



# HRS1(H) Relay

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## 1.COIL DATA

|                               |                  |
|-------------------------------|------------------|
| 1-1.Nominal Voltage           | 3 VDC to 24 VDC  |
| 1-2.Coil Resistance           | Refer to Table 1 |
| 1-3.Operate Voltage           | Refer to Table 1 |
| 1-4.Release Voltage           | Refer to Table 1 |
| 1-5.Nominal Power Consumption | 200 to 360 mW    |

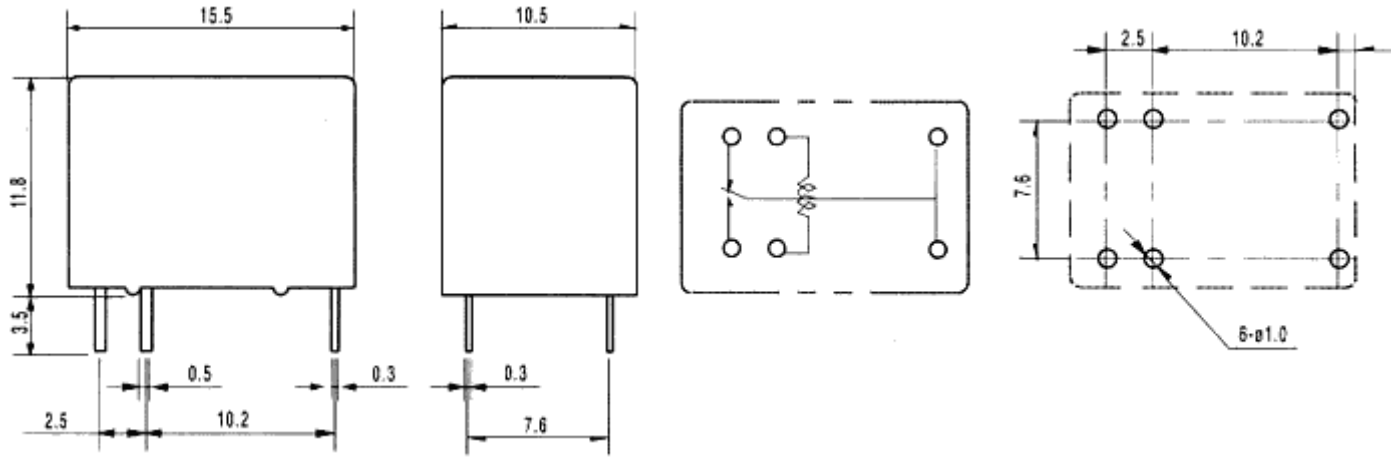
## 2.CONTACT DATA

|                                    |                                                                                   |
|------------------------------------|-----------------------------------------------------------------------------------|
| 2-1.Contact Arrangement            | 1 Form C                                                                          |
| 2-2.Contact Material               | AuAg                                                                              |
| 2-3.Contact Rating                 | 1A 24 VDC / 120VAC                                                                |
| 2-4.Max. Switching Voltage         | 30 VDC / 120 VAC                                                                  |
| 2-5.Max. Switching Current         | 2A                                                                                |
| 2-6.Max. Switching Power           | 120 VA , 24W                                                                      |
| 2-7.Contact Resistance ( Initial ) | 100 mΩ, at 6 VDC 1A                                                               |
| 2-8.Life Expectancy                | Electrical 100,000 operations at nominal load<br>Mechanical 10,000,000 operations |

## 3.GENERAL DATA

|                           |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|
| 3-1.Insulation Resistance | Min.100MΩ, at 500 VDC                                                             |
| 3-2.Dielectric Strength   | 1,000VAC , 1min between open contact<br>1,500VAC , 1min between contacts and coil |
| 3-3.Operate Time          | Max. 5ms                                                                          |
| 3-4.Release Time          | Max. 5ms                                                                          |
| 3-5.Temperature Range     | -25 to +55 ºC                                                                     |
| 3-6.Shock Resistance      | 10G                                                                               |
| 3-7.Vibration Resistance  | 10 - 55 Hz , Amplitude 1.5mm                                                      |
| 3-8.Weight                | 4 gr.                                                                             |
| 3-9.Safety Standard       | UL/cUL NO. E164730<br>CSA NO. LR109368-1                                          |

## 4.DIMENSIONS ( in mm )



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## 5.ORDERING CODE

| HRS1 | H- | S | DC5V | ii ii                                                            |
|------|----|---|------|------------------------------------------------------------------|
|      |    |   |      | NOMINAL VOLTAGE:<br>DC3V , DC5V , DC6V , DC9V , DC12V , DC24V    |
|      |    |   |      | ENCLOSURE<br>S ----WASHABLE                                      |
|      |    |   |      | COIL<br>ii NIL ---- STANDARD TYPE<br>H ----- HIGH SENSITIVE TYPE |
|      |    |   |      | ii TYPE                                                          |

## 6.COIL DATA CHART

| ORDERING CODE | COIL NOMINAL VDC | COIL RESISTANCE<br> , +/- 10% | OPERATE VOLTAGE VDC | RELEASE VOLTAGE VDC | COIL NOMINAL mW |
|---------------|------------------|-------------------------------|---------------------|---------------------|-----------------|
| HRS1-S DC3V   | 3                | 25                            | 2.25                | 0.30                | 360             |
| HRS1-S DC5V   | 5                | 70                            | 3.75                | 0.50                |                 |
| HRS1-S DC6V   | 6                | 100                           | 4.50                | 0.60                |                 |
| HRS1-S DC9V   | 9                | 220                           | 6.75                | 0.90                |                 |
| HRS1-S DC12V  | 12               | 400                           | 9.00                | 1.20                |                 |
| HRS1-S DC24V  | 24               | 1600                          | 18.00               | 2.40                |                 |
| HRS1H-S DC3V  | 3                | 45                            | 2.25                | 0.30                | 200             |
| HRS1H-S DC5V  | 5                | 120                           | 3.75                | 0.50                |                 |
| HRS1H-S DC6V  | 6                | 180                           | 4.50                | 0.60                |                 |
| HRS1H-S DC9V  | 9                | 400                           | 6.75                | 0.90                |                 |
| HRS1H-S DC12V | 12               | 700                           | 9.00                | 1.20                |                 |

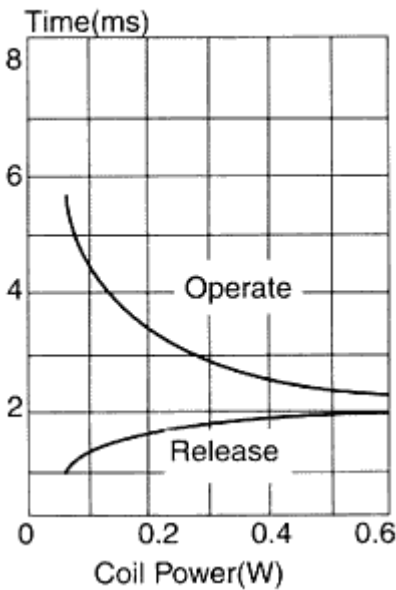
|               |    |      |       |      |  |
|---------------|----|------|-------|------|--|
| HRS1H-S DC24V | 24 | 2800 | 18.00 | 2.40 |  |
|---------------|----|------|-------|------|--|

Table 1

7.HRS1(H) CHARACTERISTIC DATA

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Timing

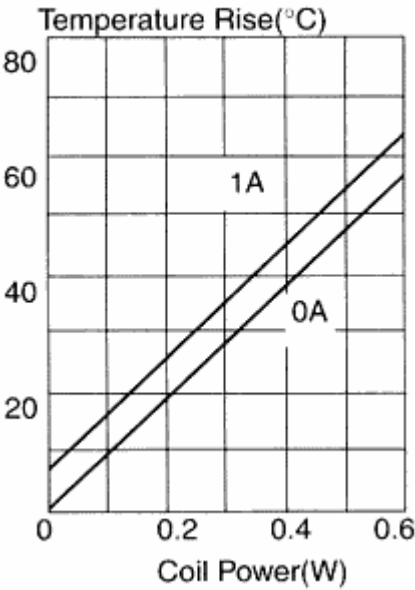


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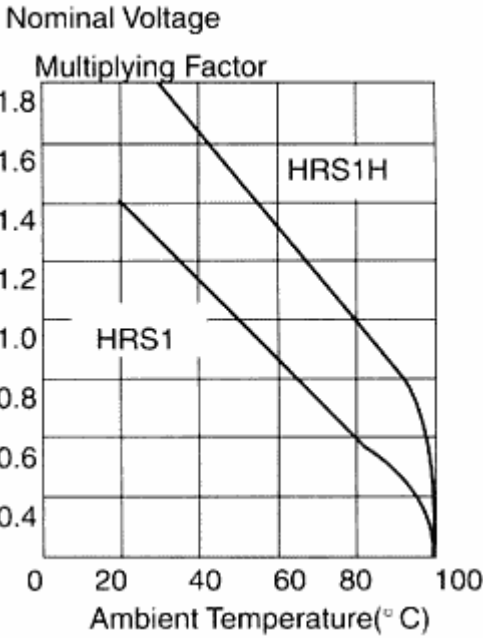
Maximum Switching Power

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Coil Temperature Rise



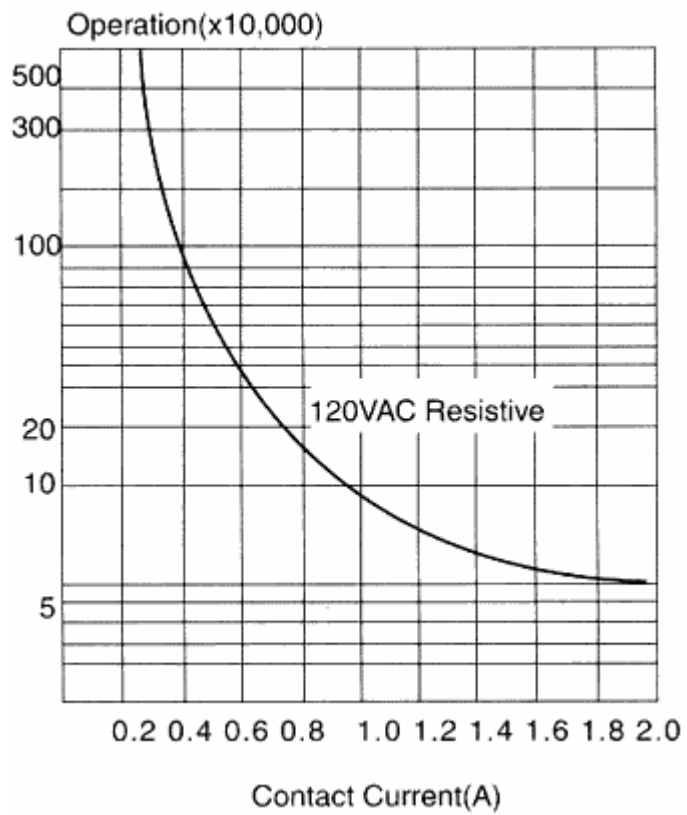
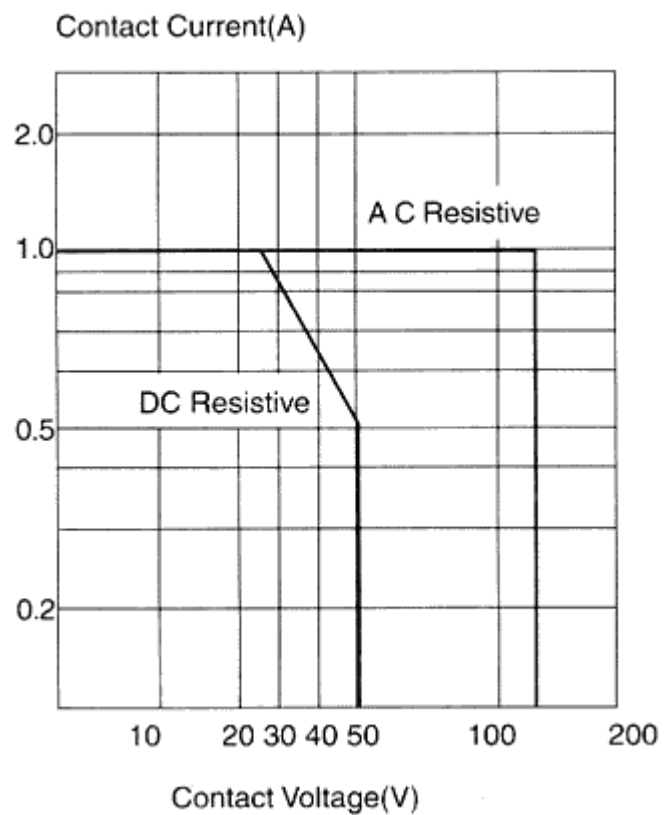
Operating Range



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Life Curve

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