



### »» Features

- Heavy duty 40A general purpose PCB Power Relay.
- Available for top faston, flux tight, sealed versions.
- UL Class F as standard.
- High CTI 250 material or product comply with IEC 60335-1 are available.
- Special design for UPS, power supply of high rating application.
- Complies with RoHS-Directive 2011/65/EU.

### »» Type List

Terminal style	Contact form	Insulation system	Designation			
			Open type	Flux tight	Sealed type	Sealed type washable
PCB terminal	1A (SPNO)	F	832HA-1A-F	832HA-1A-F-C	832HA-1A-F-V	832HA-1A-F-S
	1B (SPNC)	F	832HA-1B-F	832HA-1B-F-C	832HA-1B-F-V	832HA-1B-F-S
	1C (SPDT)	F	832HA-1C-F	832HA-1C-F-C	832HA-1C-F-V	832HA-1C-F-S
WP (PCB terminal & Quick terminal)	1A (SPNO)	F	832HAWP-1A-F	832HAWP-1A-F-C	832HAWP-1A-F-V	832HAWP-1A-F-S
	1B (SPNC)	F	832HAWP-1B-F	832HAWP-1B-F-C	832HAWP-1B-F-V	832HAWP-1B-F-S
	1C (SPDT)	F	832HAWP-1C-F	832HAWP-1C-F-C	832HAWP-1C-F-V	832HAWP-1C-F-S

### »» Ordering Information

832 HA  - 1A - F -     
 1 2 3 4 5 6 7 8

- |                                     |   |
|-------------------------------------|---|
| 1. 832 -- Basic series designation  | 6. Blank -- Open type   |
| 2. HA -- High power type            | C -- Flux tight   |
| 3. Blank -- PCB terminal            | V -- Sealed type  |
| W -- Quick terminal                 | S -- Sealed type washable   |
| WP -- PCB terminal & Quick terminal | C1 -- With flanged cover  |
| 4. 1A -- Single pole normally open  | S1 -- Sealed type washable with flanged cover   |
| 1B -- Single pole normally closed   | 7. Blank -- Standard type   |
| 1C -- Single pole double throw      | E1 -- Comply with IEC 60335-1   |
| 5. F -- Class F                     | 8. <input type="checkbox"/> -- Coil voltage (please refer to the coil rating data for the availability) |

### »» Contact Rating

Resistive load	NO : 40A 240VAC ; NC : 40A 240VAC
Max. switching current	40A
Max. switching voltage	277VAC
Max. switching capacity	9600VA

## 832HA

## »» Coil Rating (DC)

Rated voltage (V)	Rated current $\pm 10\%$ at 23°C (mA)	Coil resistance $\pm 10\%$ at 23°C ( $\Omega$ )	Max. continuous voltage at 70°C	Pick up voltage(Max.) at 23°C	Drop out voltage(Min.) at 23°C	Power consumption at rated voltage
5	185	27	110 % of rated voltage	80 % of rated voltage	10 % of rated voltage	approx. 0.93W
6	150	40				
12	77	155				
24	36	660				
48	18	2,560				

## »» Specification

Contact material	AgSnO alloy	
Contact resistance <sup>(1)</sup>	50m $\Omega$ Max. (at 1A/6VDC by 4-wire resistance measurement)	
Operate time <sup>(1)</sup>	15 ms Max.	
Release time <sup>(1)</sup>	10 ms Max.	
Vibration resistance	Operating extremes	10 ~ 55Hz , amplitude 1.5 mm
	Damage limits	10 ~ 55Hz , amplitude 1.5 mm
Shock resistance	Operating extremes	10G
	Damage limits	100G
Life expectancy	Mechanical	2,000,000 ops. (frequency 18,000 ops./hr)
	Electrical	NO:30,000 ops. ; NC:10,000 ops. (frequency 900 ops./hr)
Operating ambient temperature	-55 ~ +70°C (no freezing)	
Weight	Approx. 22 g (open type), 27g (with cover), 36g (WP) , 38g (W)	

Note : (1) Initial value. Operate and release time excluding contact bounce.

(2) Unless otherwise specified, all tests are under room temperature and humidity.

(3) Consider the heat of PCB is necessary, please check the actual condition of PCB.

(4) Applying no diode to this relay. The life expectancy will be lower when a diode is used. To use a varistor (ZNR) could absorb the coil surge of relay that is recommended.

(5) Do not use the relay exceeding the coil rating, contact rating and life expectancy, or this may cause the risk of overheating.

(6) To assure optimum performance, avoid the relay from dropping, hitting, or other unnecessary shocks.

(7) Do not switch the contacts without any load as the contact resistance may become increased rapidly.

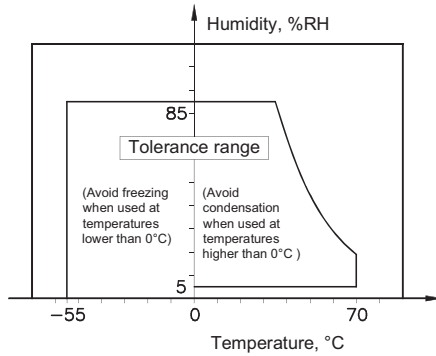
(8) Flux tight version is recommended. If there is cleaning process and sealed type is selected, the vent-hole should be removed after the process.

(9) Use suitable harnesses and bus bars according to the current as below :

40A type : Min. 10.0 mm<sup>2</sup>

(10) Usage, transport and storage conditions

- 1. Temperature: -55~+70°C
- 2. Humidity: 5 to 85% R.H.
- 3. Pressure: 86 to 106 kPa
- Furthermore, the humidity range varies with the temperature. So, use relays within the range indicated in the graph below.



(11) Please contact Song Chuan for the detailed information.

## »» Insulation Data

Insulation resistance <sup>(1)</sup>	1000 MΩ Min. (DC 500V)
Surge voltage withstand	Between contact and coil : 6KV 1.2X50μS
Dielectric strength <sup>(1)</sup>	Between open contact : AC 1500V , 50/60Hz 1min.
	Between contact and coil : AC 2500V , 50/60Hz 1min.
Insulation of IEC 61810-1	
Clearance / creepage distances	Between coil to contact : Basic, ≥ 1.5mm / ≥ 2.5mm
	Between open contact : Functional
Rated insulation voltage	250V
Rated impulse withstand voltage	2500V
Pollution degree	2
Rated voltage	230 / 400V
Overvoltage category	II

Note : (1) Initial value.

## »» Safety Approval

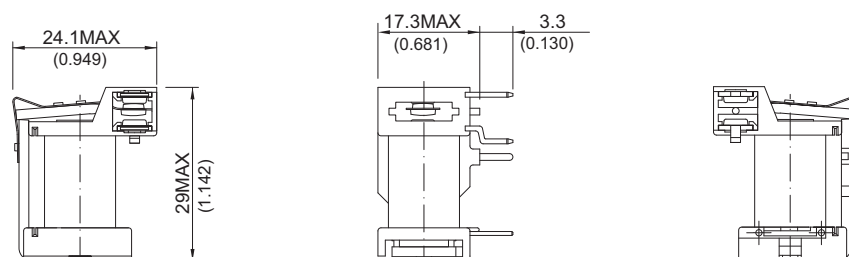
Certified	UL / CUL
File No.	E88991

## »» Safety Approval Rating

UL / CUL
NO: 40A 277VAC
NC: 40A 277VAC

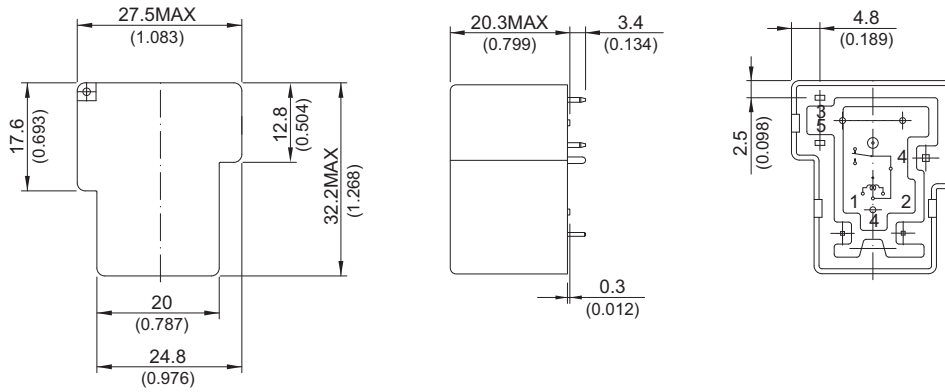
## »» Outline Dimensions

### ◆ 832HA(OPEN)

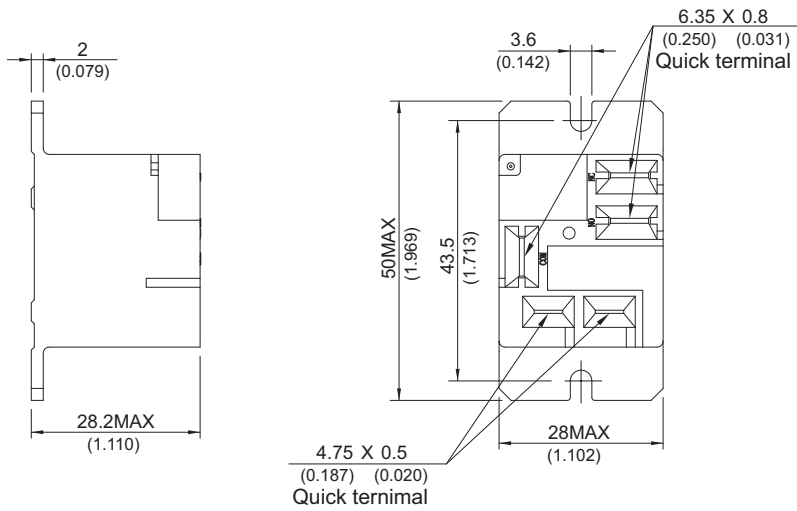


# 832HA

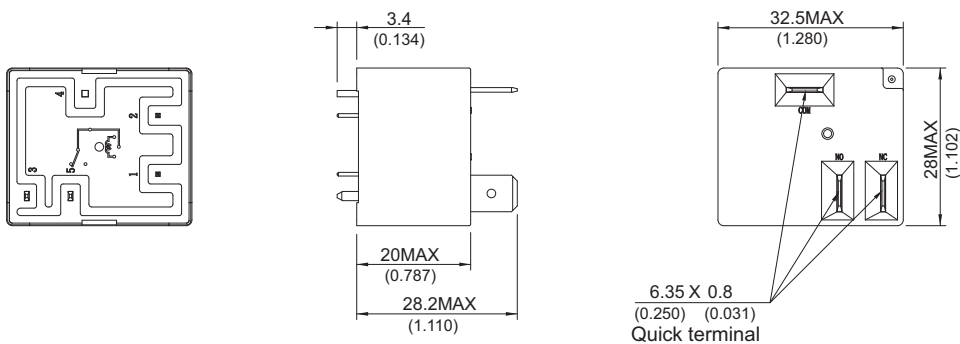
◆832HA



◆832HAW



◆832HAWP

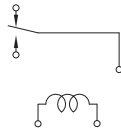


TOLERANCE:  
 LESS THAN: 1(0.039) ±0.1(0.004)  
 5(0.197) ±0.3(0.012)  
 20(0.787) ±0.5(0.020)  
 MORE THAN: 20(0.787) ±1(0.039)

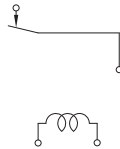
## Wiring Diagram

BOTTOM VIEW

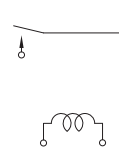
1C



1B



1A

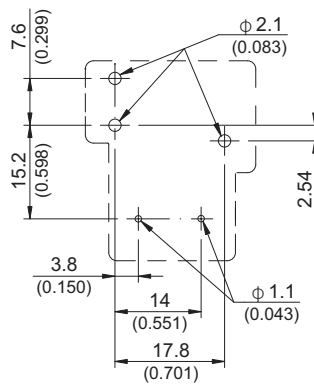


## PC Board Layout

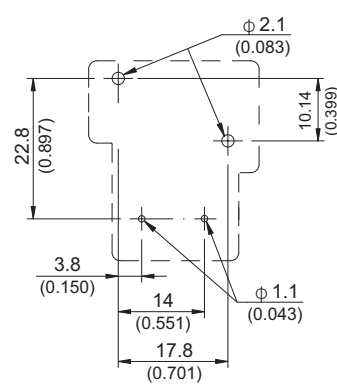
BOTTOM VIEW

### ◆832HA

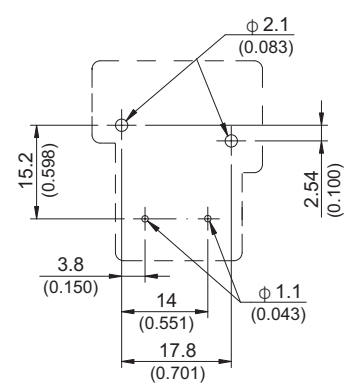
1C



1B

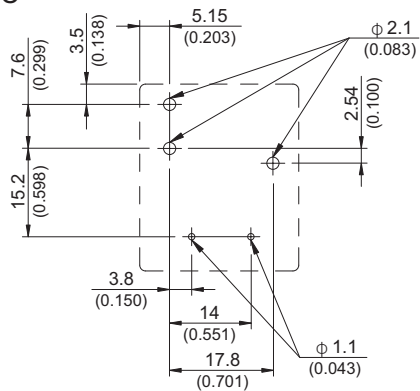


1A

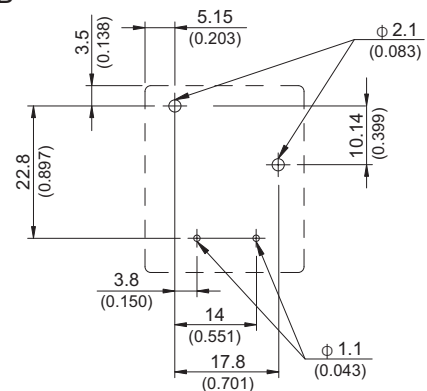


### ◆832HAWP

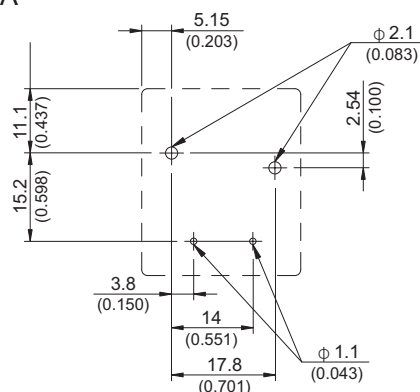
1C



1B

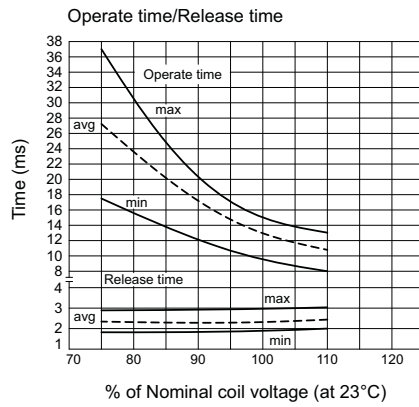
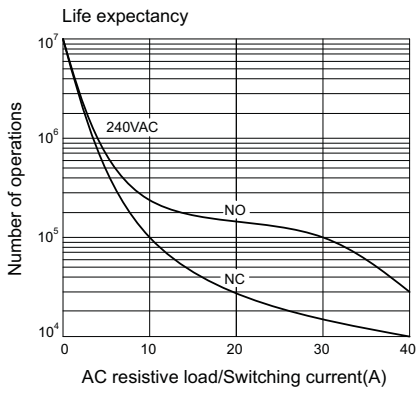
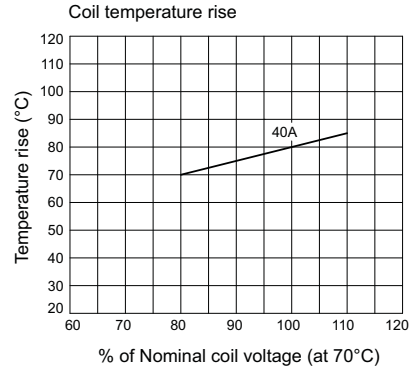
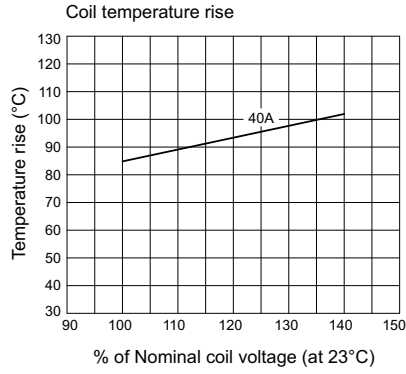
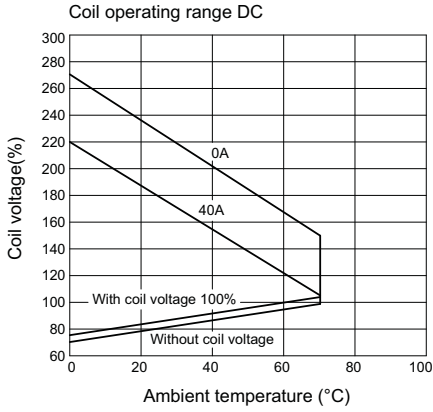


1A



# 832HA

## » Engineering Data



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