

953A Series Relay

FEATURES

- UL, CE & TUV safety approval.
- Single contact 953 series relay offers 30A switching capacity for various kinds of applications.
- Up to 30A switching in SPDT-NO and 20A switching in SPDT-NC arrangement.
- Meets UL 508 & UL 873 spacing.
- Nominal power 930mW.
- Operating power 520mW.
- Both PCB Terminal & Quick Connect Terminal for contacts.



UL FILE NO: E162117

TUV FILE NO: R 3-02158203

CE DECLARATION OF CONFORMITY

ORDERING INFORMATION

$\frac{953}{1} - \frac{1C}{2} - \frac{12}{3} \quad \frac{D}{4} \quad \frac{A}{5} \quad \frac{F}{6} - \frac{S}{7}$	
1. Model Number 2. Contact Arrangement 1A = 1 Form A (SPST-NO) 1B = 1 Form B (SPST-NC) 1C = 1 Form C (SPDT) 3. Coil Voltage DC: 5~48V AC: 6~277V 4. Coil Type D: DC A: AC	5. Enclosure Connect Type A = Double Connect I Type 6. Type of Insulation Nil = Class B F = Class F 7. Enclosure N = Open Type S = Sealed Type

COIL RATINGS (at 20°C)

COIL TYPE	Coil Nominal Voltage (V)	Coil Resistance ($\Omega \pm 10\%$)	Pick-Up Voltage (V) $\leq$	Drop-Out Voltage (V) $\geq$	Nominal Current (mA)
DC Standard Coils	5	27	3.75	0.5	185
	6	40	4.5	0.6	150
	9	97	6.75	0.9	93
	12	155	9	1.2	77
	18	380	13.5	1.8	47
	24	660	18	2.4	36
	36	1440	27	3.6	25
	48	2560	36	4.8	19
AC	6	10	5.1	0.6	
	12	43	10.2	1.2	
	24	160	20.4	2.4	
	110	3160	93.5	11	
	220	13490	187	22	
	277	19900	235.4	27.7	

* Max Continuous Voltage at 20°C: 130% of Coil Nominal Voltage.

CONTACT RATINGS

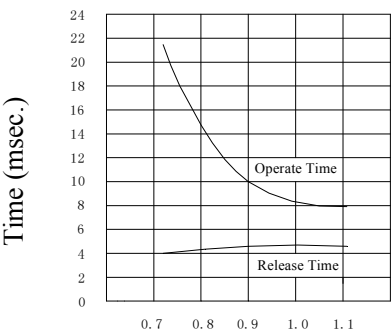
Contact Arrangement	1 Form A (SPST-NO)	1 Form B (SPST-NC)	1 Form C (SPDT)
Max. Switching Power	7500VA 600W	5000VA 300W	7500VA 600W
Max. Switching Voltage	277VAC 30VDC	277VAC 30VDC	277VAC 30VDC
Max. Switching Current	30A	20A	30A
Contact Resistance	≤50m Ω	≤50m Ω	≤50m Ω
Resistive Load	30A/250VAC 20A/277VAC 20A/30VDC	20A/240VAC 15A/277VAC 10A/30VDC	NO: 30A/240VAC 20A/277VAC 20A/30VDC NC: 20A/240VAC 15A/277VAC 10A/30VDC
Contact Material	Ag-CdO	Ag-CdO	Ag-CdO

CHARACTERISTICS

Electrical Life	1 × 10 ⁵
Mechanical Life	1 × 10 ⁷
Initial Insulation Resistance	Min. 500M Ω 500VDC
Contact Resistance (Initial)	≤50m Ω
Operate Time	≤15ms
Release Time	≤15ms
Initial Dielectric Strength	50/60Hz 1500VAC 1 min. (between open contacts) 50/60Hz 2500VAC 1 min. (between contacts and coil)
Vibration Resistance	Malfunction: 10 to 55Hz at Double Amplitude of 1.5mm Destructive: 10 to 55Hz at Double Amplitude of 1.5mm
Shock Resistance	Malfunction: 10G (11ms) / Destructive: 100G (6ms)
Ambient Temperature	−55℃ ~ +85℃
Relative Humidity	85% at 40℃
Unit Weight	Approx. 30g

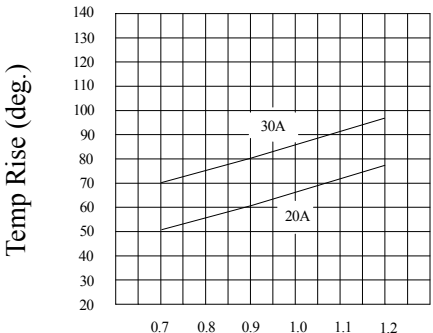
953A Referential Data

Timing



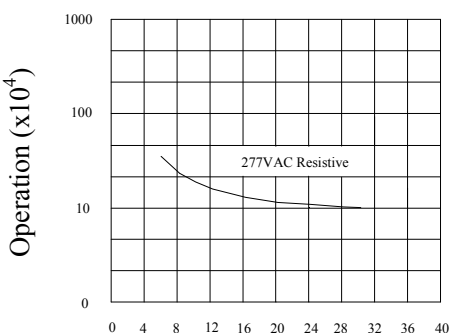
Coil Power (W)

Coil Temperature Rise



Coil Power (W)

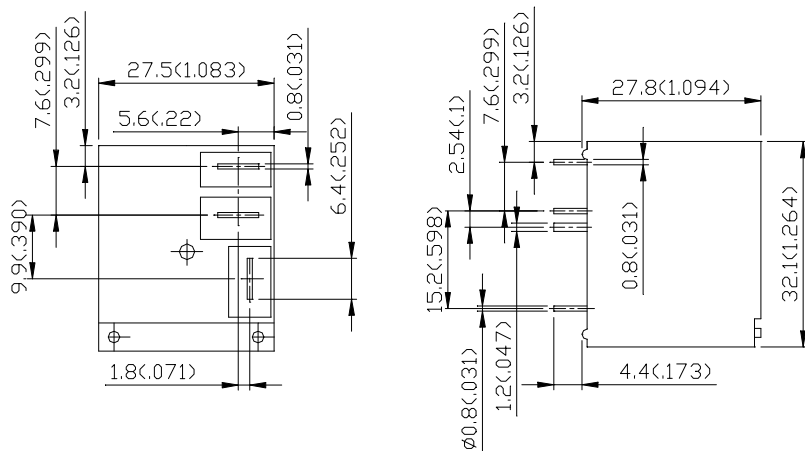
Life Curves



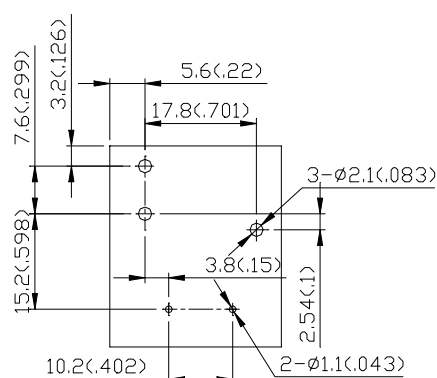
Contact Current (A)

OUTLINE DIMENSIONS

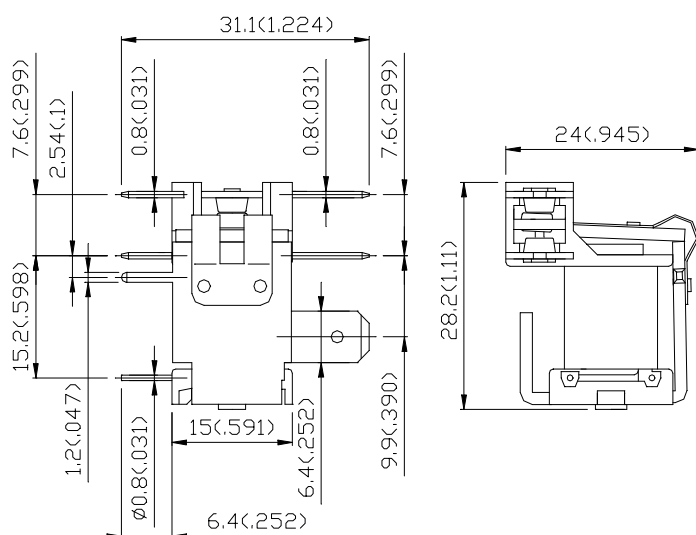
Dimensions



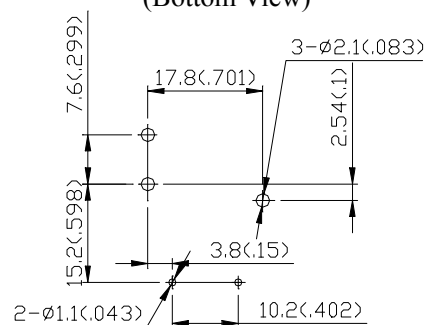
Sealed Type

Drilling Plan
(Bottom View)

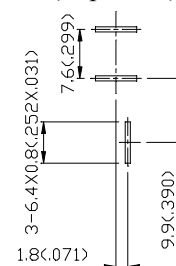
(Bottom View)



Open Type

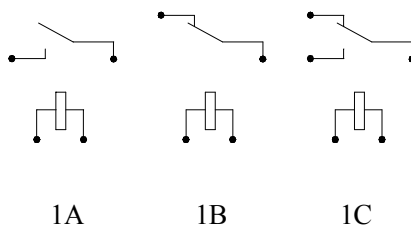


(Top View)

REMARK: Tolerance of outline dimensions: $\pm 0.2(.008)$.

Internal Connections

(Bottom View)



1A

1B

1C

UNIT: mm (inch)

SAFETY APPROVAL

● UL APPROVAL

Contact Rating	1 Form A (SPST-NO)	1 Form B (SPST-NC)	1 Form C (SPDT)	
			NO	NC
Resistive Load	20A / 277VAC 19.8A / 277VAC 30A / 240VAC 20A / 30VDC	15A / 277VAC 10A / 30VDC	20A / 277VAC 20A / 30VDC	15A / 277VAC 10A / 30VDC
General Purpose Load	10A / 277VAC	8A / 277VAC	10A / 277VAC	8A / 277VAC
Motor Load (Cos ϕ : 0.4 ~ 0.5)	2HP / 250VAC 1HP / 125VAC	1/2HP / 250VAC 1/4HP / 125VAC	2HP / 250VAC 1HP / 125VAC	1/2HP / 250VAC 1/4HP / 125VAC
Horse Power	FLA 10.3 LRA 61.8 / 277VAC FLA 11.2 LRA 67.2 / 240VAC FLA 12 / 250VAC FLA 16 LRA 96 / 240VAC FLA 16 LRA 96 / 120VAC FLA 16 / 125VAC	FLA 4.9 / 250VAC FLA 5.8 / 125VAC	FLA 12 / 250VAC FLA 16 / 125VAC	FLA 4.9 / 250VAC FLA 5.8 / 125VAC
Ballast	20A / 277VAC		20A / 277VAC	

● TUV APPROVAL

Contact Rating	1 Form A (SPST-NO)	1 Form B (SPST-NC)	1 Form C (SPDT)	
			NO	NC
Resistive Load	30A / 250VAC 20A / 30VDC	15A / 250VAC 15A / 30VDC	20A / 250VAC 20A / 30VDC	10A / 250VAC 10A / 30VDC
Inductive Load (Cos ϕ : 0.4, L/R: 7ms)	15A / 250VAC 15A / 30 VDC	8A / 250VAC 8A / 30VDC	10A / 250VAC 10A / 30VDC	8A / 250VAC 8A / 30VDC
Motor Load (Cos ϕ : 0.6)	2HP / 250VAC 1HP / 125VAC	1/2HP / 250VAC 1/4HP / 125VAC	2HP / 250VAC 1HP / 125VAC	1/2HP / 250VAC 1/4HP / 125VAC
Pilot Duty Load (Rate 6000 Operations)	720VA / 240VAC 800VA / 125VAC	360VA / 240VAC 290VA / 125VAC	470VA / 240VAC 470VA / 125VAC	360VA / 240VAC 290VA / 125VAC

● CCEE APPROVAL

Contact Rating	1 Form A (SPST-NO)	1 Form B (SPST-NC)	1 Form C (SPDT)	
			NO	NC
Resistive Load	30A / 240VAC	20A / 240VAC	30A / 240VAC	20A / 240VAC

● CE DECLARATION OF COFORMITY

In conformity with the Low Voltage Directive 73/23/EEC

Test Report No.: E9967734E02 (TUV)

Test Specification: EN61810-1

EN61810-5

EN60255-23