

» Features

- 31A/35A Miniature Power Relay
- 4.500VAC Dielectric strength between coil and contact
- Contact GAP $\geq 2.0\text{mm}$
- Class F Insulation System

» Application Examples

- Solar Inverter
- AC Power Supply
- Washing Machine

» Ordering Information

NF54 **100** **E** **35** **12** **V** **Nil**
1 **2** **3** **4** **8** **9** **10**

- | | | | |
|---------------------------|------------------------|---------------------|---|
| 1. Type: | NF54 | 8. DC Coil voltage: | 09 = 9V; 12 = 12V; 24 = 24V 48 = 48V |
| 2. Contact configuration: | 100 = 1NO (1 form A) | 9. Protection: | V = Vented (Flux-tight, RTII) S = Sealed (washable, RTIII) |
| 3. Contact material: | E = AgSnO ₂ | 10. Special Suffix: | Nil = Standard |
| 4. Contact rating: | 31 = 31A 35 = 35A | | |

30.1 x 15.7 x 26.5 [mm]



» Contact Data

| | |
|--|--------------------------------------|
| Contact Arrangement | 1 form A (NO) |
| Contact Material | AgSnO ₂ |
| Contact Rating (Resistive Load or inductive, cosΦ=0,8) | 31A/35A, 250VAC/277VAC ¹⁾ |
| Max. Switching Voltage | 277VAC |
| Max. Switching Current | 35A |
| Max. switching power | 9.695VA |
| Contact Resistance | ≤ 100mΩ @6VDC, 1A (initial) |
| Min. Switching Capacity | 100mA, 5VDC |
| Electrical endurance | 30 x 10 ³ |
| Mechanical endurance | 500 x 10 ³ |

1) Refer to Ordering Key Position 4

» Coil Rating

| Rated Coil Voltage [VDC] | Nominal Current [mA] | Coil Resistance R[Ω] ± 10% | Pull-in Voltage [VDC] | Drop-out Voltage [VDC] | Coil Power |
|--------------------------|----------------------|----------------------------|-----------------------|------------------------|------------|
| 9 | 155.6 | 58 | 6.75 | 0.45 | 1.4W |
| 12 | 116.7 | 103 | 9 | 0.60 | |
| 24 | 77.8 | 231 | 13.5 | 0.90 | |
| 48 | 58.3 | 411 | 18 | 1.20 | |

The data shown in Coil Rating tables are initial values

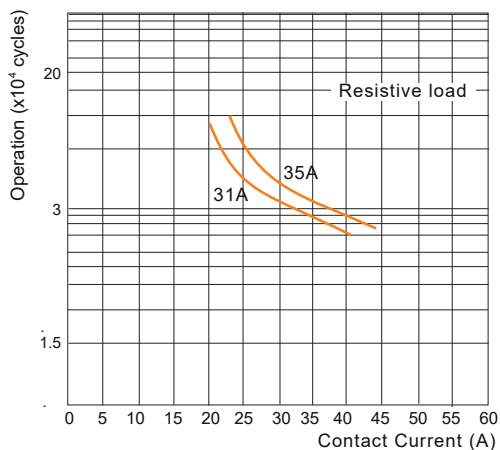
» Specification

| | |
|---|---|
| Initial Dielectric Strength | between open contacts 2.800VAC, 50/60 Hz for 1 min between contact and coil 4.500VAC, 50/60 Hz for 1 min |
| Surge voltage between coil and contacts | 10.000V (1.2/50μs) |
| Insulation resistance | 1000 MΩ (@ 500VDC) |
| Operate Time / Release Time | ≤ 20ms / ≤ 10ms (@nominal voltage) |
| Operate Voltage / Release Voltage | ≤ 75% / ≥ 5% of nominal voltage |
| Vibration Resistance (Malfunction) | 10 to 55 Hz, 1.5mm double amplitude |
| Shock Resistance | Malfunction: 100m/s ² ; Destruction: 1.000m/s ² |
| Ambient Operating Temperature ¹⁾ | -40 to +85°C |
| Ambient Operating Humidity ¹⁾ | 20% to 85% |
| Environmental Protection | RTII (Flux tight) / RTIII (Washable) |
| Weight | Approx. 23g |
| Packing Unit | 50pcs per Tray / 500pcs per Box |

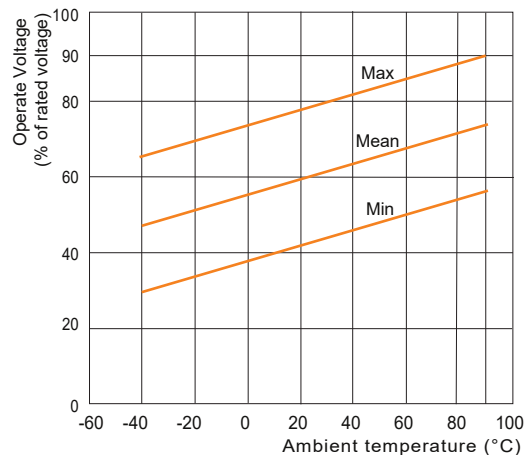
1) Without icing or condensation

» Engineering Data

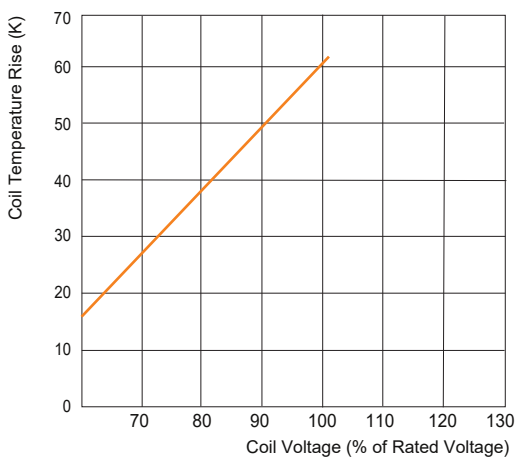
Life expectancy



Coil Operate/Release Voltage & Temperature Cure

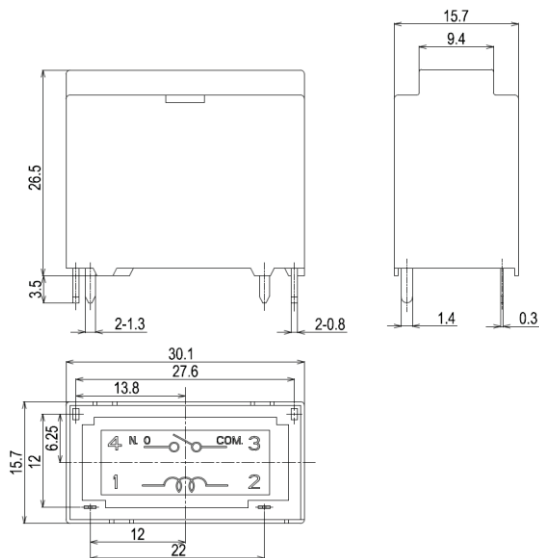


Coil Temperature rise

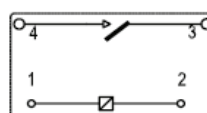


» Dimensions

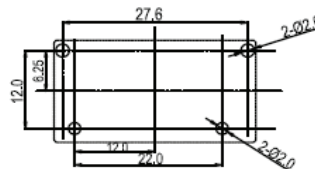
Outline Dimensions



Wiring Diagram (Bottom View)



PC Board Layout (Bottom View)



Disclaimer

All technical performance data apply to the relay as such, specific conditions of the individual application are not considered. Please always check the suitability of the relay for your intended purpose. We do not assume any responsibility or liability for not complying herewith. Any responsibility for the application of the product remains with the customer only. All specified values apply at room temperature, unless otherwise stated. All specifications are subject to change without notification. All rights are reserved.