

### » Features

- 1 form X (NO) contact
- 90A switching capability
- 1,92W coil power
- Contact gap  $\geq 3\text{mm}$
- Dielectric strength 5kV between coil and contact

### » Application Examples

- PV inverter
- Inverter precharge circuit control
- Energy Storage System/UPS
- EV charger



H x W x D: 39,5 x 38 x 33 [mm]

### » Ordering Information

**NF55** - **100** **A** **90** **12** **V**  
 1 2 3 4 5 6

- |                           |                      |                     |   |
|---------------------------|----------------------|---------------------|---|
| 1. Type:                  | NF55                 | 5. DC Coil voltage: | 06 = 6V; 09 = 9V;<br>12 = 12V; 24 = 24V |
| 2. Contact configuration: | 100 = 1NO (1 form X) | 6. Protection:      | V = Vented (Flux-tight, RTII)           |
| 3. Contact material:      | A = Ag Alloy         |                     |   |
| 4. Contact rating:        | 90 = 90A             |                     |   |

### » Contact Data

Contact Arrangement	1 form X (NO)
Contact Material	AgSnO <sub>2</sub> In <sub>2</sub> O <sub>3</sub>
Contact Rating (Resistive Load)	90A, 320VAC
Max. Switching Voltage	400VAC
Max. Switching Current	90A
Max. Switching Power	28,8kVA
Initial Contact Resistance	$\leq 10\text{m}\Omega$ (6VDC/20A)
Electrical Endurance	90A, 320VAC, $3 \times 10^3$ 60A, 320VAC, $30 \times 10^3$
Mechanical Endurance	$1 \times 10^6$

### » Coil Rating

Rated Coil Voltage [VDC]	Nominal Current [mA]	Coil Resistance [ $\Omega$ ] $\pm 10\%$	Max. Pull-in Voltage [VDC]	Min. Drop-out Voltage [VDC]	Coil Power [mW]	Holding Voltage [VDC] $\leq +23^\circ\text{C}$	Holding Voltage [VDC] $> +23^\circ\text{C}$
6	320,0	19	4,20	0,30	1920	2,4 ~ 6,0	3,0 ~ 3,6
9	213,3	42	6,30	0,45	1920	3,6 ~ 9,0	4,5 ~ 5,4
12	160,0	75	8,40	0,60	1920	4,8 ~ 12,0	6,0 ~ 7,2
24	80,0	300	16,80	1,20	1920	9,6 ~ 24,0	12,0 ~ 14,4

### » Specification

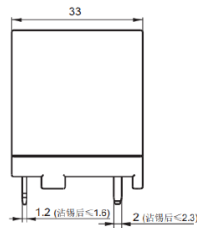
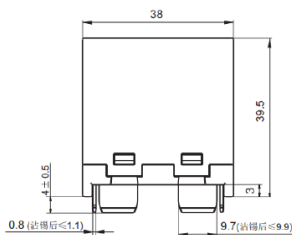
Insulation resistance	≥1000MΩ (at 500VDC)
Initial Dielectric Strength	between open contact: 2000Vrms, 50/60Hz for 1 min between contact & coil: 5000Vrms, 50/60Hz for 1 min
Surge voltage	10kV (1,2/50μs)
Operate Time / Release Time	≤30ms / ≤10ms (at nominal voltage)
Environmental Protection	RTII (flux-tight)
Shock Resistance	Malfunction: 98m/s <sup>2</sup> Destruction: 980m/s <sup>2</sup>
Vibration Resistance	Destruction: 10 ~ 55Hz, 1,5mm double amplitude
Ambient Operating Temperature (without icing or condensation)	-40 ~ +85°C
Ambient Operating Humidity	20% ~ 85% RH
Weight	100g

### » Safety Approvals

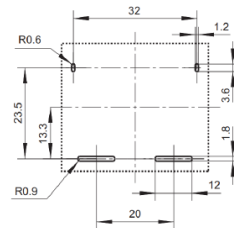
Approval	File No.	Rating(s)
UL	E352915	90A @ 277VAC/320VAC @85°C make&break 30A/carry 100A @ 277VAC/400VAC @85°C
VDE	pending	90A @ 320VAC @85°C 60A @ 320VAC @85°C make&break 30A/carry 100A @ 400VAC @85°C

### » Dimensions

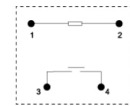
Outline Dimensions



PCB Layout  
(Bottom View)



Wiring Diagram  
(Bottom View)



Remark: 1) The reference tolerance in outline dimension: outline dimension ≤1mm, reference tolerance is ±0.2mm;  
outline dimension >1mm and ≤5mm, reference tolerance is ±0.3mm;  
outline dimension >5mm, reference tolerance is ±0.5mm.  
2) The reference tolerance for PC Board layout is ±0.1mm.

#### 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.