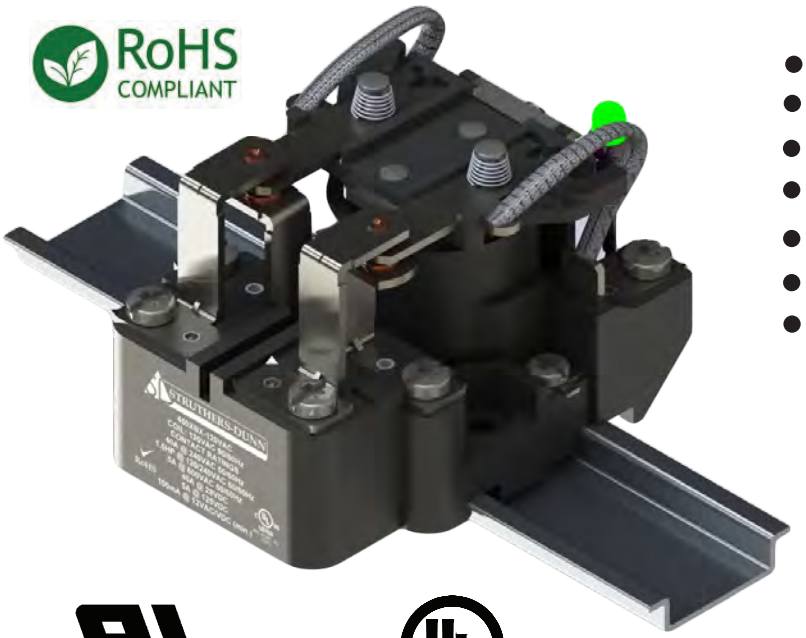
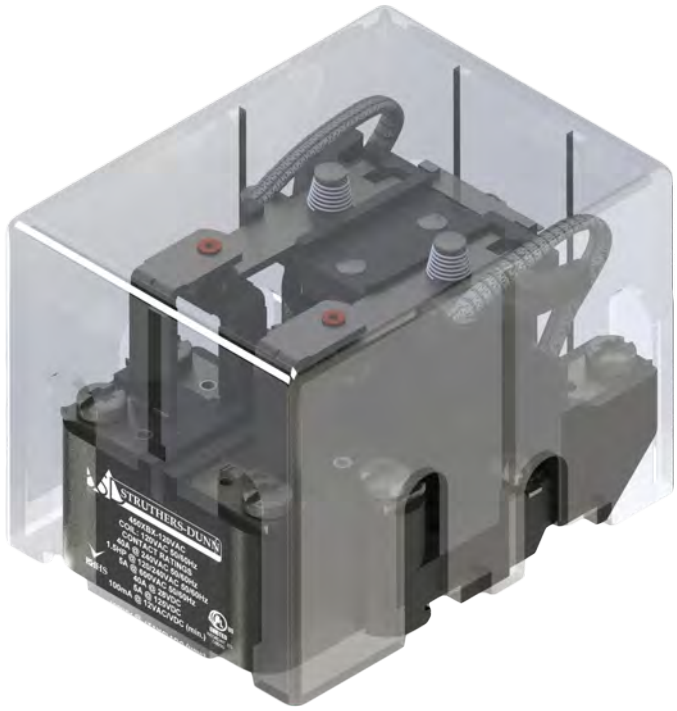
450 SERIES HEAVY DUTY POWER RELAY



- 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 Between poles Between contacts	2200VAC 2200VAC 1500VAC
Ambient Temperature	AC Coil DC Coil	-55°C to 70°C -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 6, 12, 24, 48, 110/125, 250VDC
Operating Range	AC: 85% to 110% of Rated Voltage 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		4500Ω
6VDC	~2W	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); BXX (DPST) (2 Form A); HXX (SPST-NO-DM) (Form X); XXH (SPST-NC-DB) (Form Y); XHX (SPDT-DM-DB) (Form Z)	
Contact Material:	AgSnO2 - Silver Tin Oxide	
	40A	**50A**
AC Rating:	40A @ 277VAC 50/60Hz 20A @ 600VAC 50/60Hz 30A @ 120VAC (Ballast) 15A @ 240VAC (Ballast)	50A @ 240VAC 50/60Hz 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 Blowout Magnet:	20A @ 125VDC 4A @ 250VDC 1A @ 500VDC	20A @ 125VDC 4A @ 250VDC 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

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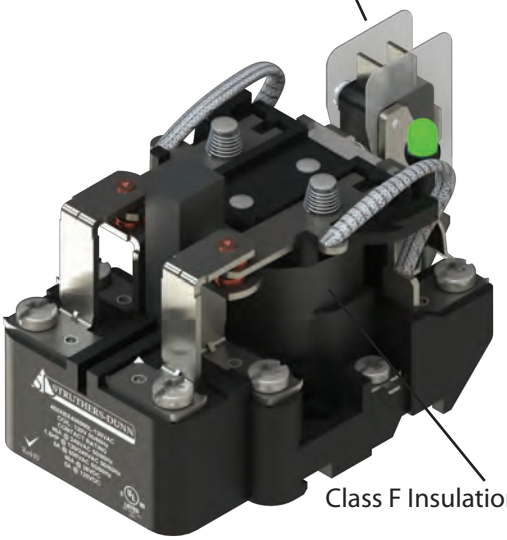
SPECIAL FEATURES

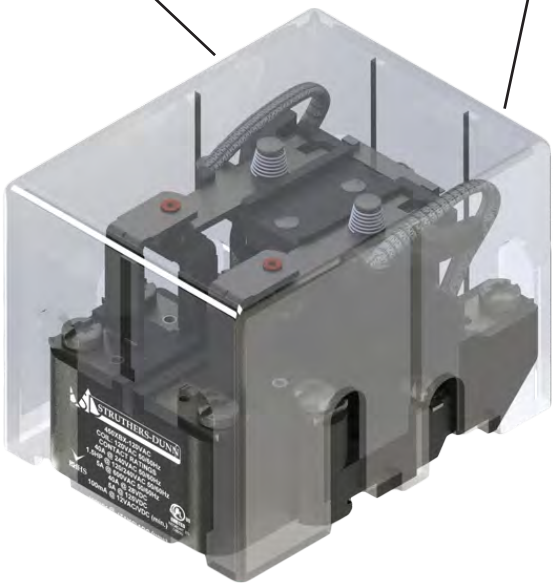
*Optional Auxiliary Switch - (Code "90")
*Dual Auxiliary Switch Available - (Code "91")



Class F Insulation System

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

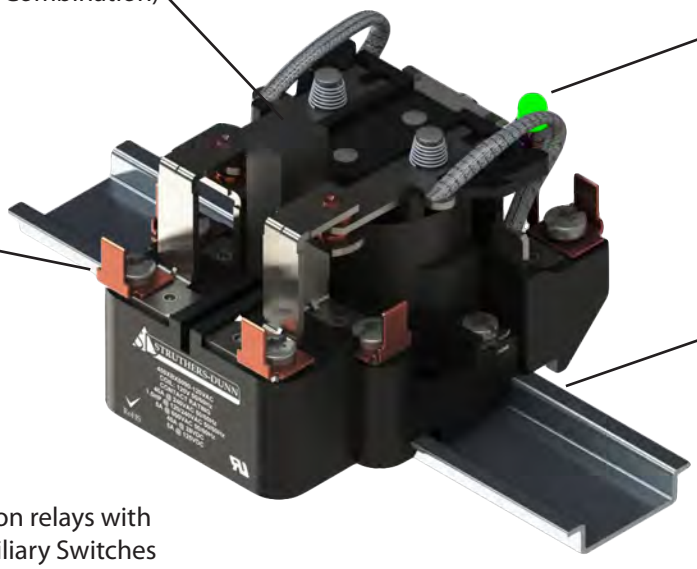
Optional Polycarbonate
Protective Cover - (Code "C")



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

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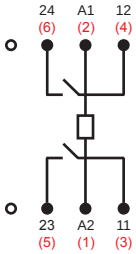
450 SERIES HEAVY DUTY POWER RELAY

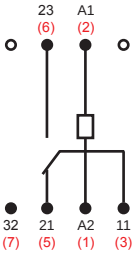
WIRING DIAGRAMS

2 FORM A



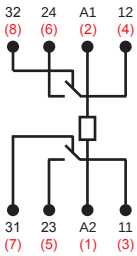
DPDT - NO
IEC
(NEMA)

1 FORM C



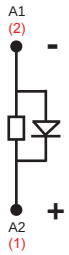
SPDT
IEC
(NEMA)

2 FORM C



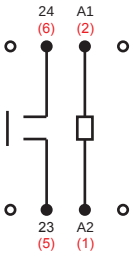
DPDT
IEC
(NEMA)

COIL SUPPRESSION DIODE



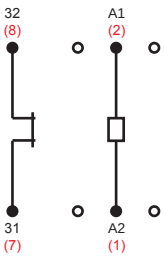
POLARITY SENSITIVE

1 FORM X



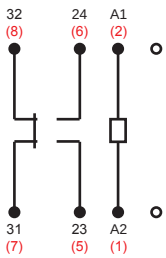
SPST - NO - DM
IEC
(NEMA)

1 FORM Y



SPST - NC - DB
IEC
(NEMA)

1 FORM Z



SPDT - DM - DB
IEC
(NEMA)

PART NUMBERING INFORMATION

450 XBX 40 C 69 Q L V 90 120VAC

Series Part Number

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

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

Din-rail
- Standard Din Rail Mount Base – No Code

Other Options:
- Blowout Magnet – 69 (not available with a **XXH** contact combination)
- ¼" Quick Connect Terminals – Q
- LED indicator – L
- Coil Suppression Diode – V (VDC version only)
- Auxiliary Switch – 90 *
- Dual Auxiliary Switch - 91 *

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

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)

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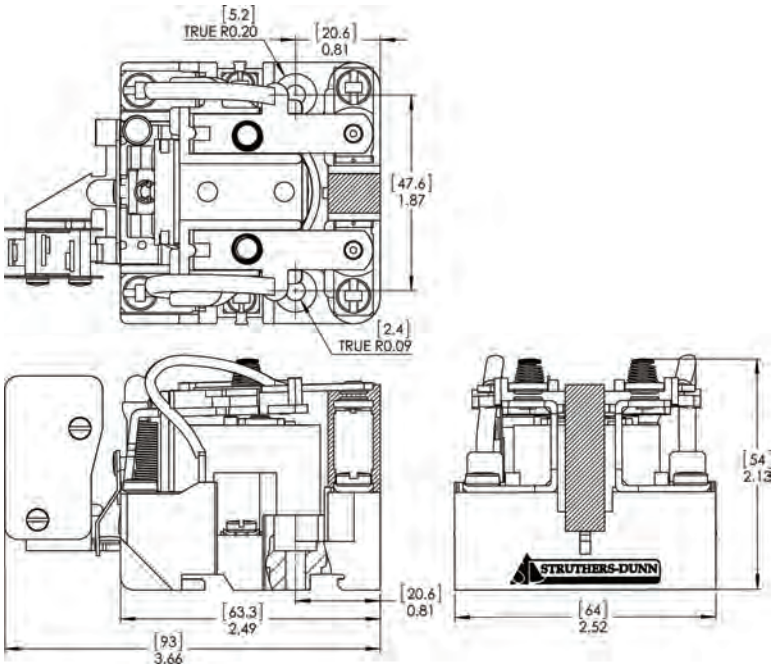
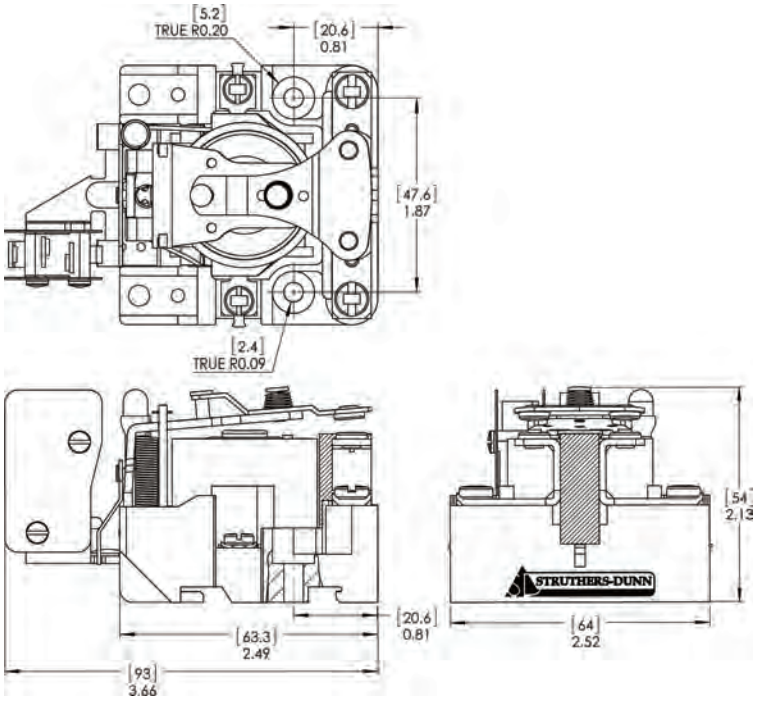
OUTLINE DIMENSIONS

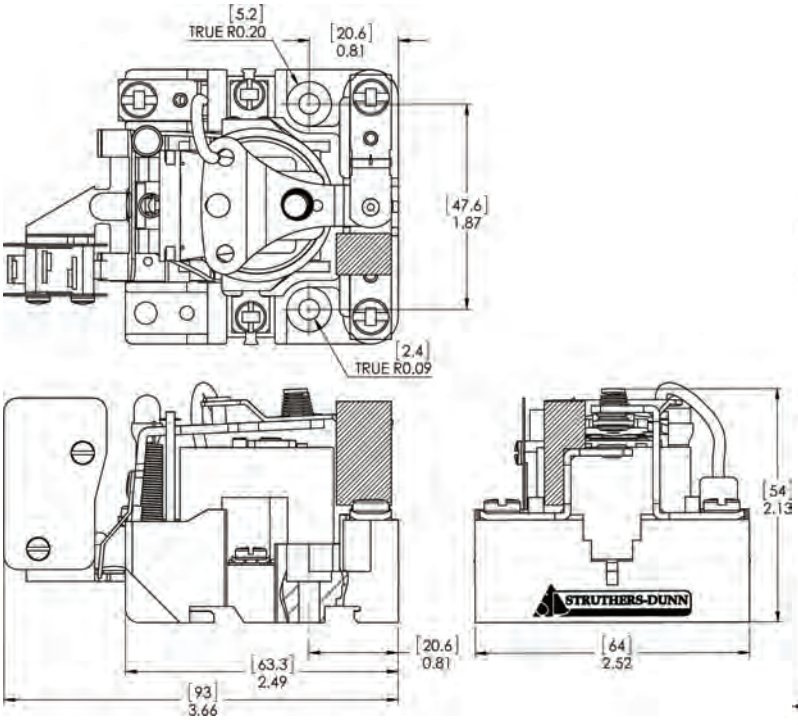
450BXX
(DPST - 2 FORM A)



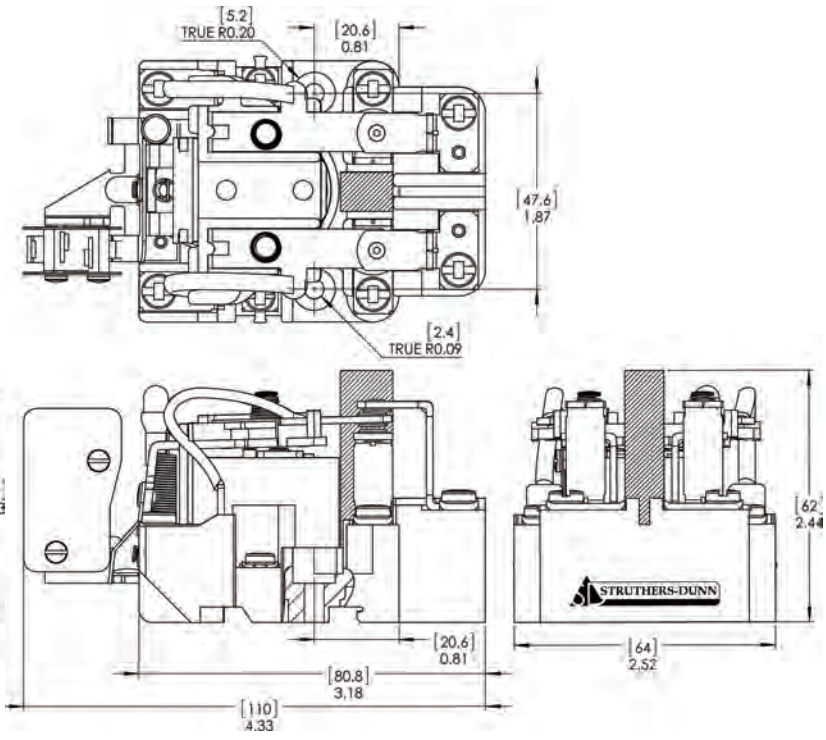
450HXX
(SPST-NO-DM - 1 FORM X)



450XAX
(SPDT - 1 FORM C)

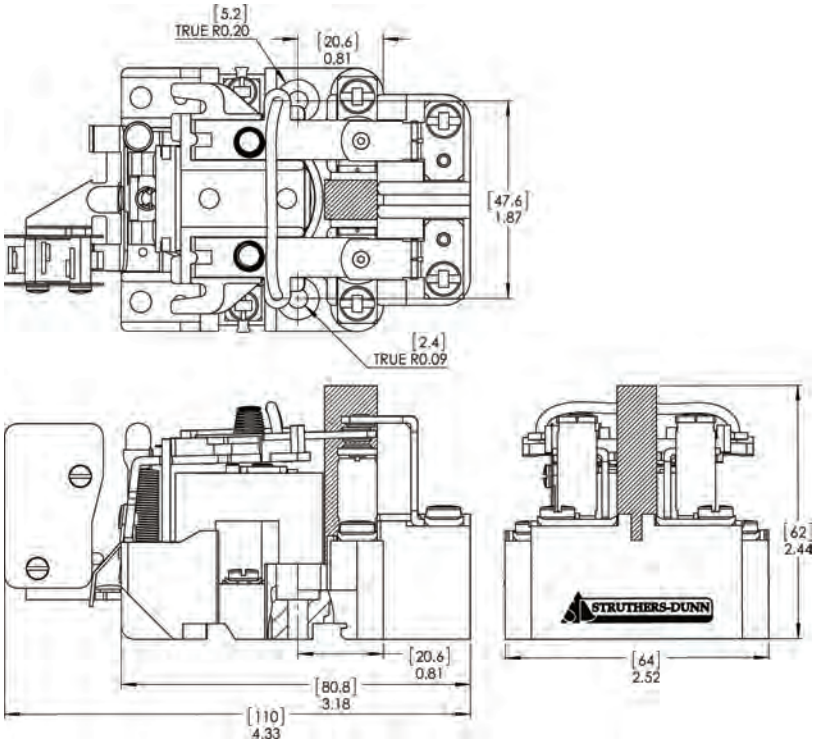


450XBX
(DPDT - 2 FORM C)

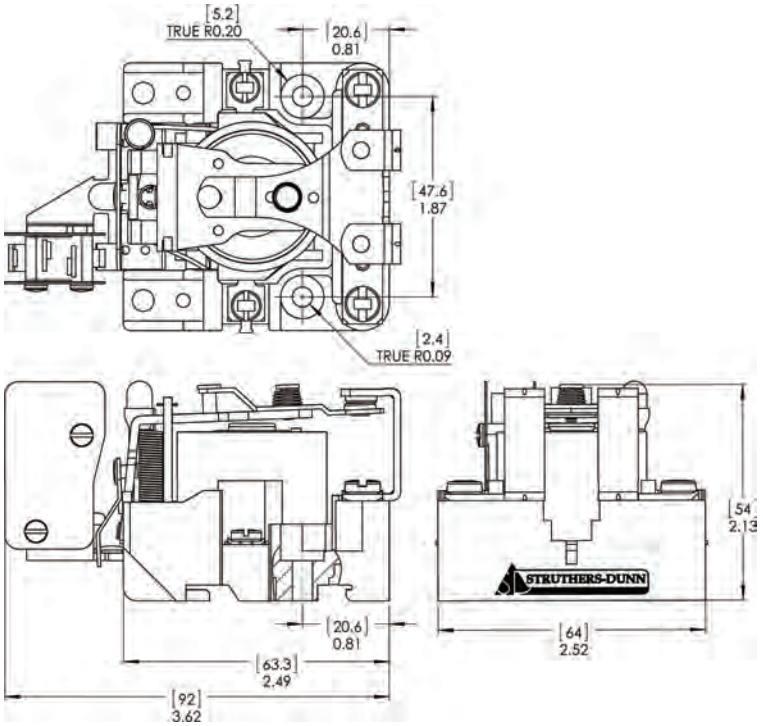


OUTLINE DIMENSIONS

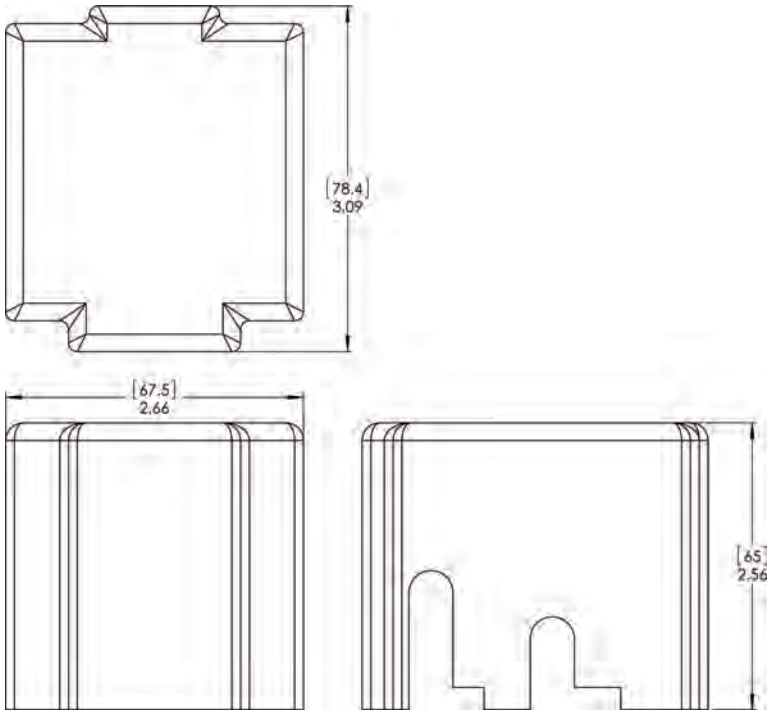
450XHX
(SPDT-DM-DB - 1 FORM Z)



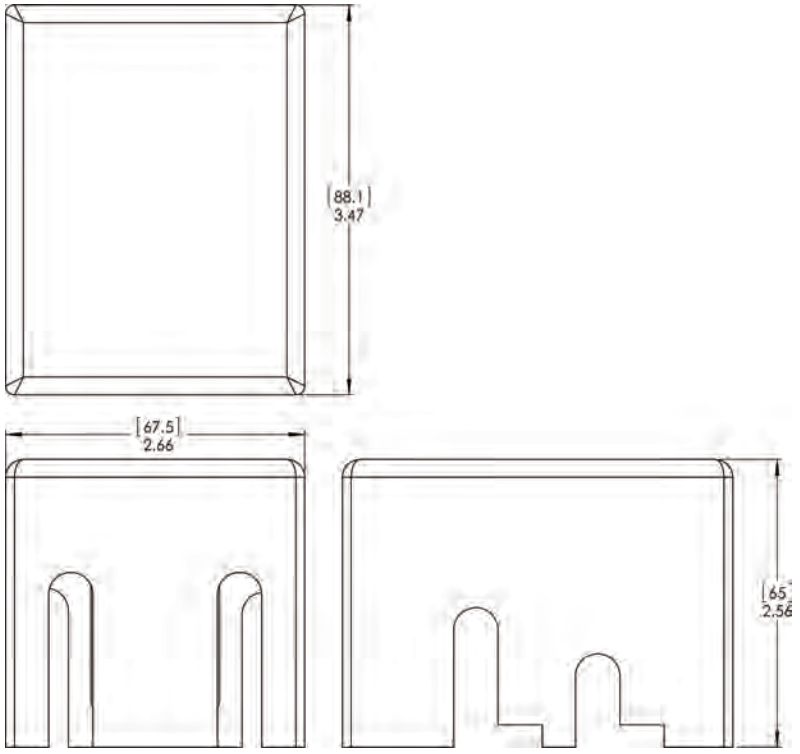
450XXH
(SPST-NC-DB - 1 FORM Y)



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



COVER - LONG BASE
(XBX, XHX)



NOTES:

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