

**UL/CUL LISTED  
CLASS 1 DIVISION 2 FOR  
HAZARDOUS LOCATIONS  
ATEX & IECEx PENDING**



# 87H Series Hermetically Sealed Relays

# Product Attributes

## Hermetically Sealed Construction

The inert, dry nitrogen environment mitigates corrosion and/or oxidation of the internal relay components including the contacts

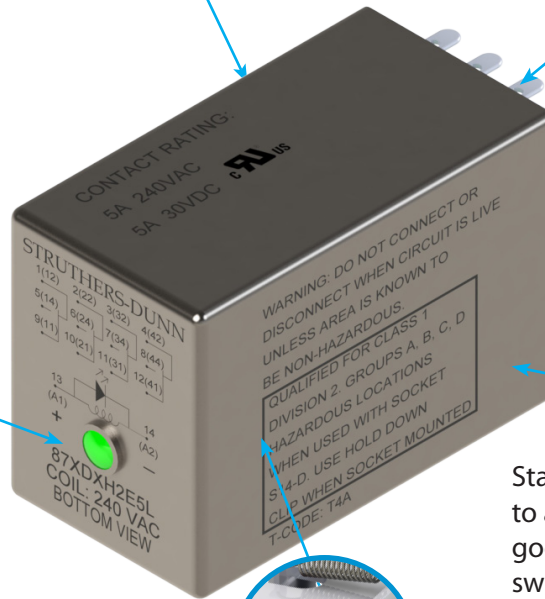
## Corrosion Resistant

- Cupronickel Cover
- Salt water Resistant

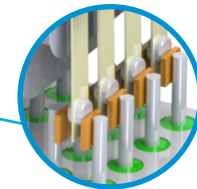
## Contact Transfer LED Indicator



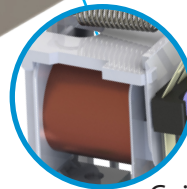
LED is not wired to coil like traditional relays, providing positive confirmation of contact transfer unlike legacy hermetically sealed relays



## Contacts



Standard Contact Rated 10mA-5A to allow single part-number that is good for both low and high level switching.

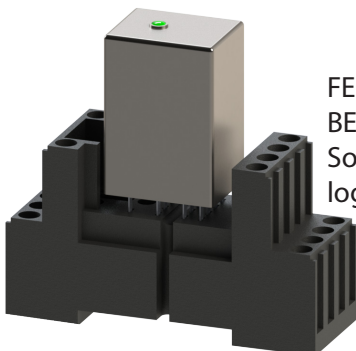


## Coil

Coil Temperature Rating 155 °C (Class F)  
Optional coil suppression diode that will protect your sensitive equipment from coil transient voltage.

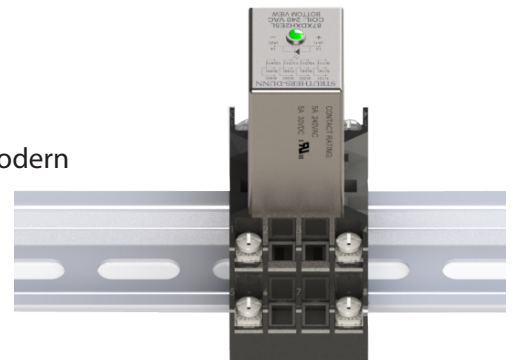
## Safety Certifications

UL/CUL Listed for ordinary locations (E52197) and Class 1, Div 2 hazardous locations (E509225) with approved Struthers-Dunn sockets SK-ICE08-DS or SK-ICE14-DS (E340027) or approved ERSCE sockets ES15/2 or ES15/4 (E113714)



### FEATURE: **Fits Legacy & Non Legacy Sockets**

BENEFITS: Internal Solder-Lip allows relay to fit all modern Socket designs with high stacked terminals, logic design and even module compatible



# GENERAL SPECIFICATIONS (@25 °C)

## Input

	<u>Nominal Input</u>	<u>Nominal Coil</u>	<u>Nominal Input</u>	<u>Nominal Coil</u>
	<u>Voltage</u>	<u>Resistance, Ω at</u>	<u>Voltage</u>	<u>Resistance, Ω at</u>
		<u>25 °C</u>		<u>25 °C</u>
<b>Coil Voltage Range</b>	6 VDC	40	6 VAC	10.5
	12 VDC	160	12 VAC	41
	24 VDC	650	24 VAC	180
	36 VDC	1500	120 VAC	4550
	48 VDC	2600	240 VAC	17260
	72 VDC	5850		
	110/125 VDC	12000		
<b>Drop-out Voltage</b>	10% of nominal VAC, 10% of nominal VDC			
<b>Average Consumption Coil</b>	1.2 VA (AC) 0.9 W (DC)			
<b>Maximum Operating Voltage</b>	110 % (AC/DC)			
<b>Maximum Pickup Voltage</b>	80% of nominal (VDC) 85% nominal (VAC)			

## Contacts

<b>Contact Configuration</b>	DPDT/ 2 Form C, 4PDT/4 Form C			
<b>Component Type</b>	Hermetically Sealed Relay			
<b>Mounting Type</b>	Socket or Stud Mount			
<b>UL Switching Ratings</b>	<u>Amps/Power</u>	<u>Voltage</u>	<u>Cycles</u>	<u>Load</u>
	3A	240 VAC	50k	Resistive
	5A	240 VAC	25k	Resistive
	1/10 HP	120 VAC	6k	Motor
	1/10 HP	240 VAC	100k	Motor
	5A	30 VDC	100k	Resistive
	1A	48 VDC	100k	Resistive
	0.5 A	125 VDC	100k	Resistive
	0.25 A	250 VDC	100k	Resistive
<b>Minimum Switching Requirement</b>	10 mA @ 5 VAC, 5 VDC			
<b>Thermal (Carrying) Current</b>	5 Amps			

## Performance

<b>Mechanical Life</b>	5,000,000 cycles
<b>Electrical Life, Operations at Rated Current</b>	100,000 cycles
<b>Operate Time (Max)</b>	20ms
<b>Release Time (Max)</b>	15ms
<b>Dielectric Strength ( Between Parts of Opposite Polarity)</b>	1500 Vrms
<b>Dielectric Strength (Across Open Contacts)</b>	500 Vrms



## Environment

<b>Ambient Temperature - Storage</b>	-40 to +85 °C
<b>Ambient Air Temperature around the device - Operation</b>	-20 to +70 °C
<b>Temperature Code for Hazardous Locations</b>	T4: +70 °C (+158 °F)

## Miscellaneous

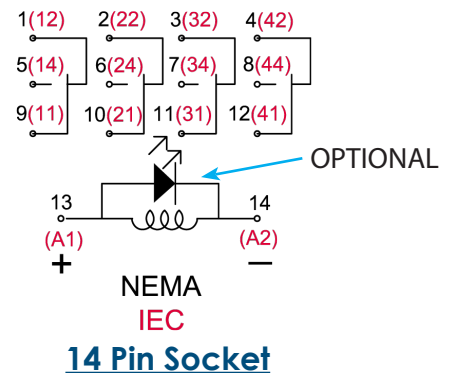
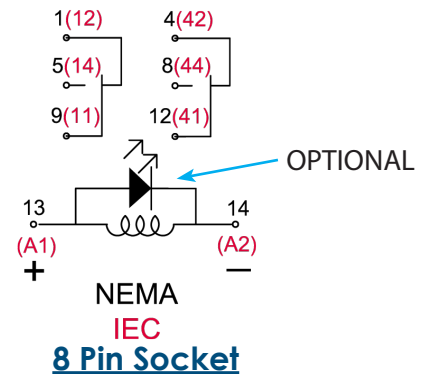
<b>Optional Contact Transfer Indicator-Code "L"</b>	Green LED
<b>Weight</b>	45 grams

## Ordering Code

### Series 87 Ordering Code

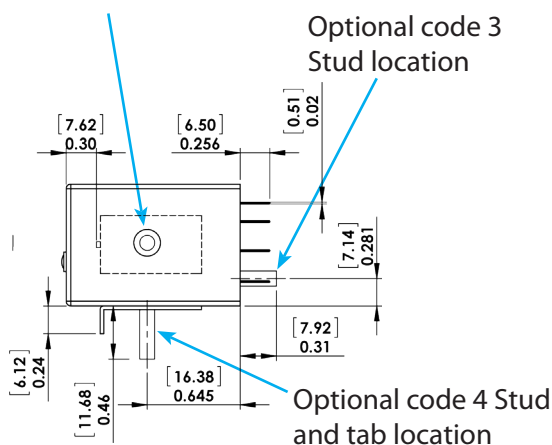
	87	XDX	H	2	E	5	LV	-24VDC
<b>Series Part Number</b>	_____							
<b>Contact Combination</b>	_____							
	XBX (DPDT) (2 FORM C)							
	XDX (4 PDT) (4 FORM C)							
<b>Hermetically Sealed</b>	_____							
<b>Stud Location</b>	_____							
	No Stud-2							
	Terminal Side Only-3							
	Narrow Side-4							
	Top Side-5							
	Wide Side-6							
<b>Flammable Environment</b>	_____							
<b>Contact Type</b>	_____							
	Standard 5 Amp Sliver/Tin Alloy Gold Flashed-5							
<b>Options</b>	_____							
	LED Indicator-L							
	Coil Suppression Diode-V (DC ONLY)							
<b>Coil Voltage</b>	_____							
	6, 12, 24, 36, 48, 72, 110/125 VDC							
	Other Coil Voltages Available							

### Wiring Diagrams



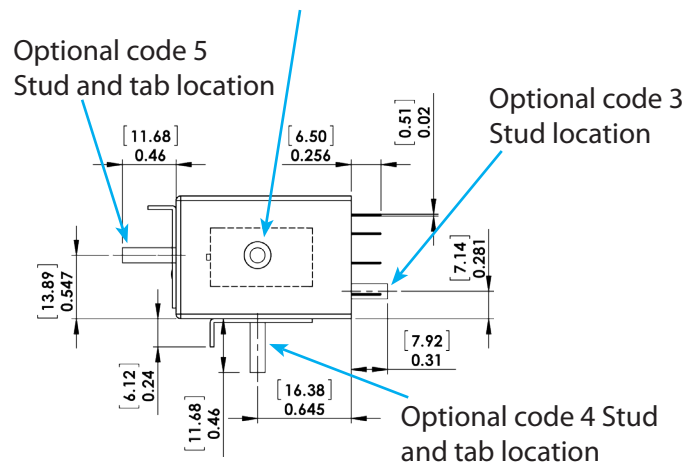
### LED Version With Stud

Optional code 6 Mounting stud  
With #6-32 Thread and anti-rotation tab

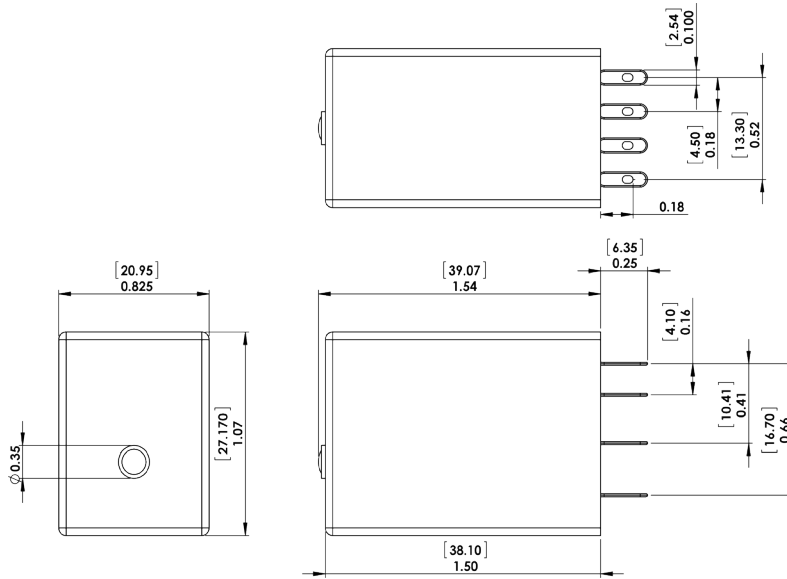


### No LED Version With Stud

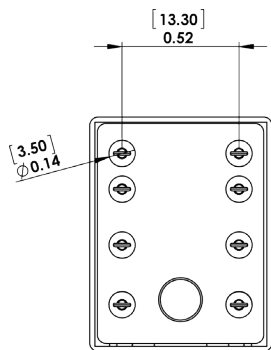
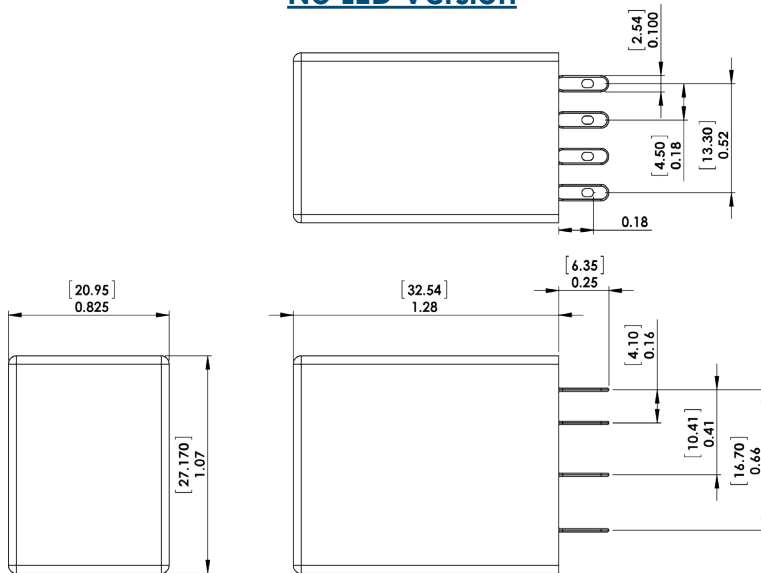
Optional code 6 Mounting stud  
With #6-32 Thread and anti-rotation tab



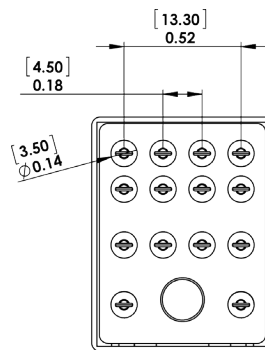
## LED Version



## No LED Version



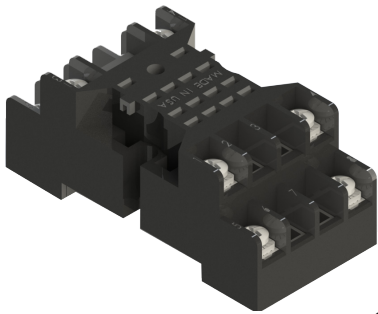
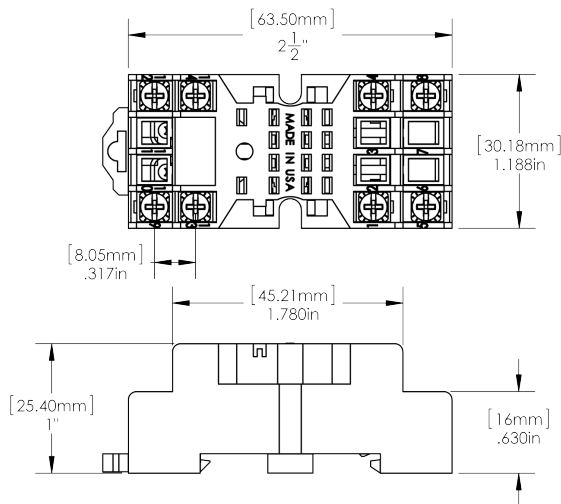
**Pin Location**



**Pin Location**

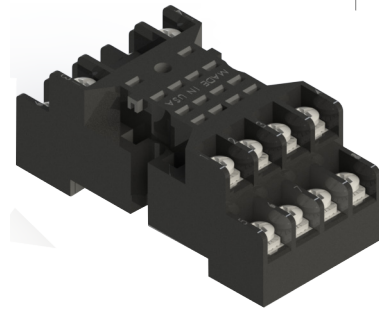
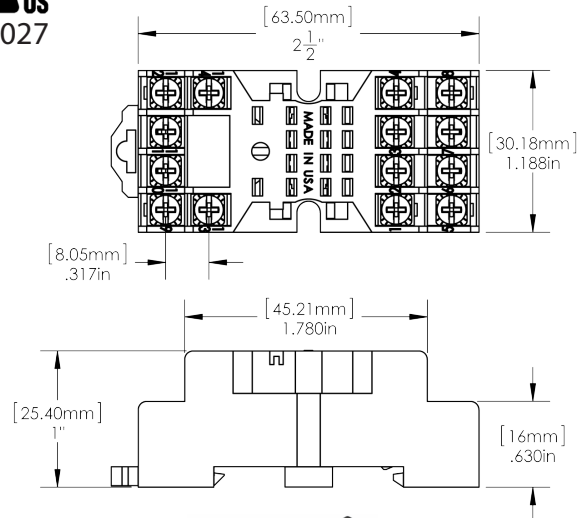
# Outline Dimensions

## 8 Pin Socket-SK-ICE08-DS



## 14 Pin Socket-SK-ICE14-DS

**CALUS**  
E340027



Sockets fit standard 1mm thick,  
35mm wide top hat style DIN rails.

Optional hold-down clip CL-ICE-87H-DS available.

