                  | 200 Amp                  |
|--------------------------------------|--------------------------|--------------------------|
| Rated load at 277 Volts              | 120 Amps                 | 200 Amps                 |
| Max. continuous operating AC voltage | 480 Volts                | 480 Volts                |
| Insulation resistance                | 1,000 MΩ at 500 Volts DC | 1,000 MΩ at 500 Volts DC |
| <b>Dielectric strenght</b>           |                          |                          |
| Coil to contact                      | 4,000 VAC for 1 min      | 4,000 VAC for 1 min      |
| Across open contacts                 | 2,500 VAC for 1 min      | 2,500 VAC for 1 min      |
| Max. switching current               | 120 Amps                 | 240 Amps                 |
| Max. switching power                 | 27,700 VA                | 55,700 VA                |

#### UL 508 A

|                                      |          |          |
|--------------------------------------|----------|----------|
| Ith                                  | 160 Amps | 240 Amps |
| Max. hp at 240 Volts AC single phase | 15 hp    | 30 hp    |

#### IEC-60947

|                        |                |                |
|------------------------|----------------|----------------|
| AC1 load               | 150 Amps       | 300 Amps       |
| AC3 load 200-240 Volts | 30 kW/105 Amps | 60 kW/210 Amps |

#### Mechanical

|                            |                                     |                                     |
|----------------------------|-------------------------------------|-------------------------------------|
| Connection terminal        | Mechanical lugs                     | Mechanical lugs                     |
| Operation temperature (°C) | -40 to +85                          | -40 to +85                          |
| Enclosure type             | NEMA 1, 3R                          | NEMA 3R                             |
| Control input              | 120 VAC, 24 VAC or dry contacts     | 120 VAC, 24 VAC or dry contacts     |
| Warranty                   | 5 years on Magnetic Latching Relays | 5 years on Magnetic Latching Relays |



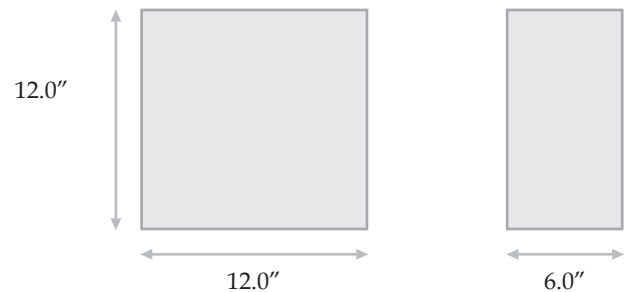
**LS-102X1BX** 100 Amp 3 Phase  
Latching Relay



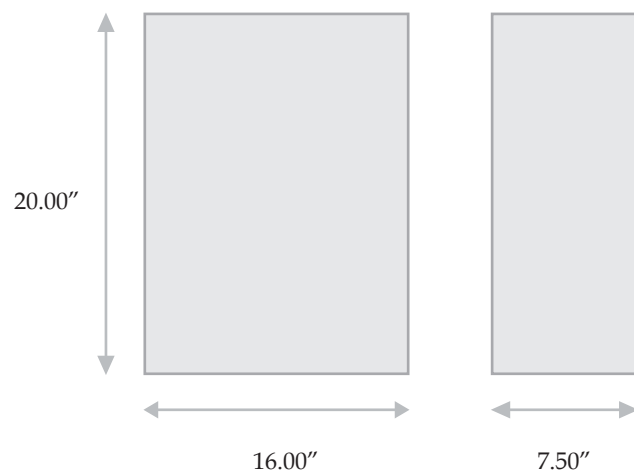
**LS-202X1BX** 200 Amp 3 Phase  
Latching Relay

#### Dimensions

##### LS-102X1BX



##### LS-202X1BX

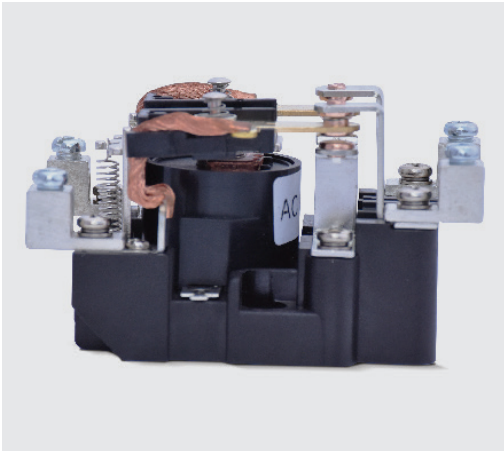




# TRANE®

## NCR-50A 2 Pole 50 Amp Normally Closed Relay Panels

Relays Available Individually or as Pre-Assembled Enclosures with (1), (2), (3) or (4) 50 Amp Normally Closed Relay(s)



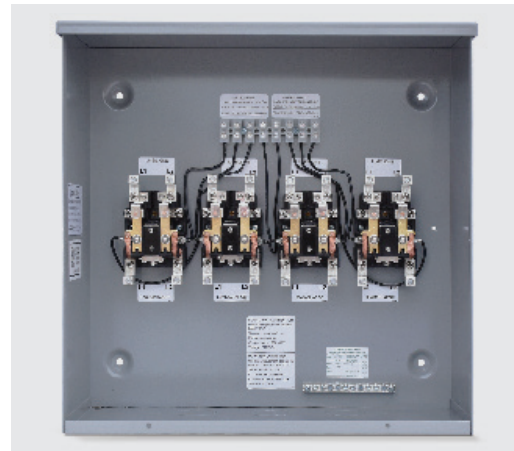
NCR-50A 50 Amp Normally Closed Relay with box lugs



LS051X2EX Two 50 Amp Normally Closed Relays  
10X10X04 NEMA 1 enclosure



LS051X3EX Three 50 Amp Normally Closed Relays  
12X12X04 NEMA 1 enclosure



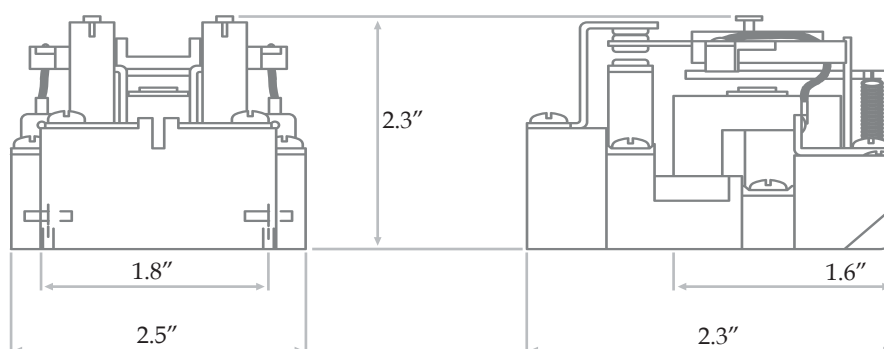
LS051X4EX Four 50 Amp Normally Closed Relays  
15X15X06 3R enclosure

## Features

- Normally closed and normally open contacts for universal application
- Available with one, two, three or four relays with termination blocks and grounding bars
- Box Lug termination
- Small footprint, standard open frame configuration
- **UL and CUL listed to 508 A standard as an assembly**
- Available as an individual component or mounted in NEMA 1 or 3R enclosures with grounding bar
- Low profile allows for flush mounting in standard 2x4" stud wall with **optional** flush mount cover for 1/2/3 relay versions



## Dimensions

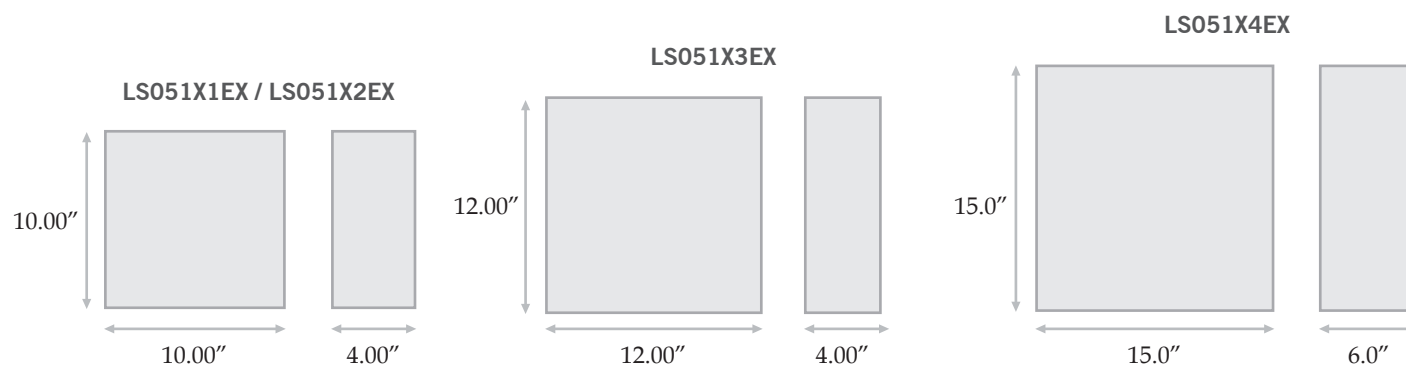


## Specifications\*

|                            |   |
|----------------------------|---|
| Pole Configuration         | DPDT silver alloy contacts                |
| Maximum Switching Voltage  | 250 Volts AC, 30 Volts DC                 |
| Maximum Amperage           | 50 Amps/250 Volts AC                      |
| Operating Voltage          | 80% rated voltage                         |
| Maximum Voltage            | 110% rated voltage                        |
| Contact Resistance         | <100 MΩ                                   |
| Operate Voltage (25 °C)    | 80% rated voltage                         |
| Release Voltage (25 °C)    | 30% rated voltage                         |
| Operating Temperature (°C) | -25 to +55                                |
| Normal Coil Power          | 10 VA                                     |
| Dielectric Strength        | 2,500 VAC / 1 minute leakage current 1 ma |
| Terminal Connections       | CU rated box lug terminals                |
| Coil Connections           | Screw terminal                            |
| Listings                   | UL/CUL                                    |

\* Specifications subject to change without notice

## Enclosure Dimensions





**Bring us your toughest load management challenge and put our technical team to the test**

**Decades of experience and a diverse pool of knowledge are at your disposal.  
Your most difficult challenges today are our new products for tomorrow.**

**We can custom build almost any panel to meet your requirements**

**Fill in the blanks and then call us**

If only there was a way to \_\_\_\_\_, Installs would be much easier.

If it weren't for \_\_\_\_\_, Generator installs would go much faster.

If only I had \_\_\_\_\_, I could sell a lot more generators.

I think \_\_\_\_\_, would make a great add on item when selling generators.

**TRANE**

2205 Industrial Park Rd  
Van Buren, AR 72956

