

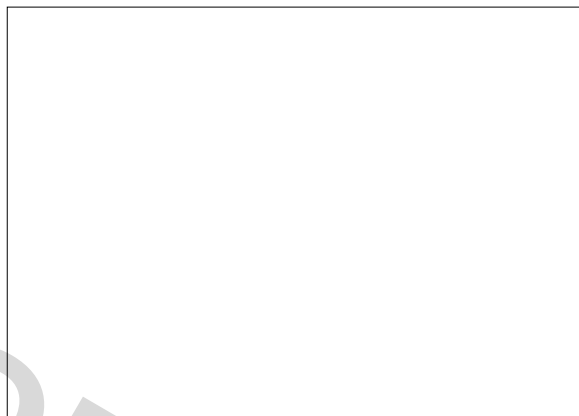
POWER RELAY

1 POLE—16 A (CADMIUM FREE CONTACTS TYPE)

VH SERIES

■ FEATURES

- UL, CSA recognized TV-10 rated
- 1 Form A (SPST-NO) contact
- Heavy duty 16 A small power relay with tab-terminals (#250)
- High inrush current and high surge voltage
 - Inrush Current 55 A
 - Surge Strength 7,000 V
- Small package meets high density mounting requirement
- Environmentally friendly cadmium free contact type is available



■ ORDERING INFORMATION

[Example] $\frac{VH}{(a) (*) (b)}$

| | | |
|-----|-----------------|------------------------------|
| (a) | Series Name | VH: VH Series |
| (b) | Nominal Voltage | Refer to the COIL DATA CHART |

Actual marking omits the hyphen (-) of (*)

■ SAFETY STANDARD AND FILE NUMBERS

UL508, 873 (File No. E56140,E108658)

C22.2 No. 1, No. 14 (File No. LR35579)

Please note that UL/CSA rating may differ from the standard rating.

Please request when the approval markings are required on the cover.

| Type | Nominal voltage | Contact rating |
|------|-----------------|---|
| VH | 5 to 60 VDC | TV-10 120 VAC 1 HP 125 VAC/250 VAC 16 A 125 VAC resistive Pilot duty A 150 |

■ SPECIFICATIONS

| Item | | | VH |
|------------|------------------------------|---------------------------|---|
| Contact | Arrangement | | 1 form A (SPST-NO) |
| | Material | | Silver-alloy |
| | Style | | Single |
| | Resistance (initial) | | Maximum 30 mΩ (at 1 A 6 VDC) |
| | Ratings (resistive) | | 16 A 250 VAC |
| | Maximum Carrying Current | | 20 A |
| | Maximum Switching Power | | 4,000 VA |
| | Maximum Switching Voltage | | 380 VAC |
| | Maximum Switching Current | | 16 A |
| | Minimum Switching Load*1 | | 100 mA 5 VDC |
| Coil | Nominal Power (at 20°C) | | 0.9 to 1.0 W |
| | Operate Power (at 20°C) | | 0.45 to 0.5 W |
| | Operating Temperature | | -30°C to +70°C (no frost) |
| Time Value | Operate (at nominal voltage) | | Maximum 15 ms |
| | Release (at nominal voltage) | | Maximum 5 ms |
| Insulation | Resistance (at 500 VDC) | | Minimum 1,000 MΩ |
| | Dielectric Strength | between open contacts | 1,000 VAC 1 minute |
| | | between coil and contacts | 4,000 VAC 1 minute |
| | Surge Strength | | 7,000 V (at 1.2 × 50 μs) |
| Life | Mechanical | | 5 × 10 ⁶ operations minimum |
| | Electrical | | 2 × 10 ⁵ operations minimum (contact rating) |
| Other | Vibration Resistance | Misoperation | 10 to 55 Hz (double amplitude of 3 mm) |
| | | Endurance | 10 to 55 Hz (double amplitude of 3 mm) |
| | Shock Resistance | Misoperation | 200 m/s ² (11 ±1 ms) |
| | | Endurance | 1,000 m/s ² (6 ±1 ms) |
| | Unit Mass | | Approximately 35 g |

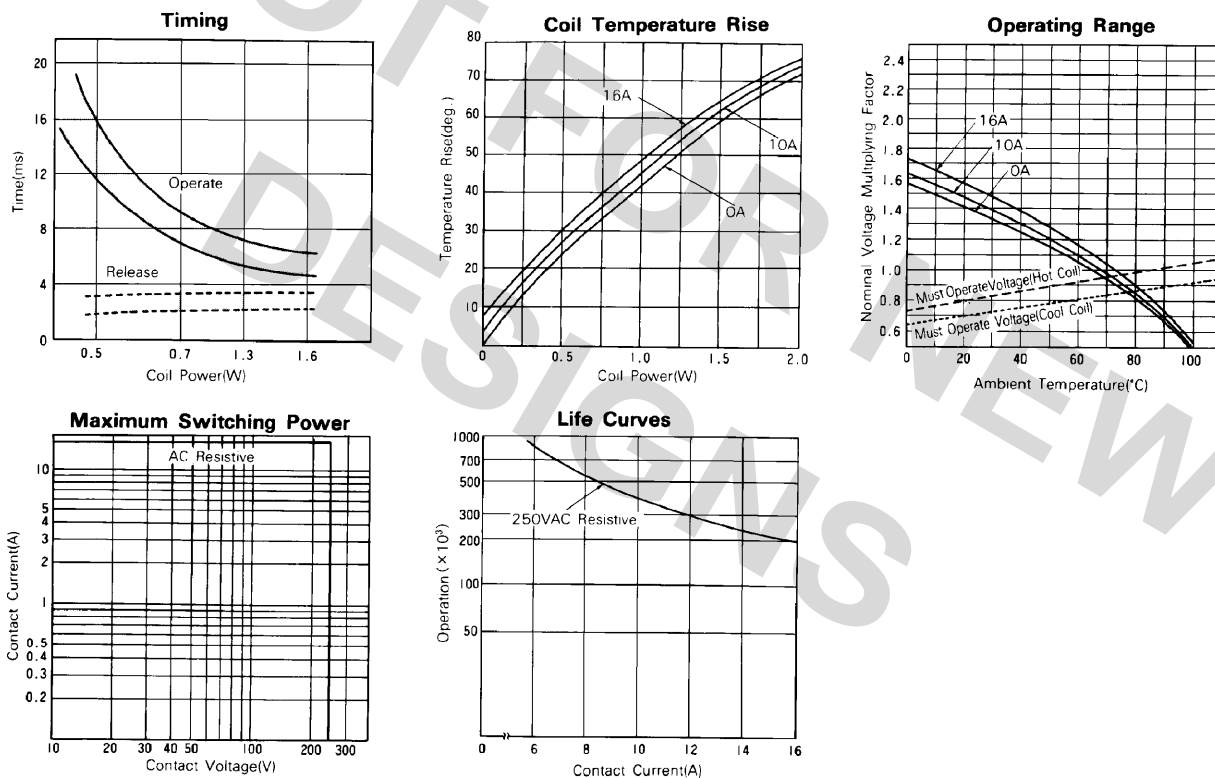
*1 Minimum switching loads mentioned above are reference values. Please perform the confirmation test with the actual load before production since reference values may vary according to switching frequencies, environmental conditions and expected reliability levels.

COIL DATA CHART

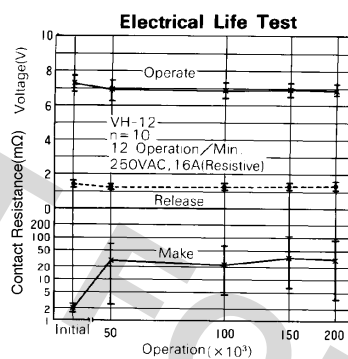
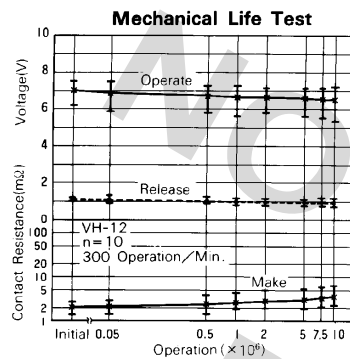
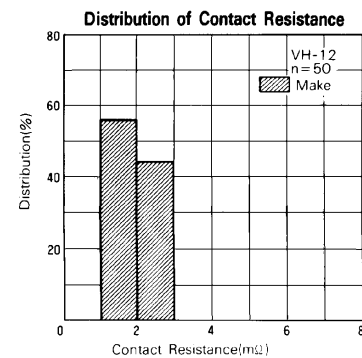
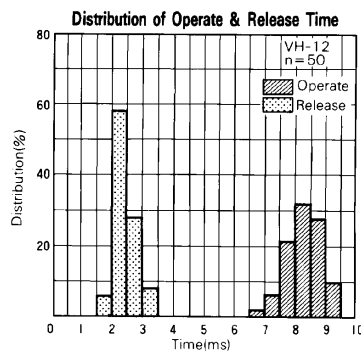
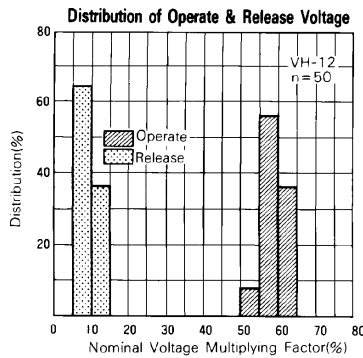
| MODEL | Nominal voltage | Coil resistance ($\pm 10\%$) | Must operate voltage | Must release voltage | Nominal power |
|-------|-----------------|--------------------------------|----------------------|----------------------|---------------|
| VH- 5 | 5 VDC | 28 Ω | 3.5 VDC | 0.25 VDC | 0.9 W |
| VH- 6 | 6 VDC | 40 Ω | 4.2 VDC | 0.3 VDC | 0.9 W |
| VH- 9 | 9 VDC | 90 Ω | 6.3 VDC | 0.45 VDC | 0.9 W |
| VH-12 | 12 VDC | 160 Ω | 8.4 VDC | 0.6 VDC | 0.9 W |
| VH-18 | 18 VDC | 360 Ω | 12.6 VDC | 0.9 VDC | 0.9 W |
| VH-24 | 24 VDC | 640 Ω | 16.8 VDC | 1.2 VDC | 0.9 W |
| VH-48 | 48 VDC | 2,300 Ω | 33.6 VDC | 2.4 VDC | 1.0 W |
| VH-60 | 60 VDC | 3,600 Ω | 42.0 VDC | 3.0 VDC | 1.0 W |

Note: All values in the table are measured at 20°C

CHARACTERISTIC DATA

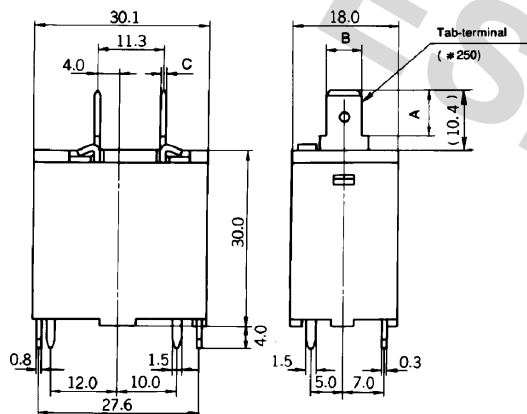


REFERENCE DATA

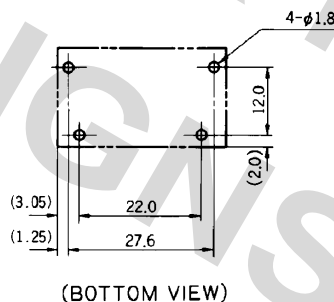


DIMENSIONS

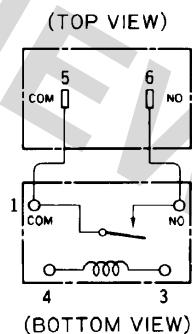
Dimensions



Schematics (BOTTOM VIEW)



PC board mounting hole layout



Unit: mm

| Type | A | B | φ |
|------|------|------|-----|
| VH | 7.95 | 6.35 | 0.8 |

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