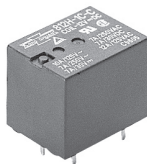


# 812H/812BH

## »» Features

- Miniature PCB Power Relays 10A 250VAC.
- High CTI 250 and New Glow Wire Approved material.
- UL Insulation Class F.
- VDE 0435, UL/CUL, TUV, CSA approved.
- Comply with RoHS-Directive 2002/95/EC, and ELV-Directive 2000/53/EC.



## »» Type List

### ◆ 812H

| Terminal style | Contact form | UL Insulation system approval | Designation (provided with) |                  |                      |
|----------------|--------------|-------------------------------|-----------------------------|------------------|----------------------|
|                |              |                               | Flux tight                  | Sealed type      | Sealed type washable |
| PCB terminal   | 1C<br>(SPDT) | -----                         | 812H-1C-C                   | 812H-1C-V        | 812H-1C-S            |
|                |              | F                             | 812H-1C-C FXXVDC            | 812H-1C-V FXXVDC | 812H-1C-S FXXVDC     |
|                | 1A<br>(SPNO) | -----                         | 812H-1A-C                   | 812H-1A-V        | 812H-1A-S            |
|                |              | F                             | 812H-1A-C FXXVDC            | 812H-1A-V FXXVDC | 812H-1A-S FXXVDC     |
|                | 1B<br>(SPNC) | -----                         | 812H-1B-C                   | 812H-1B-V        | 812H-1B-S            |
|                |              | F                             | 812H-1B-C FXXVDC            | 812H-1B-V FXXVDC | 812H-1B-S FXXVDC     |

### ◆ 812BH

| Terminal style | Contact form | UL Insulation system approval | Designation (provided with) |                   |                      |
|----------------|--------------|-------------------------------|-----------------------------|-------------------|----------------------|
|                |              |                               | Flux tight                  | Sealed type       | Sealed type washable |
| PCB terminal   | 1C<br>(SPDT) | -----                         | 812BH-1C-C                  | 812BH-1C-V        | 812BH-1C-S           |
|                |              | F                             | 812BH-1C-C FXXVDC           | 812BH-1C-V FXXVDC | 812BH-1C-S FXXVDC    |
|                | 1A<br>(SPNO) | -----                         | 812BH-1A-C                  | 812BH-1A-V        | 812BH-1A-S           |
|                |              | F                             | 812BH-1A-C FXXVDC           | 812BH-1A-V FXXVDC | 812BH-1A-S FXXVDC    |
|                | 1B<br>(SPNC) | -----                         | 812BH-1B-C                  | 812BH-1B-V        | 812BH-1B-S           |
|                |              | F                             | 812BH-1B-C FXXVDC           | 812BH-1B-V FXXVDC | 812BH-1B-S FXXVDC    |

## »» Ordering Information

812 BH - 1A - C E FXXVDC  
1 2 3 4 5 6

- |        |                                            |          |                         |
|--------|--------------------------------------------|----------|-------------------------|
| 1. 812 | -- Basic series designation                | 4. C     | -- Flux tight           |
|        |                                            | V        | -- Sealed type          |
| 2. BH  | -- High power type with insulation barrier | S        | -- Sealed type washable |
| H      | -- High power type                         |          |                         |
| 3. 1A  | -- Single pole normally open               | 5. Blank | -- Standard type        |
| 1B     | -- Single pole normally closed             | E        | -- CTI 250V             |
| 1C     | -- Single pole double throw                | 6. Blank | -- Standard type        |
|        |                                            | F        | -- Class F              |

# 812H/812BH

## »» Contact Rating

|                |                                                    |
|----------------|----------------------------------------------------|
| Resistive load | NO: 10A/240VAC 12A/120VAC NC: 8A/240VAC 10A/120VAC |
|----------------|----------------------------------------------------|

## »» 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 85 °C | Pick up voltage(Max) at 23 °C | Drop out voltage(Min) at 23 °C | Power consumption at rated voltage |
|-------------------|----------------------------------------|--------------------------------------------------|----------------------------------|-------------------------------|--------------------------------|------------------------------------|
| 3                 | 120                                    | 25                                               | 160 % of rated voltage           | 75 % of rated voltage         | 10 % of rated voltage          | approx. 0.36W                      |
| 5                 | 73                                     | 69                                               |                                  |                               |                                |                                    |
| 6                 | 60                                     | 100                                              |                                  |                               |                                |                                    |
| 9                 | 40                                     | 225                                              |                                  |                               |                                |                                    |
| 12                | 30                                     | 400                                              |                                  |                               |                                |                                    |
| 18                | 20                                     | 900                                              |                                  |                               |                                |                                    |
| 24                | 15                                     | 1600                                             |                                  |                               |                                |                                    |
| 48                | 7.5                                    | 6400                                             |                                  |                               |                                |                                    |

## »» Specification

|                                      |                              |                                                           |
|--------------------------------------|------------------------------|-----------------------------------------------------------|
| Contact material                     | AgSnO alloy                  |                                                           |
| Contact resistance <sup>(1)</sup>    | 100m $\Omega$ Max.           |                                                           |
| Operate time <sup>(1)</sup>          | 15ms Max.                    |                                                           |
| Release time <sup>(1)</sup>          | 5ms Max.                     |                                                           |
| Insulation resistance <sup>(1)</sup> | 100M $\Omega$ Min. (DC 500V) |                                                           |
| Dielectric strength <sup>(1)</sup>   | Between open contact         | : AC 750V , 50/60Hz 1 min. (for 812H)                     |
|                                      |                              | : AC 1000V, 50/60Hz 1 min. (for 812BH)                    |
|                                      | Between contact and coil     | : AC 1500V , 50/60Hz 1 min. (for 812H)                    |
|                                      |                              | : AC 2000V, 50/60Hz 1 min. (for 812BH)                    |
| Vibration resistance                 | Operating extremes           | 10~50Hz , amplitude 1.0 mm                                |
|                                      | Damage limits                | 10~50Hz , amplitude 1.0 mm                                |
| Shock resistance                     | Operating extremes           | 10G                                                       |
|                                      | Damage limits                | 100G                                                      |
| Life expectancy                      | Mechanical                   | 10,000,000 operations<br>(frequency 18,000 operations/hr) |
|                                      | Electrical                   | 100,000 operations<br>(frequency 900 operations/hr)       |
| Operating ambient temperature        | -40~+85 °C (no freezing)     |                                                           |
| Weight                               | Approx. 9 g                  |                                                           |

Note : (1) initial value

# 812H/812BH

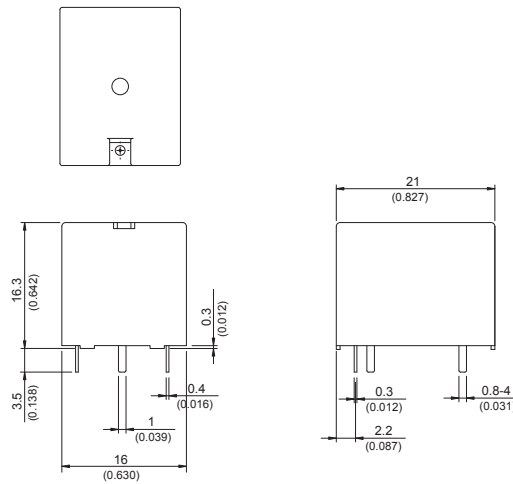
## »» Safety Approval

| Certified | UL / CUL | CSA     | VDE    | TUV       |
|-----------|----------|---------|--------|-----------|
| File No.  | E88991   | 1129068 | 122905 | R50041911 |

## »» Safety Approval Rating

| UL / CUL, CSA |              | VDE             | TUV        |
|---------------|--------------|-----------------|------------|
| NO            | NC           |                 |            |
| 20A 125VAC    | 20A 125VAC   | 12A 250VAC T85  | 7A 250VAC  |
| 16A 277VAC    | 12A 277VAC   | 10A 250VAC T105 | 10A 125VAC |
| 1/2 HP 125VAC | 1/2HP 125VAC |                 | 7A 30VDC   |
| 1HP 250VAC    | 1HP 250VAC   |                 |            |
| 10A 30VDC     | 7A 30VDC     |                 |            |
| TV 8          |              |                 |            |

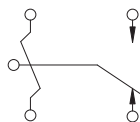
## »» Outline Dimensions



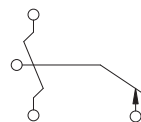
## »» Wiring Diagram

BOTTOM VIEW

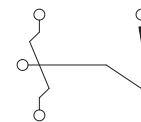
1C



1B

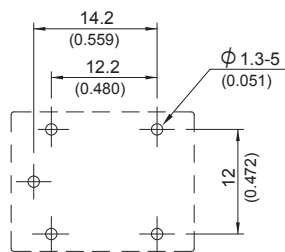


1A



# 812H/812BH

## PC Board Layout BOTTOM VIEW



## Engineering Data

