

»» Features

- Heavy duty 30A general purpose Power Relays.
- UL/CUL (UL 508 & 873), VDE safety approvals.
- Optional for open frame, dust cover, sealed type and with and without quick terminal on top, etc.
- High insulation type & high dielectric strength type available.
- Contact gap to 1.9mm, high dielectric strength 4000Vrms.
- High CTI 250 material or product comply with IEC 60335-1 are available.
- Ideal for HVAC, UPS & power supply, Home Appliances.
- Complies with RoHS-Directive 2011/65/EU.
- Optional for explosion-proof version.

»» Type List

◆ 832

| Terminal style | Contact form | Insulation system | Designation | | | |
|----------------|--------------|-------------------|-------------|-------------|-------------|----------------------|
| | | | Open type | Flux tight | Sealed type | Sealed type washable |
| PCB terminal | 1A (SPNO) | ----- | 832-1A | 832-1A-C | 832-1A-V | 832-1A-S |
| | | | 832-1AC | 832-1AC-C | 832-1AC-V | 832-1AC-S |
| | 1B (SPNC) | ----- | 832-1B | 832-1B-C | 832-1B-V | 832-1B-S |
| | | | 832-1BC | 832-1BC-C | 832-1BC-V | 832-1BC-S |
| | 1C (SPDT) | ----- | 832-1C | 832-1C-C | 832-1C-V | 832-1C-S |
| | | | 832-1CC | 832-1CC-C | 832-1CC-V | 832-1CC-S |
| | 1A (SPNO) | F | 832-1A-F | 832-1A-F-C | 832-1A-F-V | 832-1A-F-S |
| | | | 832-1AC-F | 832-1AC-F-C | 832-1AC-F-V | 832-1AC-F-S |
| | 1B (SPNC) | F | 832-1B-F | 832-1B-F-C | 832-1B-F-V | 832-1B-F-S |
| | | | 832-1BC-F | 832-1BC-F-C | 832-1BC-F-V | 832-1BC-F-S |
| | 1C (SPDT) | F | 832-1C-F | 832-1C-F-C | 832-1C-F-V | 832-1C-F-S |
| | | | 832-1CC-F | 832-1CC-F-C | 832-1CC-F-V | 832-1CC-F-S |

◆ 832A

| | | | | | | |
|--------------|-----------|-------|------------|--------------|--------------|--------------|
| PCB terminal | 1A (SPNO) | ----- | 832A-1A | 832A-1A-C | 832A-1A-V | 832A-1A-S |
| | | | 832A-1AC | 832A-1AC-C | 832A-1AC-V | 832A-1AC-S |
| | 1B (SPNC) | ----- | 832A-1B | 832A-1B-C | 832A-1B-V | 832A-1B-S |
| | | | 832A-1BC | 832A-1BC-C | 832A-1BC-V | 832A-1BC-S |
| | 1C (SPDT) | ----- | 832A-1C | 832A-1C-C | 832A-1C-V | 832A-1C-S |
| | | | 832A-1CC | 832A-1CC-C | 832A-1CC-V | 832A-1CC-S |
| | 1A (SPNO) | F | 832A-1A-F | 832A-1A-F-C | 832A-1A-F-V | 832A-1A-F-S |
| | | | 832A-1AC-F | 832A-1AC-F-C | 832A-1AC-F-V | 832A-1AC-F-S |
| | 1B (SPNC) | F | 832A-1B-F | 832A-1B-F-C | 832A-1B-F-V | 832A-1B-F-S |
| | | | 832A-1BC-F | 832A-1BC-F-C | 832A-1BC-F-V | 832A-1BC-F-S |
| | 1C (SPDT) | F | 832A-1C-F | 832A-1C-F-C | 832A-1C-F-V | 832A-1C-F-S |
| | | | 832A-1CC-F | 832A-1CC-F-C | 832A-1CC-F-V | 832A-1CC-F-S |

◆ 832AW

| Terminal style | Contact form | Insulation system | Designation | |
|--------------------|--------------|-------------------|----------------|---|
| | | | Flanged cover | Sealed type washable (with flanged cover) |
| W (Quick terminal) | 1A (SPNO) | ----- | 832AW-1A-C1 | 832AW-1A-S1 |
| | | | 832AW-1AC-C1 | 832AW-1AC-S1 |
| | 1C (SPDT) | ----- | 832AW-1C-C1 | 832AW-1C-S1 |
| | | | 832AW-1CC-C1 | 832AW-1CC-S1 |
| | 1A (SPNO) | F | 832AW-1A-F-C1 | 832AW-1A-F-S1 |
| | | | 832AW-1AC-F-C1 | 832AW-1AC-F-S1 |
| | 1C (SPDT) | F | 832AW-1C-F-C1 | 832AW-1C-F-S1 |
| | | | 832AW-1CC-F-C1 | 832AW-1CC-F-S1 |

◆ 832AWP

| Terminal style | Contact form | Insulation system | Designation | | |
|------------------------------------|--------------|-------------------|----------------|----------------|----------------------|
| | | | Flux tight | Sealed type | Sealed type washable |
| WP (PCB terminal & Quick terminal) | 1A (SPNO) | ----- | 832AWP-1A-C | 832AWP-1A-V | 832AWP-1A-S |
| | | | 832AWP-1AC-C | 832AWP-1AC-V | 832AWP-1AC-S |
| | 1C (SPDT) | ----- | 832AWP-1C-C | 832AWP-1C-V | 832AWP-1C-S |
| | | | 832AWP-1CC-C | 832AWP-1CC-V | 832AWP-1CC-S |
| | 1A (SPNO) | F | 832AWP-1A-F-C | 832AWP-1A-F-V | 832AWP-1A-F-S |
| | | | 832AWP-1AC-F-C | 832AWP-1AC-F-V | 832AWP-1AC-F-S |
| | 1C (SPDT) | F | 832AWP-1C-F-C | 832AWP-1C-F-V | 832AWP-1C-F-S |
| | | | 832AWP-1CC-F-C | 832AWP-1CC-F-V | 832AWP-1CC-F-S |

◆ 832AWP (Cover with shroud)

| Terminal style | Contact form | Insulation system | Designation | |
|------------------------------------|--------------|-------------------|--------------------------|------------------------------------|
| | | | Flux tight (with shroud) | Sealed type washable (with shroud) |
| WP (PCB terminal & Quick terminal) | 1A (SPNO) | ----- | 832AWP-1A-CF | 832AWP-1A-SF |
| | | | 832AWP-1AC-CF | 832AWP-1AC-SF |
| | 1C (SPDT) | ----- | 832AWP-1C-CF | 832AWP-1C-SF |
| | | | 832AWP-1CC-CF | 832AWP-1CC-SF |
| | 1A (SPNO) | F | 832AWP-1A-F-CF | 832AWP-1A-F-SF |
| | | | 832AWP-1AC-F-CF | 832AWP-1AC-F-SF |
| | 1C (SPDT) | F | 832AWP-1C-F-CF | 832AWP-1C-F-SF |
| | | | 832AWP-1CC-F-CF | 832AWP-1CC-F-SF |

◆ 832A enlarge contact gap type

| Terminal style | Contact form | Special feature | Designation | | |
|----------------|--------------|-------------------------------|--------------|--------------|----------------------|
| | | | Flux tight | Sealed type | Sealed type washable |
| PCB terminal | 1A (SPNO) | ----- | 832A-1A-C-H | 832A-1A-V-H | 832A-1A-S-H |
| | 1A (SPNO) | High dielectric strength type | 832A-1A-C-BH | 832A-1A-V-BH | 832A-1A-S-BH |

»» Ordering Information

832 - 1A - - -

1 2 3 4 5 6 7 8

- | | |
|--|---|
| 1. 832 -- Basic series designation | 5. Blank -- Standard type F -- Class F |
| 2. Blank -- General type (provided with 2 common terminals) A -- Different type (provided with 1 common terminal) | 6. Blank -- Open type C -- Flux tight D -- Dust cover V -- Sealed type S -- Sealed type washable C1 -- With flanged cover S1 -- Sealed type washable with flanged cover CF -- Flux tight with shroud SF -- Sealed type washable with shroud |
| 3. Blank -- PCB terminal W -- Quick terminal WP -- PCB terminal & Quick terminal | 7. Blank -- Standard type B -- With Insulation barrier BH -- With Insulation barrier and 1.9 mm contact gap (for SPNO type only) H -- 1.9 mm contact gap (for SPNO type only) E1 -- Comply with IEC 60335-1 |
| 4.1A -- Single pole normally open, contact material AgSnO 1B -- Single pole normally closed, contact material AgSnO 1C -- Single pole double throw, contact material AgSnO 1AC -- Single pole normally open, contact material AgNi 1BC -- Single pole normally closed, contact material AgNi 1CC -- Single pole double throw, contact material AgNi | 8. <input type="checkbox"/> -- Coil voltage (please refer to the coil rating data for the availability) |

»» Contact Rating

◆ 832/832A series

| Load type | 1A | 1B | 1C | |
|-------------------------|-------------------------|------------|-------------------------|-------------------------|
| | | | NO | NC |
| Resistive load | 30A 240VAC 20A 30VDC | 15A 240VAC | 20A 240VAC 20A 30VDC | 10A 240VAC 10A 30VDC |
| Max. switching current | 30A | 30A | 30A | 30A |
| Max. switching voltage | 277A | 277A | 277A | 277A |
| Max. switching capacity | 7200A | 3600A | 4800A | 2400A |

◆ 832/832A H/BH series

| | |
|-------------------------|------------|
| Resistive load | 20A 250VAC |
| Max. switching current | 30A |
| Max. switching voltage | 277VAC |
| Max. switching capacity | 5000VA |

»» Coil Rating (DC)

◆ 832/832A series

| Rated voltage (V) | Rated current $\pm 10\%$ at 23°C (mA) | Coil resistance $\pm 10\%$ at 23°C (Ω) | Max. continuous voltage at 85°C | Pick up voltage(Max.) at 23°C | Drop out voltage(Min.) at 23°C | Power consumption at rated voltage |
|-------------------|---------------------------------------|---|---------------------------------|-------------------------------|--------------------------------|------------------------------------|
| 5 | 185 | 27 | 130 % of rated voltage | 75 % of rated voltage | 10 % of rated voltage | approx. 0.93W |
| 6 | 150 | 40 | | | | |
| 9 | 93 | 97 | | | | |
| 12 | 77 | 155 | | | | |
| 24 | 36 | 660 | | | | |
| 48 | 18 | 2,560 | | | | |
| 110 | 8 | 13,450 | | | | |

◆ 832/832A H/BH series

| Rated voltage (V) | Rated current $\pm 10\%$ at 23°C (mA) | Coil resistance $\pm 10\%$ at 23°C (Ω) | Max. continuous voltage at 60°C | Pick up voltage(Max.) at 23°C | Drop out voltage(Min.) at 23°C | Power consumption at rated voltage |
|-------------------|---------------------------------------|---|---------------------------------|-------------------------------|--------------------------------|------------------------------------|
| 6 | 183 | 32.7 | 130 % of rated voltage | 80 % of rated voltage | 10 % of rated voltage | approx. 1.1W |
| 12 | 92.3 | 130 | | | | |
| 24 | 46 | 524 | | | | |
| 48 | 22.9 | 2,094 | | | | |

»» Specification

| | |
|-----------------------------------|---|
| Contact material | AgSnO / AgNi alloy |
| Contact gap | 1.9 mm Min. (for 832/832A H/BH) |
| Contact resistance ⁽¹⁾ | 50m Ω Max. (at 1A/6VDC by 4-wire resistance measurement) |

| | | |
|-------------------------------|---|---|
| Operate time ⁽¹⁾ | 15 ms Max. | |
| | 20 ms Max. (for 832/832A H/BH) | |
| Release time ⁽¹⁾ | 10 ms Max. | |
| | 5 ms Max. (for 832/832A H/BH) | |
| 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 | 10,000,000 ops. 5,000,000 ops. (for 832/832A H/BH) (frequency 18,000 ops./hr) |
| | Electrical | 100,000 ops. (frequency 1,200 ops./hr) |
| 832/832A H/BH series : | | |
| | | 20,000 ops. for 20A/250VAC |
| | | 100,000 ops. for 10A/250VAC |
| | | (frequency 900 ops./hr) |
| Operating ambient temperature | -55~+85°C (no freezing) | |
| Weight | Approx. 22g (open type) · 27g (832A) · 36g (832AWP) · 38g (832AW) | |

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.

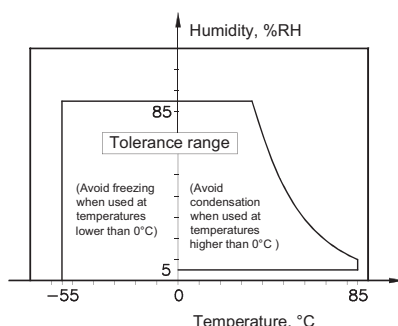
(9) Use suitable harnesses and bus bars according to the current as below :

20A type : Min. 3.0 mm²

30A type : Min. 6.0 mm²

(10) Usage, transport and storage conditions

- 1. Temperature: -55~+85°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 ⁽¹⁾ | 1000 MΩ Min. (DC 500V) |
| | 100 MΩ Min. (DC 500V) (for 832/832A H/BH) |
| Surge voltage withstand | Between contact and coil : 6KV 1.2X50 μ S (for 832A) |
| Dielectric strength ⁽¹⁾ | Between open contact : AC 1500V , 50/60Hz 1min. |
| | Between contact and coil : AC 1500V , 50/60Hz 1min. |
| | : AC 2500V , 50/60Hz 1min (for 832A) High dielectric strength type : AC 4000V , 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 | CSA / CUS | VDE |
| File No. | E88991 | 1429333 | 6615 |

» Safety Approval Rating

◆ 832 series (UL/CUL · CSA/CUS)

| Contact material (AgSnO) | | Contact material (AgNi) | |
|---|---|--------------------------|--------------------------|
| NO | NC | NO | NC |
| 30A 277VAC 20A 30VDC 2HP 250VAC 1HP 125VAC 30 FLA, 80LRA 240VAC 16 FLA, 96LRA 250VAC TV-5 | 30A 250VAC 15A 277VAC 15A 30VDC 1/2HP, 4.9FLA 250VAC 1/4HP, 5.8FLA 125VAC 12 FLA, 33LRA 250VAC | 30A 277VAC 24A 240VAC | 30A 277VAC 24A 240VAC |

◆ 832 series (VDE)

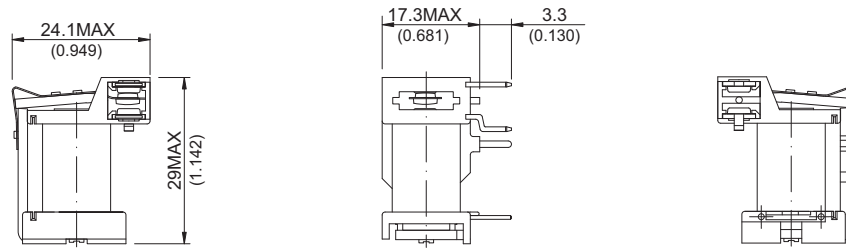
| | | |
|------------|------------|------------|
| 1A | 1B | 1C |
| 30A 250VAC | 20A 250VAC | 20A 250VAC |

◆ 832A H/BH

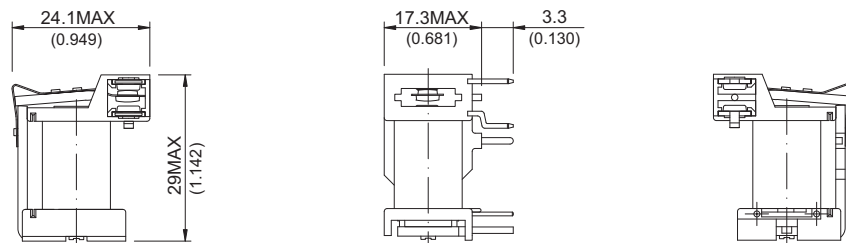
| | |
|---|----------------|
| UL / CUL · CSA / CUS | VDE |
| 30A 277VAC 30A 30VDC 1HP, 8FLA 250VAC | 20A 250VAC T85 |

»» Outline Dimensions

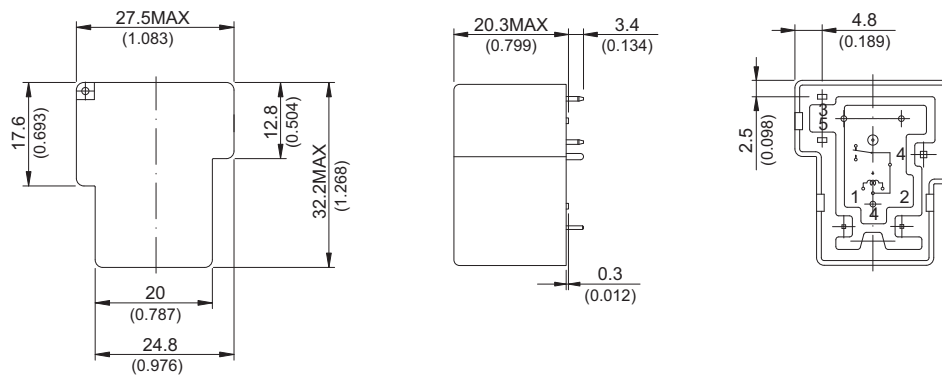
◆ 832A(OPEN)



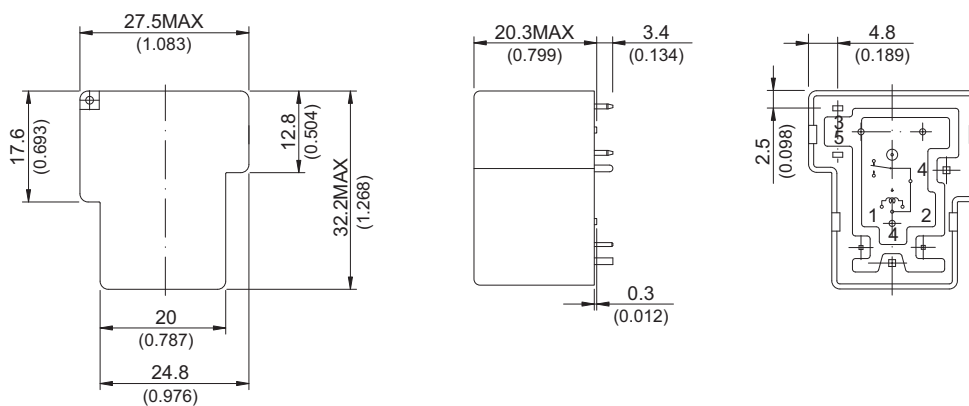
◆ 832(OPEN)



◆ 832A

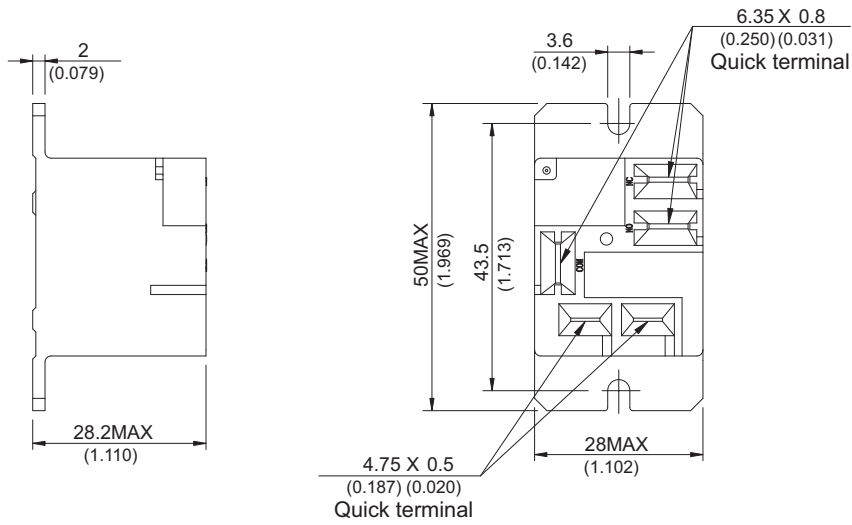


◆ 832

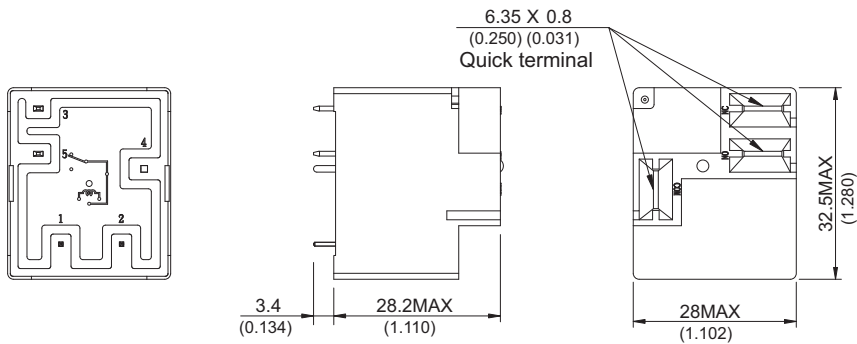


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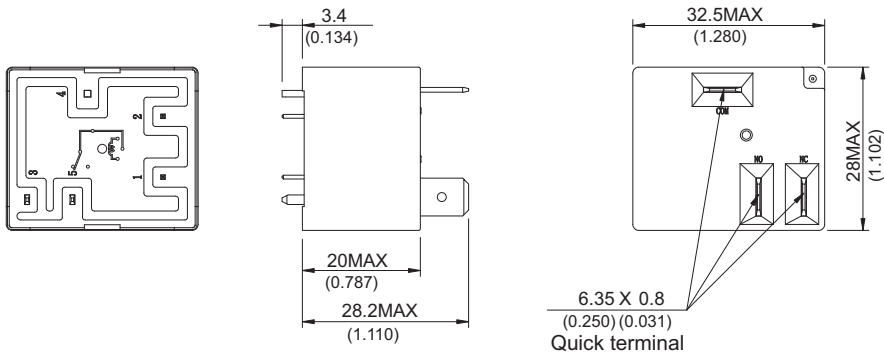
◆832AW



◆832AWP(Cover with shroud)



◆832AWP



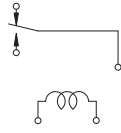
TOLERANCE:
 LESS THAN: 1(0.039) ±0.1(0.004)
 5(0.197) ±0.3(0.012)
 20(0.787) ±0.5(0.020)
 MORE THAN: 20(0.787) ±1(0.039)

Wiring Diagram

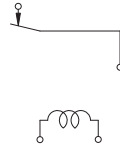
BOTTOM VIEW

◆832A

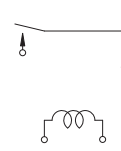
1C



1B

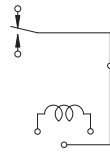


1A

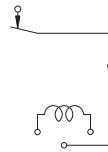


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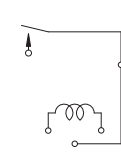
1C



1B



1A

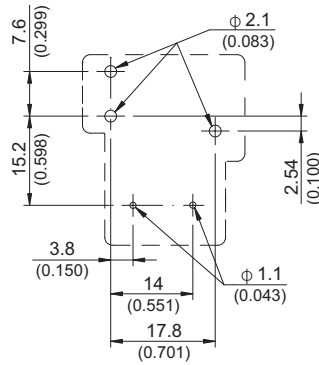


PC Board Layout

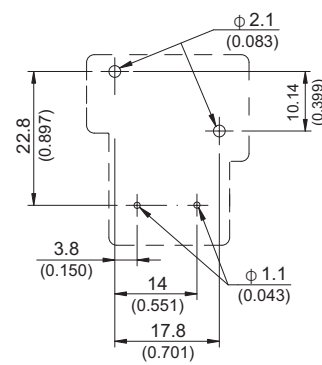
BOTTOM VIEW

◆832A

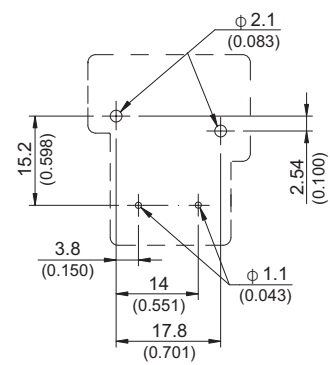
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1B

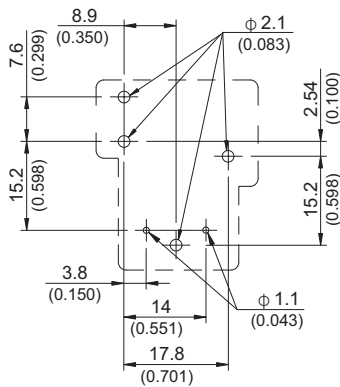


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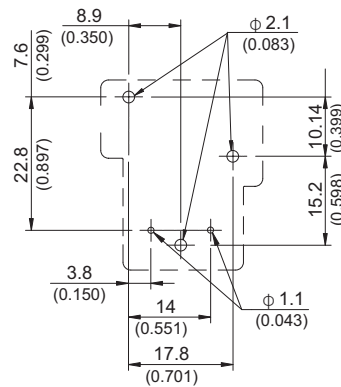


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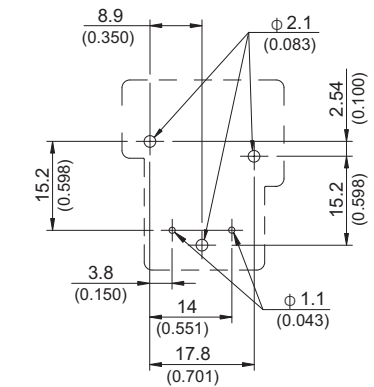
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1B

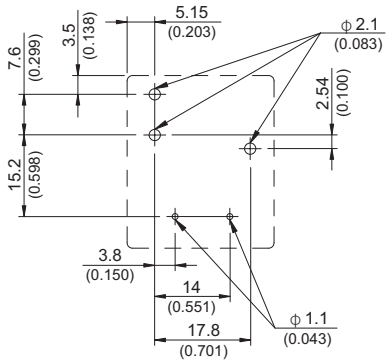


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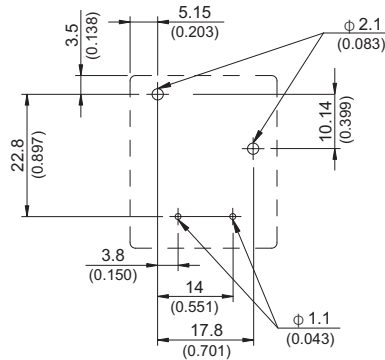


◆ 832AWP

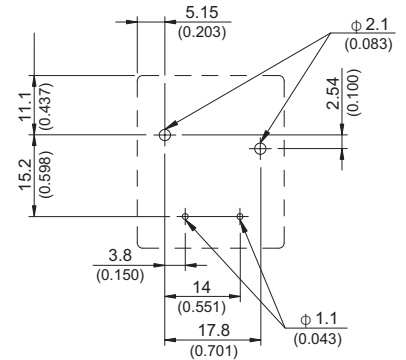
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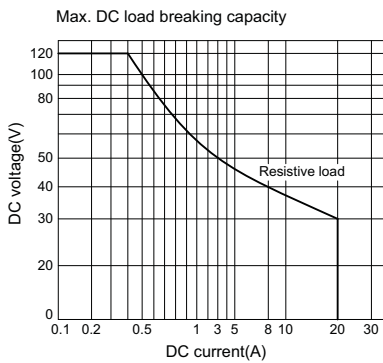
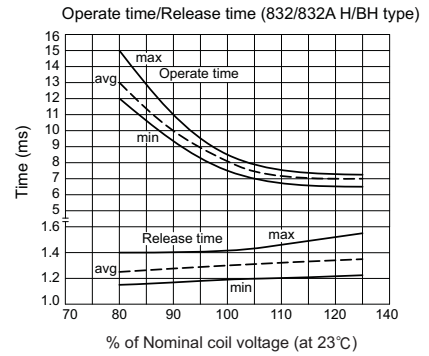
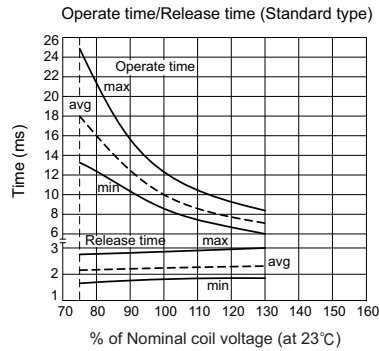
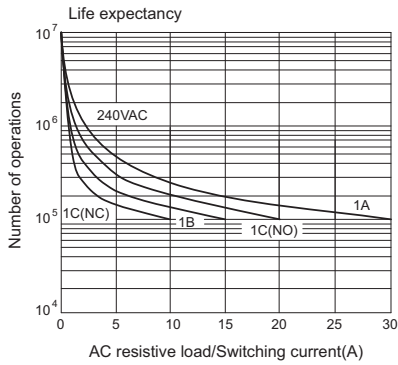
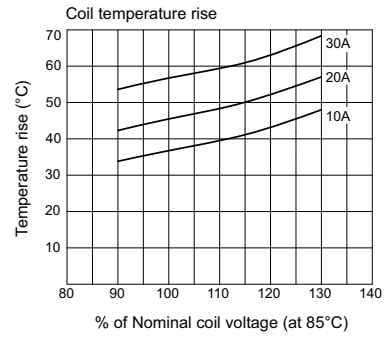
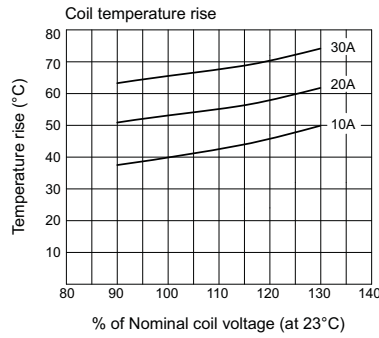
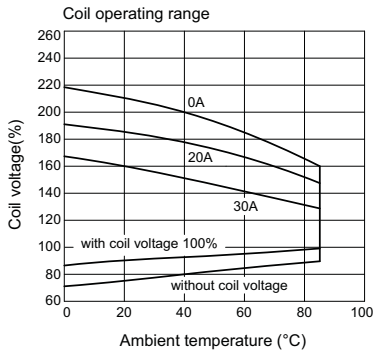
1B



1A



» Engineering Data



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