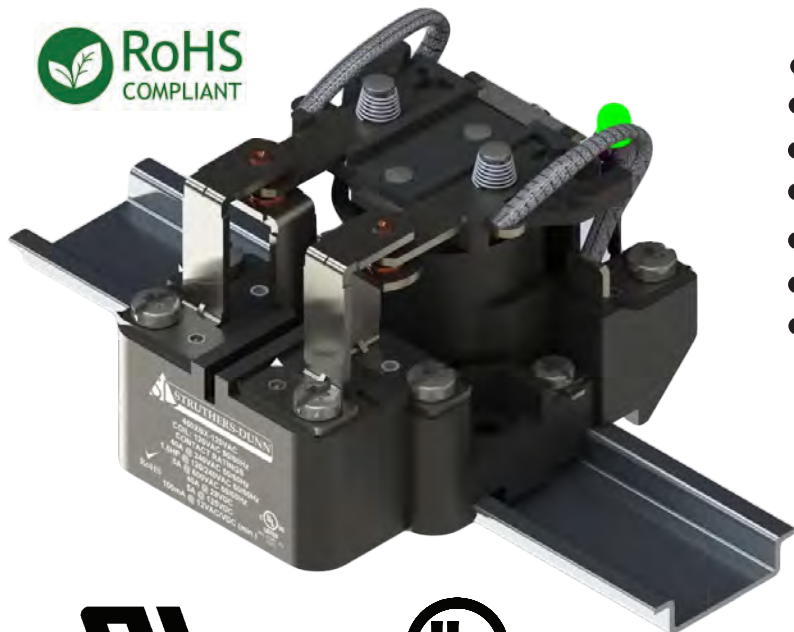




# 450 SERIES HEAVY DUTY POWER RELAY



- UL Standard 60947-1 (UL 508) Qualified
- Standard Base with DIN Rail and Panel Mount Option
- 10,000,000 Cycles Mechanical and 100,000 Cycles Electrical
- Optional LED - Coil Power Indication
- Optional Polycarbonate Protective Cover
- Class F (155°C) Insulation System
- Max. Rating: 40 Amps or 50 Amps
  - 40 Amps @ 277 VAC      - 50 Amps @ 240VAC
  - 40 Amps @ 28 VDC      - 50 Amps @ 28VDC



## GENERAL CHARACTERISTICS

|                     |                                                             |                |
|---------------------|-------------------------------------------------------------|----------------|
| Insulation System   | Class F (155°C)                                             |                |
| Mechanical Life     | 10,000,000 operations                                       |                |
| Electrical Life     | 100,000 operations                                          |                |
| Operate Time        | 20ms                                                        |                |
| Release Time        | 15ms                                                        |                |
| Dielectric          | Between coil and contact                                    | 2200VAC        |
|                     | Between poles                                               | 2200VAC        |
|                     | Between contacts                                            | 1500VAC        |
| Ambient Temperature | AC Coil                                                     | -55°C to 70°C  |
|                     | DC Coil                                                     | -55°C to 105°C |
| Connection          | Listed wire connectors required for UL Listed Installations |                |
| Weight              | 227-311 g                                                   |                |

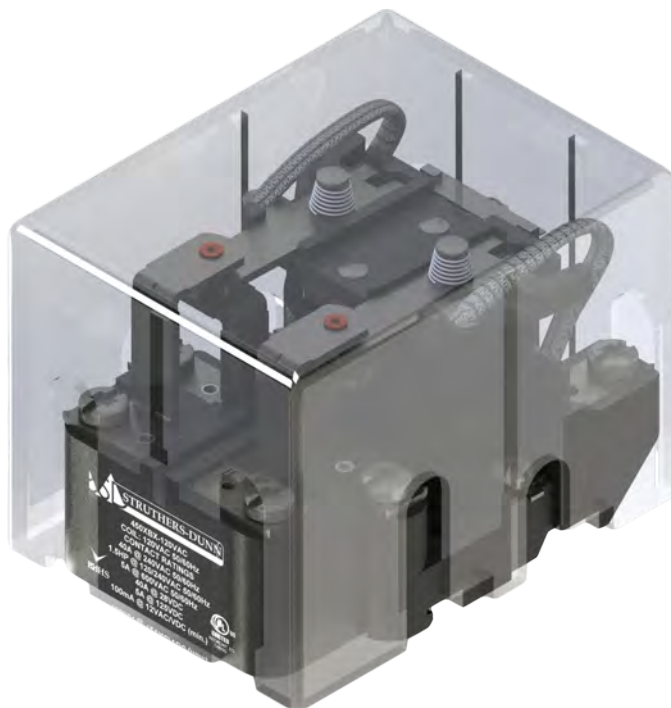
## INPUT CHARACTERISTICS

|                       |                                                                              |
|-----------------------|------------------------------------------------------------------------------|
| Rated Voltage         | 6, 12, 24, 120, 208, 220, 240, 277, 480VAC<br>6, 12, 24, 48, 110/125, 250VDC |
| Operating Range       | AC: 85% to 110% of Rated Voltage<br>DC: 80% to 110% of Rated Voltage         |
| Dropout Voltage       | 10% of Rated Voltage                                                         |
| Insulation Resistance | 1000 MΩ @ 500VDC                                                             |

## COIL CHARACTERISTICS

| Nominal Voltage | Power Consumption | Coil Resistance |
|-----------------|-------------------|-----------------|
| 6 VAC           | ~10VA             | 0.85Ω           |
| 12VAC           |                   | 2.85Ω           |
| 24VAC           |                   | 12Ω             |
| 120VAC          |                   | 290Ω            |
| 208VAC          |                   | 850Ω            |
| 220VAC          |                   | 1040Ω           |
| 240VAC          |                   | 1200Ω           |
| 277VAC          |                   | 1500Ω           |
| 480VAC          | ~2W               | 4500Ω           |
| 6VDC            |                   | 18Ω             |
| 12VDC           |                   | 70Ω             |
| 24VDC           |                   | 290Ω            |
| 48VDC           |                   | 1200Ω           |
| 110/125VDC      |                   | 6000Ω           |
| 250VDC          |                   | 34000Ω          |

\*Additional Coil Voltages Available Upon Request



## CONTACT CHARACTERISTICS

| Configurations                    | XAX (SPDT) (1 Form C); XBX (DPDT) (2 Form C);<br>BXX (DPST) (2 Form A); HXX (SPST-NO-DM) (Form X);<br>XXH (SPST-NC-DB) (Form Y); XHX (SPDT-DM-DB) (Form Z) |                                              |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Contact Material:                 | AgSnO <sub>2</sub> - Silver Tin Oxide                                                                                                                      |                                              |
| AC Rating:                        | <b>40A</b>                                                                                                                                                 | <b>50A</b>                                   |
|                                   | 40A @ 277VAC 50/60Hz<br>20A @ 600VAC 50/60Hz<br>30A @ 120VAC (Ballast)<br>15A @ 240VAC (Ballast)                                                           | 50A @ 240VAC 50/60Hz<br>10A @ 600VAC 50/60Hz |
| Motor Load Rating:                | 2HP @ 120/240VAC 50/60Hz                                                                                                                                   | 2HP @ 120/240VAC 50/60Hz                     |
| DC Rating:                        | 40A @ 28VDC                                                                                                                                                | 50A @ 28VDC                                  |
| DC Rating With<br>Blowout Magnet: | 20A @ 125VDC<br>4A @ 250VDC<br>1A @ 500VDC                                                                                                                 | 20A @ 125VDC<br>4A @ 250VDC<br>2A @ 500VDC   |
| Minimum Load Rating:              | 100mA @ 12 VAC/DC (min.)                                                                                                                                   | 100mA @ 12 VAC/DC (min.)                     |
| Auxiliary Switch Rating:          | 10A @ 125/250VAC                                                                                                                                           | 10A @ 125/250VAC                             |
| Pilot Duty:                       | A300                                                                                                                                                       | A300                                         |
| Certifications:                   | UL/CUL Listed, UL/CUL Recognized                                                                                                                           |                                              |

\*Tungsten Contacts Also Available

# STRUTHERS-DUNN

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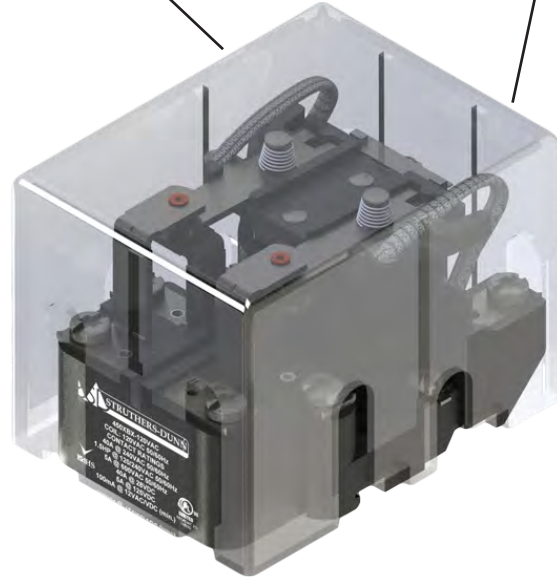
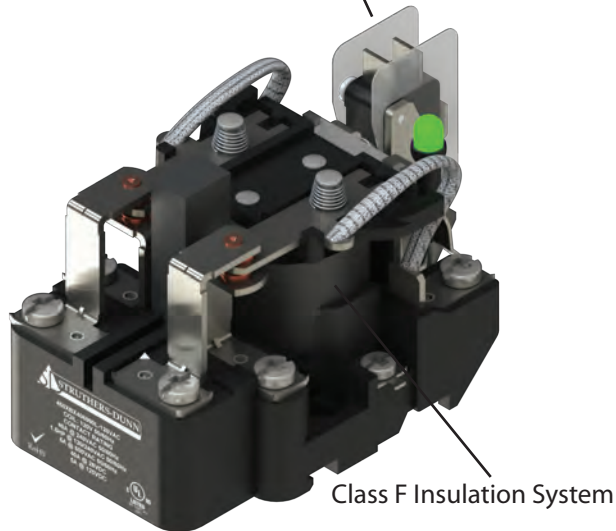
# 450 SERIES HEAVY DUTY POWER RELAY

## SPECIAL FEATURES

\*Optional Auxiliary Switch - (Code "90")  
\*Dual Auxiliary Switch Available - (Code "91")

Optional Coil Suppression Diode - (Code "V")  
(DC Version Only)

Optional Polycarbonate  
Protective Cover - (Code "C")

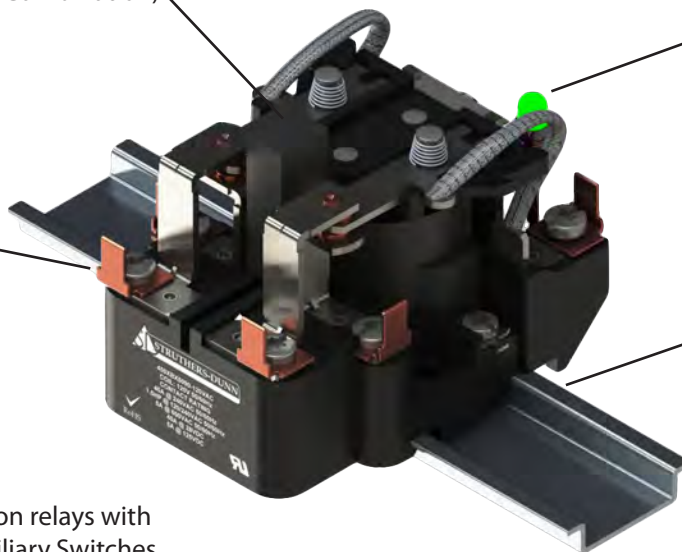


Optional Blowout Magnet - (Code "69")  
(Not Available with XXH Contact Combination)

Optional Green  
LED Indicator - (Code "L")

\*Optional Quick Connect  
Terminals - (Code "Q")

Standard Din Rail  
& Panel Mount Combination



\*Note: Covers can not be used on relays with  
Quick Connect Terminals or Auxiliary Switches