

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 ($\cos\phi = 0.4$),
4A @ 28VDC inductive ($L/R = 7\text{msec}$)

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) $\pm 10\%$	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/s² (100G approximately).

Operational: 100m/s² (10G approximately).

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

Mechanical Data

Termination: Printed circuit terminals.

Enclosure (94V-0 Flammability Ratings):

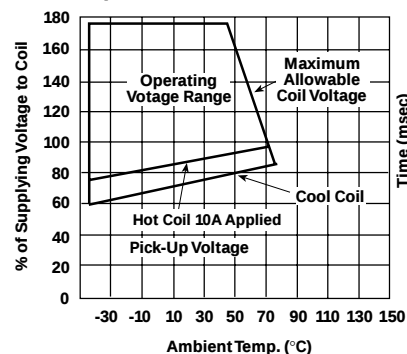
SRUDH-SS: Vented (Flux-tight) plastic cover

SRUDH-SH: Sealed plastic case

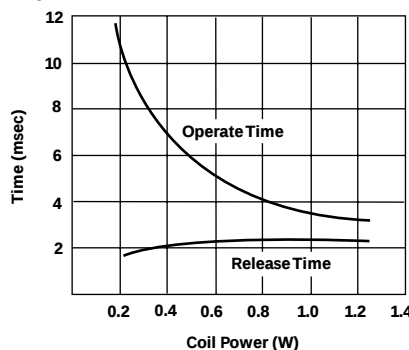
Weight: 0.42 oz (12g) approximately.

Reference Data

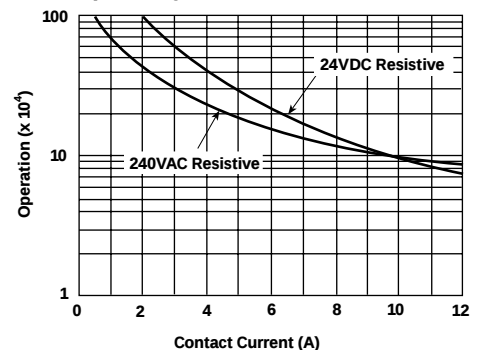
Coil Temperature Rise



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
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|--------------------------------|--|--|
| 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
09 = 9VDC | 12 = 12VDC
24 = 24VDC

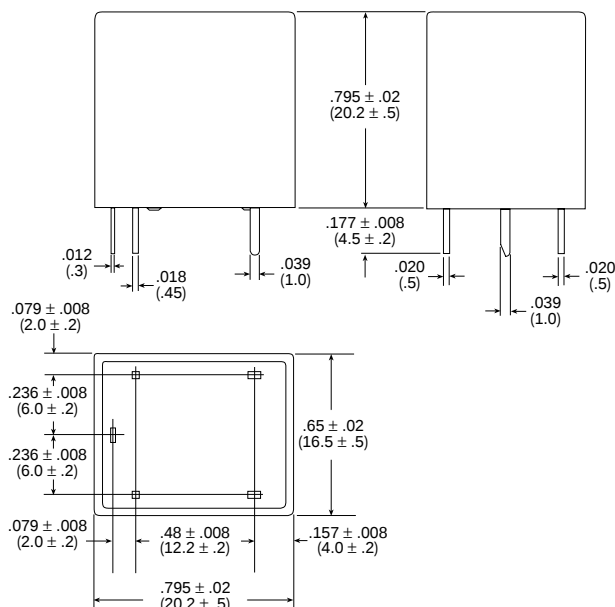
48 = 48VDC |
| 5. Coil Input: | D = Standard | |
| 6. Contact Arrangement: | Blank = 1 Form C, SPDT | M = 1 Form A, SPST-NO |
| 7. Contact Material: | 1 = AgCdO | |
| 8. Suffix: | .000 = Standard model | Other Suffix = Custom model |

* Not suitable for immersion cleaning processes.

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

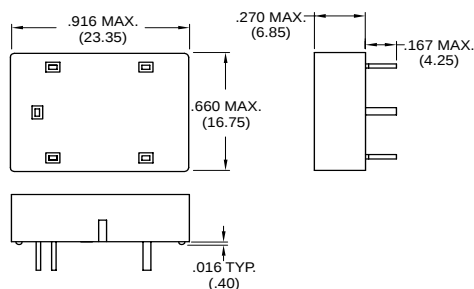
SRUDH-SH-112D1,000	SRUDH-SH-112DM1,000
SRUDH-SH-124D1,000	SRUDH-SH-124DM1,000

Outline Dimensions

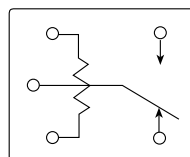


Socket

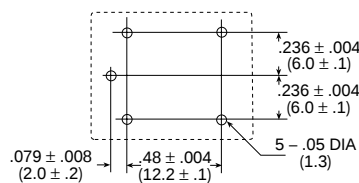
27E1064 socket is rated 10A @ 300VAC. UL Recognized for US and Canada. Designed to fit same suggested board layout as relay.



Wiring Diagram (Bottom View)



PC Board Layout (Bottom View)



Hold-Down Spring

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

