

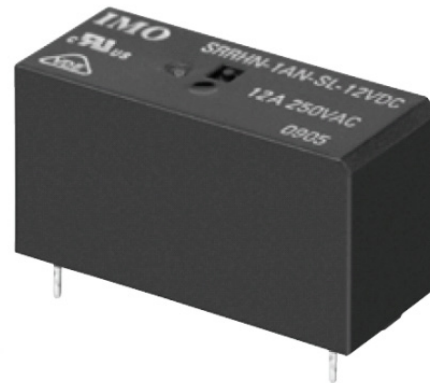
SRRHN - Miniature High Power Relay



Technical Datasheet

Key Features

- 1 and 2 pole configuration
- 5kV dielectric strength (between coil and contacts)
- 12A switching capabilities
- Creepage distance 10mm
- Sealed IP67 and flux proof types available
- Outline dimensions: 29.0 x 12.7 x 15.7mm



Options & Ordering Codes

SRRHN - 1A N - S L F - 12VDC

Contact Arrangement

SPNO	1A	DPNO	2C
SPNC	1B	SPNO 5mm pin spacing	1A1
SPCO	1C	SPNC 5mm pin spacing	1B1
DPNO	2A	SPNO 5mm pin spacing	1C1
DPNC	2B		

Contacts

AgNi	N
AgNi + Au plated	N1
AgSnO ₂	T
AgSnO ₂ + Au plated	T1

Voltage

Insulation

	DC: B Class, AC: F Class
F	DC Only: F Class

L RoHS Compliant

Construction

S	Sealed
F	Flux-Tight

Technical Specification

Contact arrangement	1A, 1B, 1C	2A, 2B, 2C
Initial contact resistance max.	100mΩ max. (at 1A 6VDC)	
Contact material	See ordering information	
Contact rating	12A 250VAC/24VDC	8A 250VAC/24VDC
Max. switching voltage	440VAC / 300VDC	
Max. switching current	12A	8A
Max. switching power	3000VA	2000VA
Mechanical life	DC	1 x 10 ⁷ OPS
	AC	1 x 10 ⁶ OPS
Electrical life	DC	1 x 10 ⁵ OPS
	AC	5 x 10 ⁴ OPS

Characteristics

Insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	5000VAC 1min
	Between open contacts	1000VAC 1min
	Between contact sets	2500VAC 1min
Operate time (at nomi. volt.) DC only	15ms max.	
Release time (at nomi. volt.) DC only	8ms max.	
Temperature rise (at nomi. Volt)	DC version	55°C
	AC version	85°C
Vibration resistance	10Hz to 150Hz 10g/5g	
Shock resistance	Functional	98m/s ²
	Destructive	980m/s ²
Ambient temperature	-40°C to 85°C	
Termination	PCB	
Unit weight	13.5g	
Construction	Sealed IP67, Flux proofed	

Coil Data

	Nominal Voltage V	Pick-up Voltage V	Drop-out Voltage V	Coil Resistance Ω
DC Version VDC	5	3.50	0.5	62±10%
	6	4.20	0.6	90±10%
	9	6.30	0.9	202±10%
	12	8.40	1.2	360±10%
	18	12.60	1.8	810±10%
	24	16.80	2.4	1440±10%
	48	33.60	4.8	5760±15%
AC Version VAC	60	42.00	6.0	7500±15%
	110	77.00	11.0	25200±15%
	24	18.00	3.6	350±10%
	115	86.30	17.3	8100±15%
	230	172.50	34.5	32500±15%

Coil

Coil power	DC version	0.4W
	AC version	0.75VA

SRRHN - Miniature High Power Relay



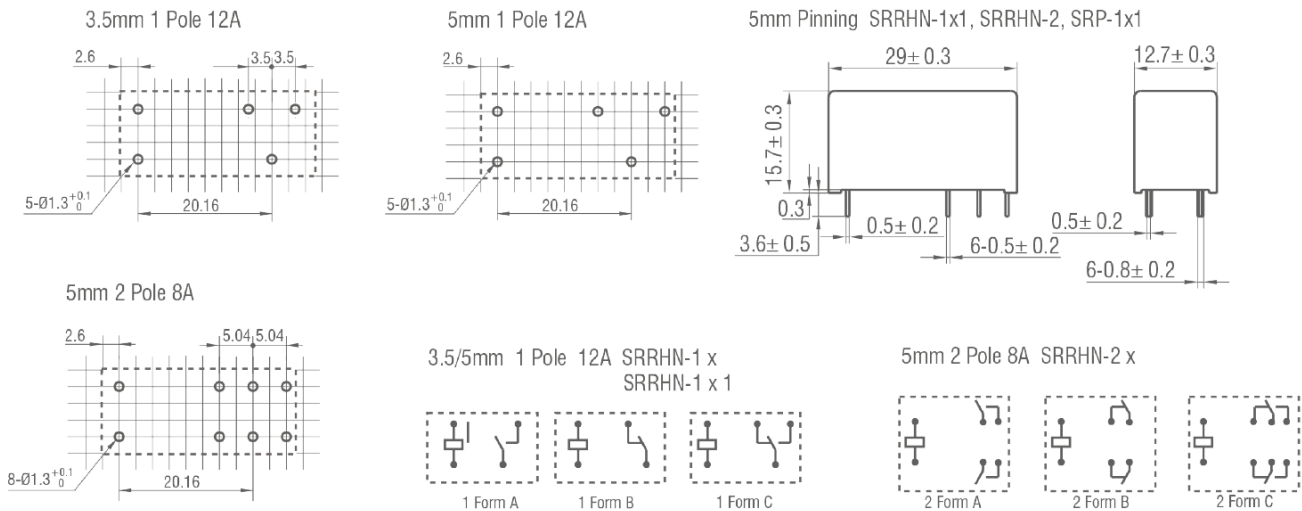
Technical Datasheet

Safety Approval Ratings

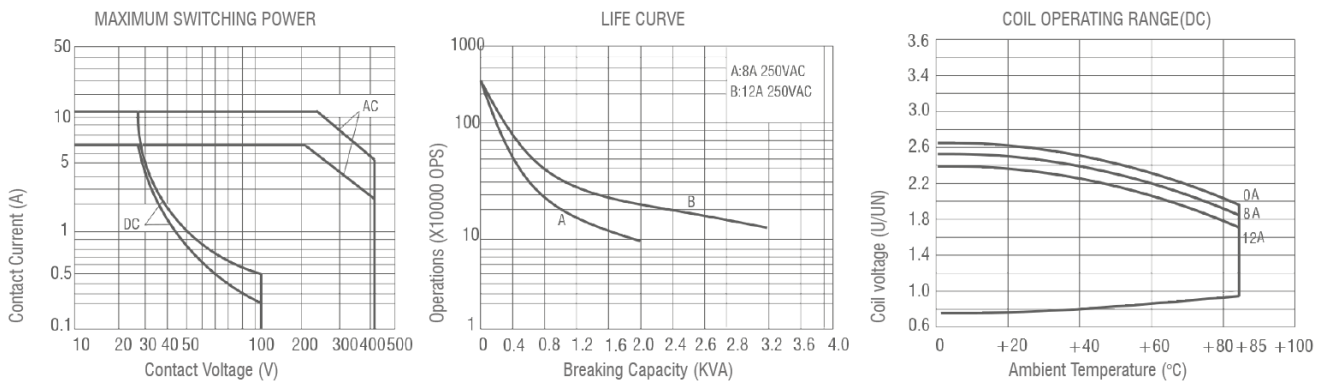
UL/CUR	DC version 1 pole	12A 277 VAC
	DC version 2 pole	8A 277 VAC
	AC version 1 pole	12A 250 VAC
	AC version 2 pole	8A 250 VAC
VDE	DC version 1 pole	12A 250 VAC at 85°C
	DC version 2 pole	8A 250 VAC at 85°C
	AC version 1 pole	12A 250 VAC
	AC version 2 pole	8A 250 VAC

Notes: Typical ratings are listed above, refer to IMO for more details

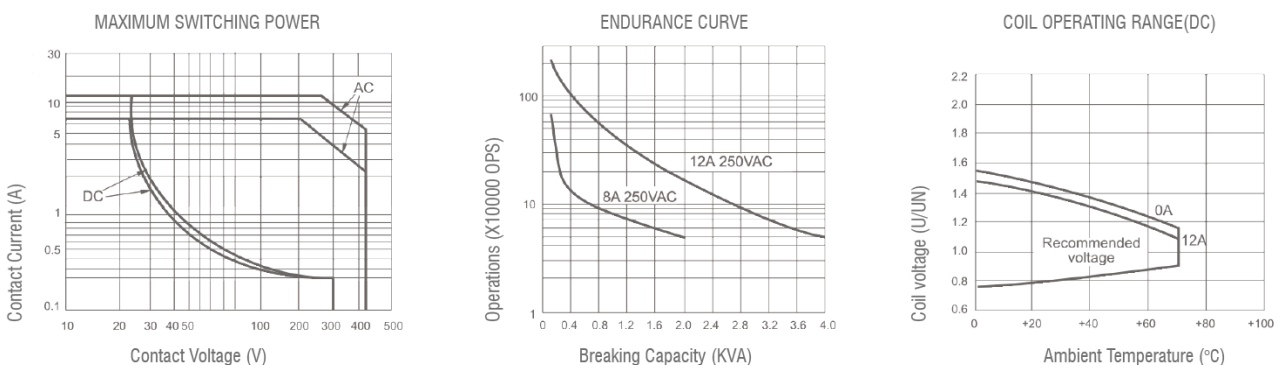
PCB layout (T=2.52±0.02mm)



Characteristic Curve (DC version)



Characteristic Curve (AC version)



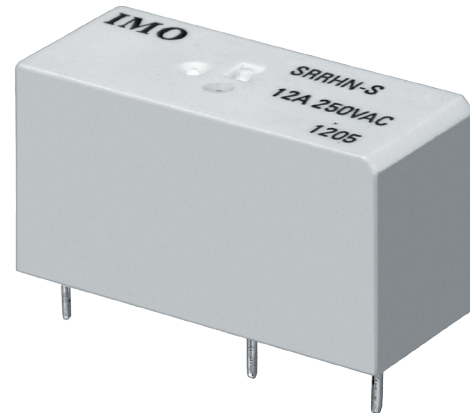
SRRHN-D & SRRHN-S

Miniature High Power Latching Relays



Key Features

- Single or double coil latching
- High switching capacity 8A 250VAC
- Low height 15.7mm
- 5kV dielectric capacity
- Suitable for switching tungsten lamps
- RoHS compliant
- 10A switching capacity



Options & Ordering Codes

SRRHN		-	S		-	2A		-	FL		-	5		-	DC	
Coil Arrangement					Contact Arrangement					Coil Voltage						
Single Coil				S	DPNO				2A	5	5V					
Double Coil				D	DPCO				2C	6	6V					
										9	9V					
										12	12V					
										24	24V					
										Construction						
									FL	Flux-tight						
									SL	Sealed						

Technical Specification

Contact arrangement	2A, 2C
Contact resistance	100mΩ max. (at 1A 6VDC)
Contact material	AgSnO ₂
Contact rating	8A 250VAC
Typical applicable load	Lamp: Tungsten 3A 277VAC Standardballast: 3A 277VAC
Max. switching voltage	440VAC / 300VDC
Max. switching current	10A
Max. switching power	2000VA
Mechanical endurance	2 x 10 ⁶ OPS
Electrical endurance	2H type: 5 x 10 ⁴ OPS (8A 250VAC, General use, at 85°C, 5s on 5s off) 2Z type: 1 x 10 ⁴ OPS (8A 250VAC, General use, at 85°C, 5s on 5s off)

Characteristics

Insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	5000VAC 1min
	Between open contacts	1000VAC 1min
	Between contact sets	2500VAC 1min
Surge Voltage (between coil & contacts)	10kV (1.2 / 50μs)	
Set Time (at rated voltage)	10ms max.	
Reset Time (at rated voltage)	10ms max.	
Vibration resistance	10Hz to 150Hz 10g/5g	
Shock resistance	Functional	98m/s ²
	Destructive	980m/s ²
Ambient temperature	-40°C to 85°C	
Termination	PCB	
Unit weight	13.5g	
Construction	Plastic Sealed, Flux proofed	

Coil Data at 23°C

1 Coil Latching

Nominal Voltage VDC	Set Voltage VDC max. *1	Pulse Width (ms)		Reset Voltage VDC max. *1	Max Voltage VDC	Coil Resistance Ω
		Typical	Min.			
5	3.50	≥ 50	30	3.5	6	62x (1±10%)
6	4.20	≥ 50	30	4.2	7.2	90x (1±10%)
9	6.30	≥ 50	30	6.3	10.8	202x (1±10%)
12	8.40	≥ 50	30	8.4	14.4	360x (1±10%)
24	16.8	≥ 50	30	16.8	28.8	1440x (1±10%)

2 Coil Latching

Nominal Voltage VDC	Set Voltage VDC max. *1	Pulse Width (ms)		Reset Voltage VDC max. *1	Max Voltage VDC	Coil Resistance Ω
		Typical	Min.			
5	3.50	≥ 50	30	3.5	7.5	42x (1±10%)
6	4.20	≥ 50	30	4.2	9	55x (1±10%)
9	6.30	≥ 50	30	6.3	13.5	135x (1±10%)
12	8.40	≥ 50	30	8.4	18	240x (1±10%)
24	16.8	≥ 50	30	16.8	36	886x (1±10%)

Coil

Coil power	1 coil latching: Approx. 400mW
	2 coils latching: Approx. 600mW

Note: The data shown above are initial values
*1 Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time

SRRHN-D & SRRHN-S

Miniature High Power Latching Relays

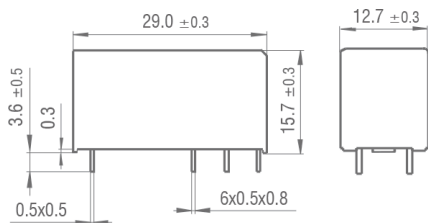
Safety Approval Ratings

UL/CUL	10A/8A 250/277VAC General use at 85°C 1/2 HP 240VAC at 40°C Standard ballast 3A 277VAC at 40°C Tungsten lamp 3A 277VAC at 40°C
VDE	8A 250 VAC at 85°C

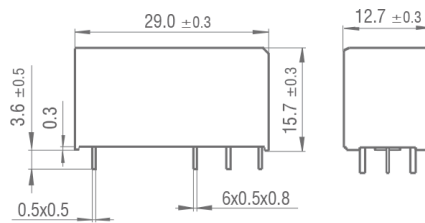
Outline dimensions (mm)

Wiring diagram (bottom view) and PCB layout (bottom view)

1 Coil Latching



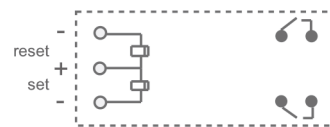
2 Coils Latching



2 Form A



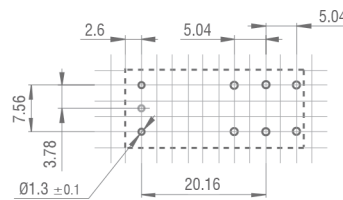
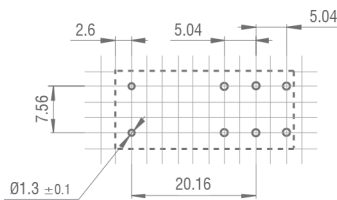
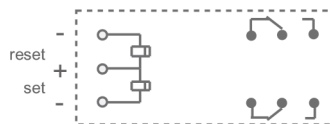
2 Form A



2 Form C



2 Form C



Note:

- 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension ≤5mm, tolerance should be ±0.4mm.
- 2) The tolerance without indicating for PCB layout is always ±0.1mm
- 3) The width of the griddling is 2.52mm