

# SRUDH series

## 12 Amp Miniature Power PC Board Relay

Appliances, HVAC, Office Machines

UL File No. E82292

CSA File No. LR48471

TUV File No. R60271

Users should thoroughly review the technical data before selecting a product part number. It is recommended that user also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

### Features

- Small package, 12 Amp switching capacity.
- 1 Form A and 1 Form C contact arrangements.
- Immersion cleanable, sealed version available.
- Applications include appliance, HVAC, security system, garage opener control, emergency lighting.

### Contact Data @ 20°C

**Arrangements:** 1 Form A (SPST-NO) and 1 Form C (SPDT).

**Material:** Ag Alloy.

**Max. Switching Rate:** 300 ops./min. (no load).  
30 ops./min. (rated load).

**Expected Mechanical Life:** 10 million operations (no load).

**Expected Electrical Life:** 100,000 operations (rated load).

**Minimum Load:** 100mA @ 5VDC.

**Initial Contact Resistance:** 100 milliohms @ 1A, 6VDC.

### Contact Ratings

**Ratings:** 12A @ 120VAC resistive,  
10A @ 240VAC resistive,  
10A @ 28VDC resistive.

4A @ 120VAC inductive (cosφ = 0.4),  
4A @ 28VDC inductive (L/R = 7msec)

**Max. Switched Voltage:** AC: 240V.  
DC: 28V.

**Max. Switched Current:** 12A.

**Max. Switched Power:** 2,400VA, 300W.

### Initial Dielectric Strength

**Between Open Contacts:** 750VAC 50/60 Hz. (1 minute).

**Between Coil and Contacts:** 1,500VAC 50/60 Hz. (1 minute).

**Surge Voltage Between Coil and Contacts:** 3,000V (1.2 / 50μs).

### Initial Insulation Resistance

**Between Mutually Insulated Elements:** 1,000M ohms min. @ 500VDCM.

### Coil Data

**Voltage:** 6 to 48VDC.

**Nominal Power:** 360 mW except 48VDC coil (510mW)

**Coil Temperature Rise:** 35°C max., at rated coil voltage.

**Max. Coil Power:** 130% of nominal.

**Duty Cycle:** Continuous.

### Coil Data @ 20°C

SRUDH				
Rated Coil Voltage (VDC)	Nominal Current (mA)	Coil Resistance (ohms) ± 10%	Must Operate Voltage (VDC)	Must Release Voltage (VDC)
6	60	100	4.50	0.60
9	40	225	6.75	0.90
12	30	400	9.00	1.20
24	15	1,600	18.00	2.40
48	10	4,500	36.00	4.80

### Operate Data

**Must Operate Voltage:** 75% of nominal voltage or less.

**Must Release Voltage:** 10% of nominal voltage or more.

**Operate Time:** 15 ms max.

**Release Time:** 5 ms max.

### Environmental Data

**Temperature Range:**

**Operating:** -30°C to +60°C

**Vibration, Mechanical:** 10 to 55 Hz., 1.5mm double amplitude

**Operational:** 10 to 55 Hz., 1.5mm double amplitude.

**Shock, Mechanical:** 1,000m/s<sup>2</sup> (100G approximately).

**Operational:** 100m/s<sup>2</sup> (10G approximately).

**Operating Humidity:** 20 to 85% RH. (Non-condensing).

### Mechanical Data

**Termination:** Printed circuit terminals.

**Enclosure (94V-0 Flammability Ratings):**

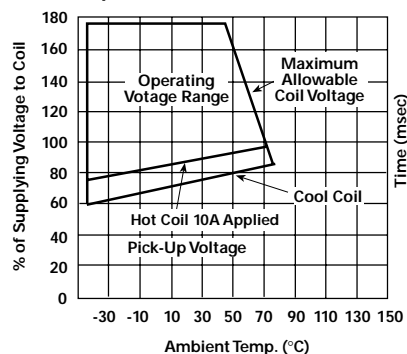
**SRUDH-SS:** Vented (Flux-tight) plastic cover

**SRUDH-SH:** Sealed plastic case

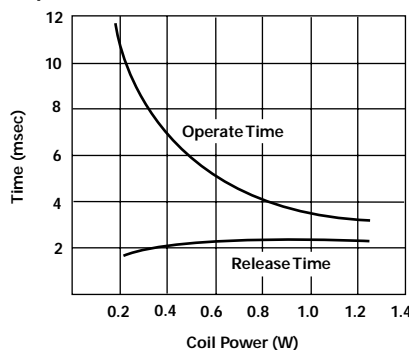
**Weight:** 0.42 oz (12g) approximately.

### Reference Data

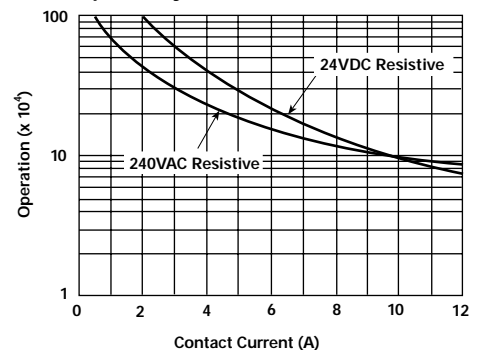
#### Coil Temperature Rise



#### Operate Time



#### Life Expectancy



**Note:** Rise data is based on the max. allowable temp. for E type insulation coil (115°C).

**Ordering Information**

Typical Part Number ▶

**SRUDH -SS -1 12 D M 1 ,000**

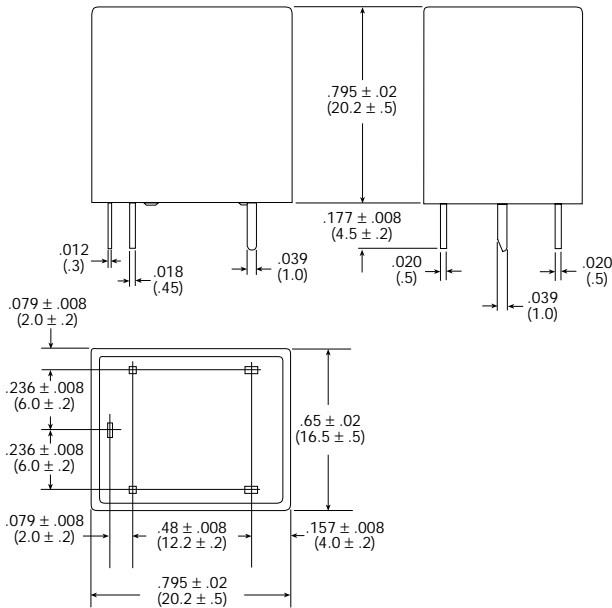
- 1. Basic Series:**  
SRUDH = Miniature Power PC board relay.
- 2. Enclosure:**  
SS = Vent (Flux-tight)\* plastic cover.  
SH = Sealed, plastic case.
- 3. Termination:**  
1 = 1 pole
- 4. Coil Voltage:**  
06 = 6VDC      12 = 12VDC      48 = 48VDC  
09 = 9VDC      24 = 24VDC
- 5. Coil Input:**  
D = Standard
- 6. Contact Arrangement:**  
Blank = 1 Form C, SPDT      M = 1 Form A, SPST-NO
- 7. Contact Material:**  
1 = AgCdO
- 8. Suffix:**  
,000 = Standard model      Other Suffix = Custom model

\* Not suitable for immersion cleaning processes.

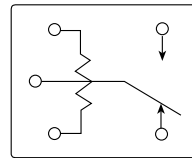
**Our authorized distributors are more likely to maintain the following items in stock for immediate delivery.**

SRUDH-SH-112D1,000      SRUDH-SH-112DM1,000  
SRUDH-SH-124D1,000      SRUDH-SH-124DM1,000

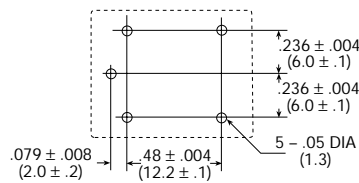
**Outline Dimensions**



**Wiring Diagram (Bottom View)**

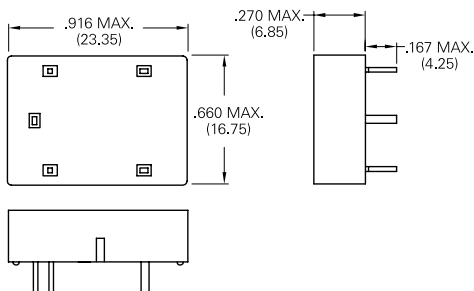


**PC Board Layout (Bottom View)**



**Socket**

**27E1064** socket is rated 10A @ 300VAC. UL Recognized for US and Canada. Designed to fit same suggested board layout as relay.



**Hold-Down Spring**

**20C430** spring is designed to secure SRUDH relay in 27E1064 socket.

