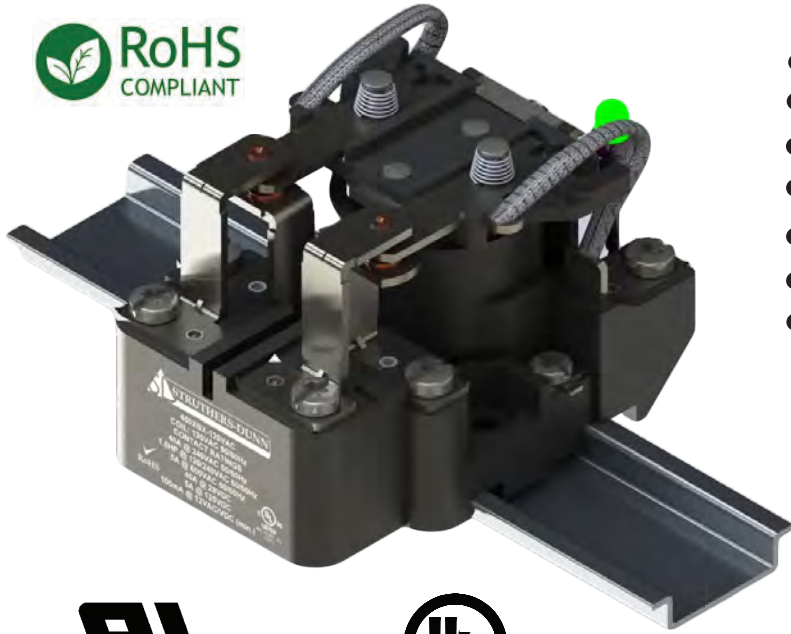
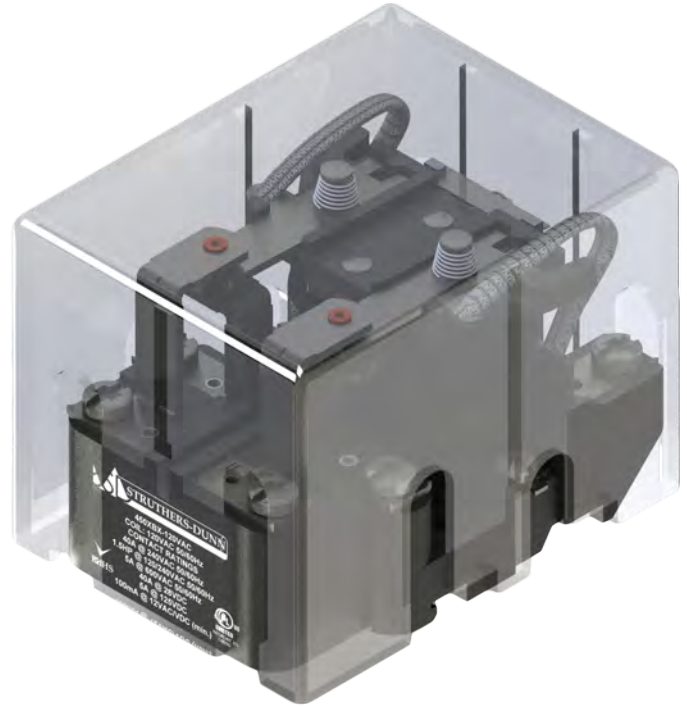




# 450 SERIES HEAVY DUTY POWER RELAY



- 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

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

## INPUT CHARACTERISTICS

<b>Rated Voltage</b>	6, 12, 24, 120, 208, 220, 240, 277, 480VAC 6, 12, 24, 48, 110/125, 250VDC
<b>Operating Range</b>	AC: 85% to 110% of Rated Voltage DC: 80% to 110% of Rated Voltage
<b>Dropout Voltage</b>	10% of Rated Voltage
<b>Insulation Resistance</b>	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		4500Ω
6VDC		~2W
12VDC	70Ω	
24VDC	290Ω	
48VDC	1200Ω	
110/125VDC	6000Ω	
250VDC	34000Ω	

## CONTACT CHARACTERISTICS

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

\*Additional Coil Voltages Available Upon Request

\*Tungsten Contacts Also Available

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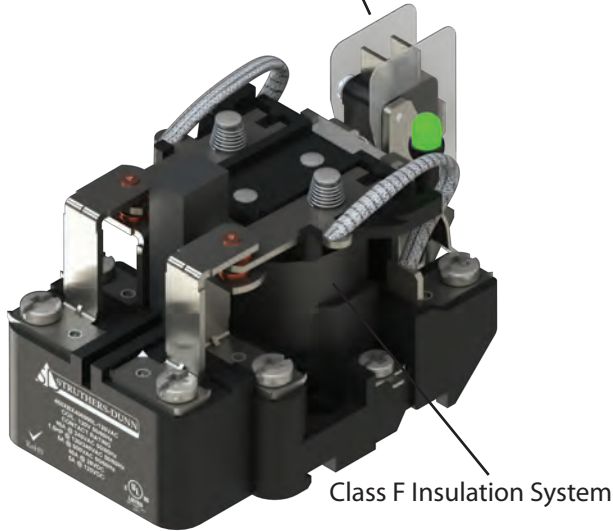
# 450 SERIES HEAVY DUTY POWER RELAY

## SPECIAL FEATURES

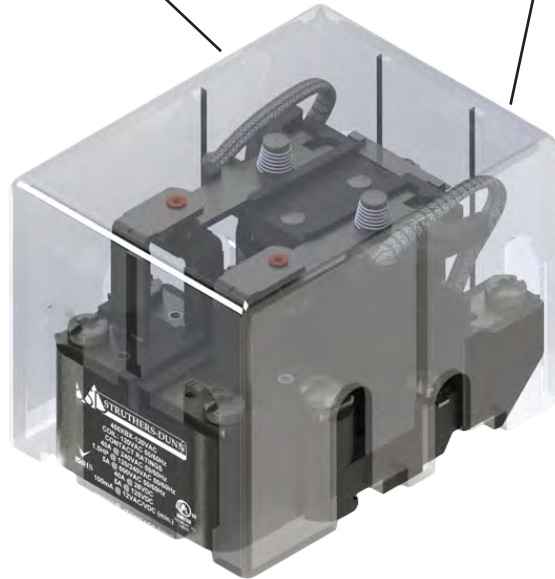
\*Optional Auxiliary Switch - (Code "90")  
\*Dual Auxiliary Switch Available - (Code "91")

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

Optional Polycarbonate Protective Cover - (Code "C")



Class F Insulation System

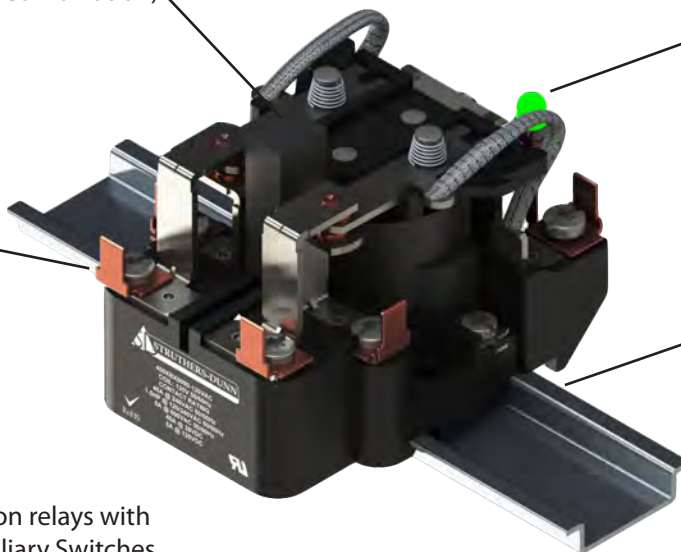


Optional Blowout Magnet - (Code "69")  
(Not Available with XXH Contact Combination)

Optional Green LED Indicator - (Code "L")

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

Standard Din Rail & Panel Mount Combination

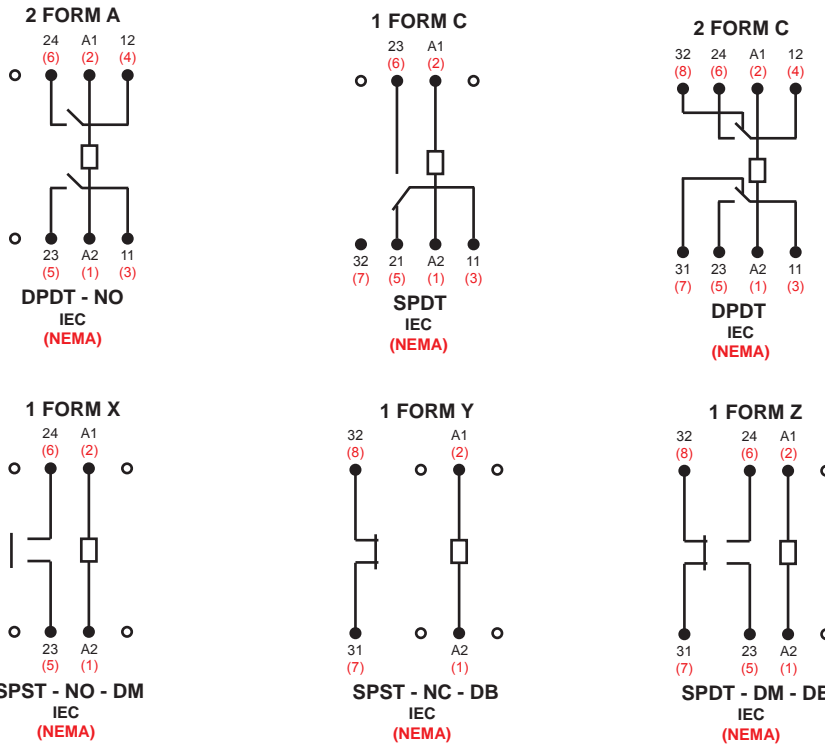


\*Note: Covers can not be used on relays with Quick Connect Terminals or Auxiliary Switches



# 450 SERIES HEAVY DUTY POWER RELAY

## WIRING DIAGRAMS



COIL SUPPRESSION DIODE



POLARITY SENSITIVE

## PART NUMBERING INFORMATION

Series Part Number: 450 XBX 40 C 69 Q L V 90 120VAC

**Contact Combination:**

- XAX (SPDT) (1 Form C)
- XBX (DPDT) (2 Form C)
- BXX (DPST) (2 Form A)
- HXX (SPST- NO-DM) (1 Form X)
- XXH (SPST- NC-DB) (1 Form Y)
- XHX (SPDT - DM-DB) (1 Form Z)

**Contact Type :**

- 40 Amp Silver Alloy – 40
- 50 Amp Silver Alloy – 50
- (Tungsten Contacts Also Available)

**Enclosure:**

- No Cover Standard – No Code
- Polycarbonate Protective Cover – C

**Din-rail:**

- Standard Din Rail Mount Base – No Code

**Other Options:**

- Blowout Magnet – 69 (not available with a XXH contact combination)
- 3/8" Quick Connect Terminals – Q
- LED indicator – L
- Coil Suppression Diode – V (VDC version only)
- Auxiliary Switch – 90 \*
- Dual Auxiliary Switch - 91 \*

**Coil Voltage – Class F, 155°C**

- VAC – 6, 12, 24, 120, 208, 220, 240, 277, 480
- VDC - 6, 12, 24, 48, 110/125, 250
- (Other Coil Voltages Available Upon Request)

**\*NOTE: Covers cannot be used on relays with QC Terminals, Auxiliary Switches or 50A Relays with AC Coils.**

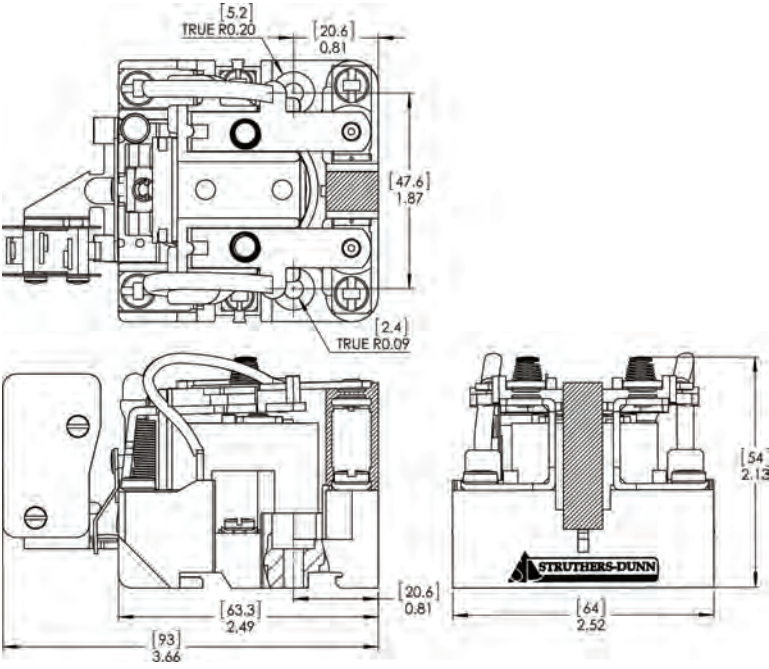




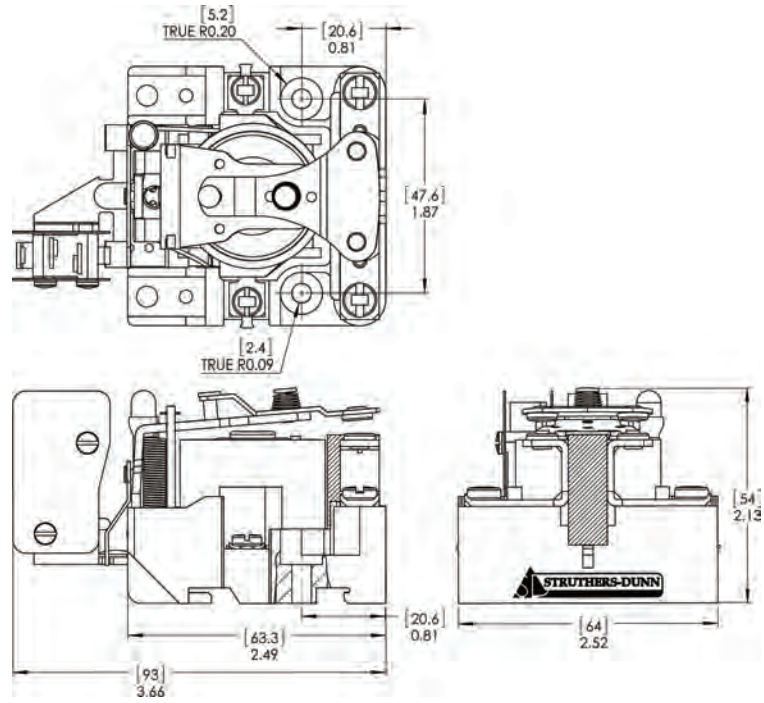
# 450 SERIES HEAVY DUTY POWER RELAY

## OUTLINE DIMENSIONS

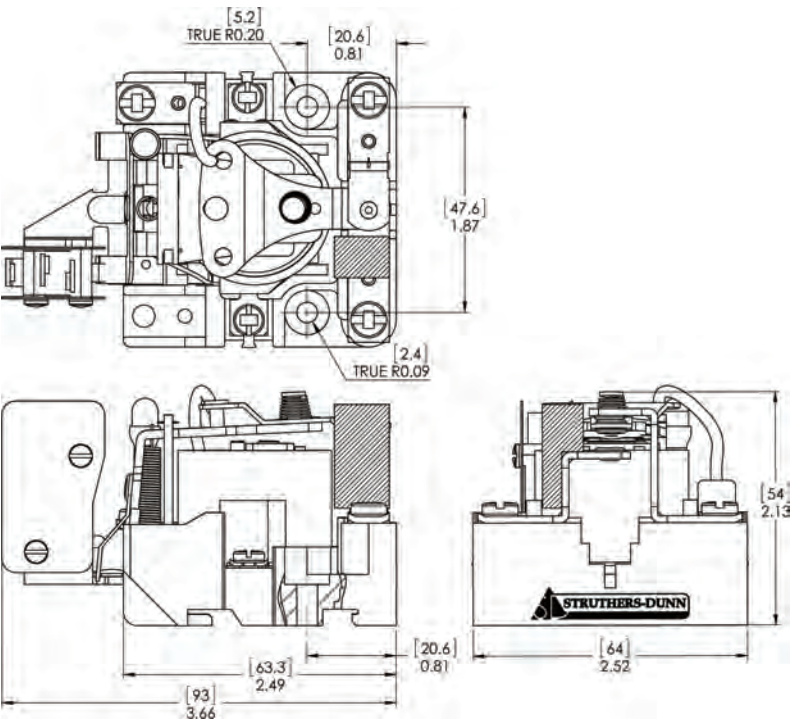
### 450BXX (DPST - 2 FORM A)



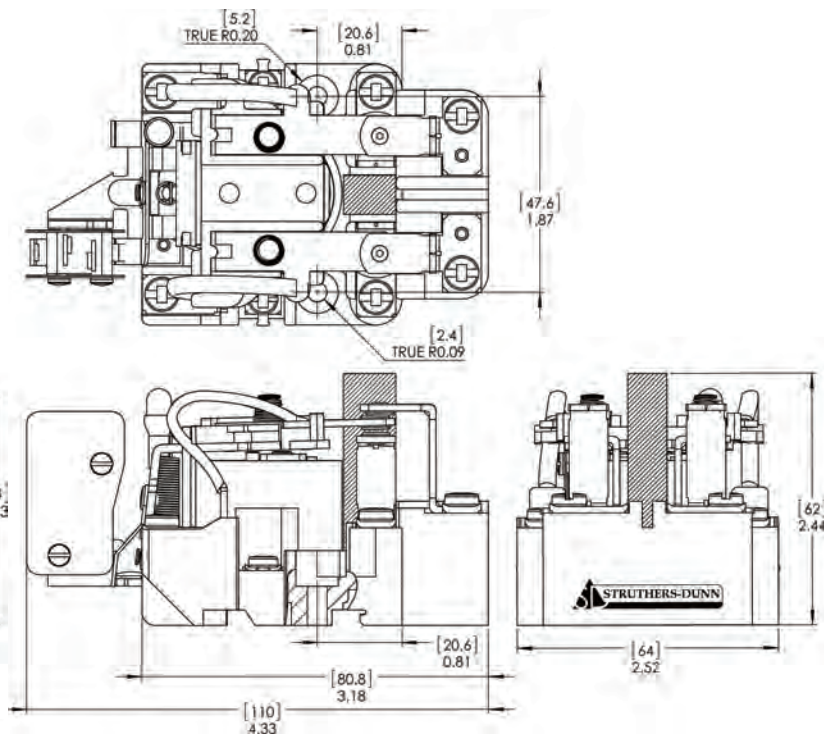
### 450HXX (SPST-NO-DM - 1 FORM X)



### 450XAX (SPDT - 1 FORM C)



### 450XBX (DPDT - 2 FORM C)



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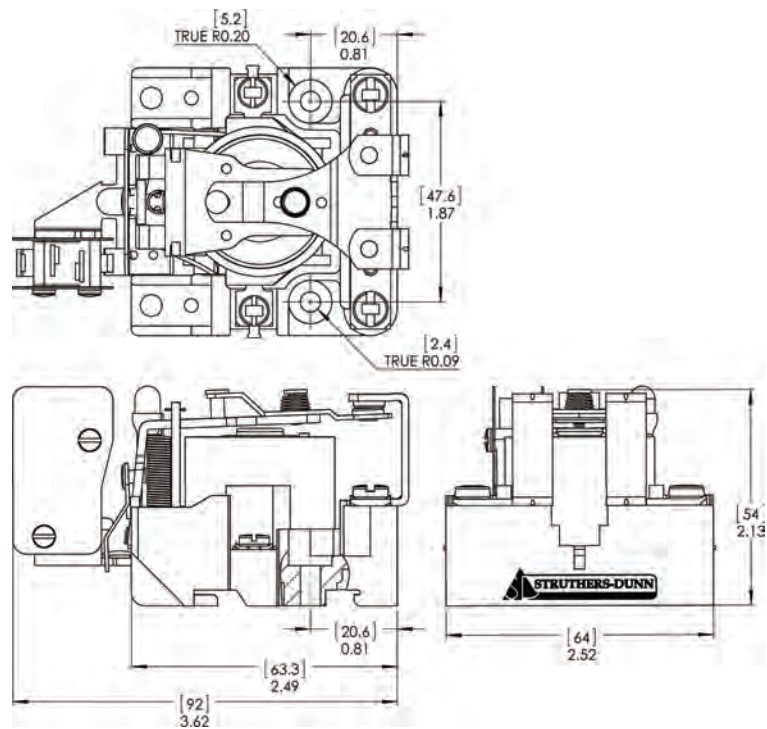
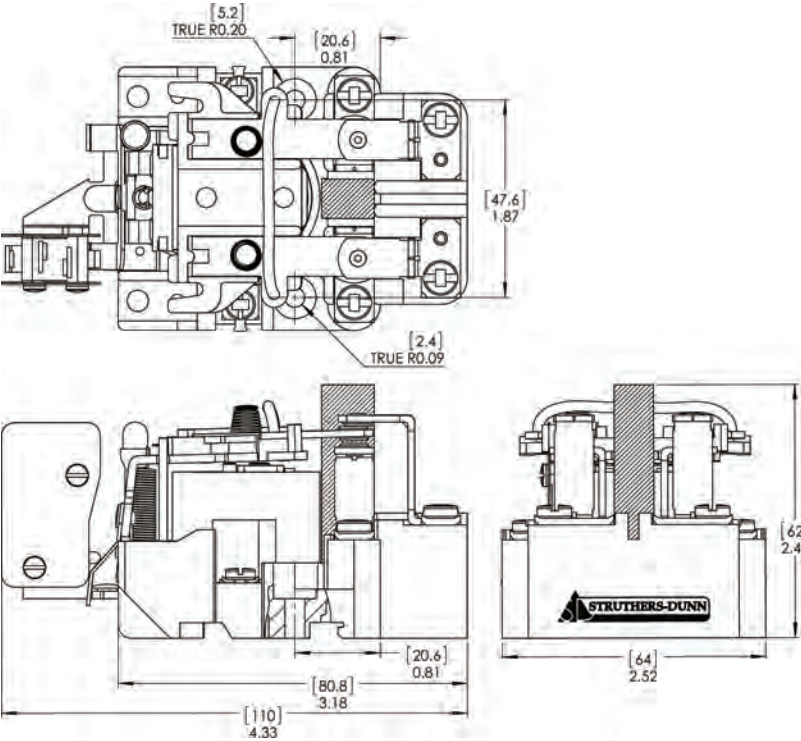
## OUTLINE DIMENSIONS

### 450XHX

(SPDT-DM-DB - 1 FORM Z)

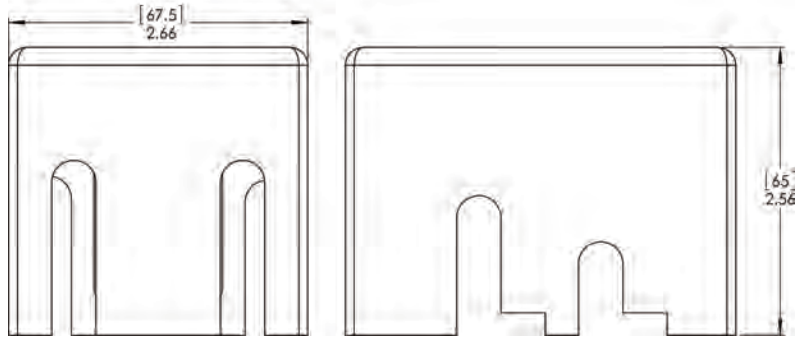
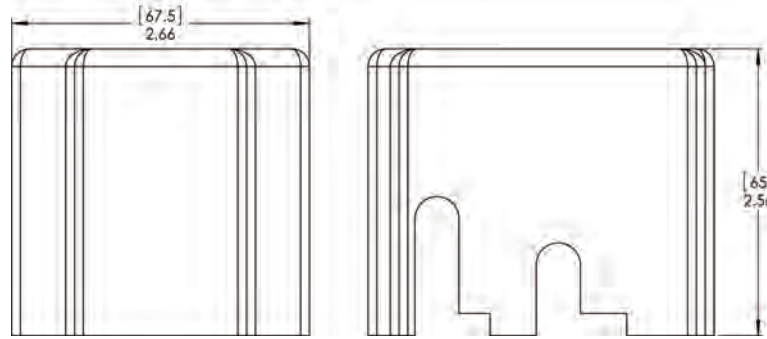
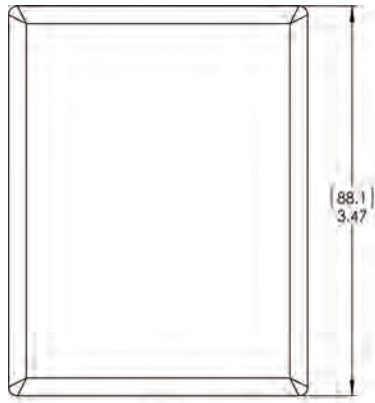
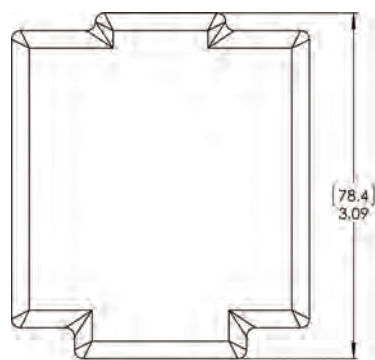
### 450XXH

(SPST-NC-DB - 1 FORM Y)



**COVER - SHORT BASE**  
(BXX, HXX, XAX, XXH)

**COVER - LONG BASE**  
(XBX, XHX)



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