

### » Features

- 60A ~ 160A Power PCB Relay
- 4.000VAC Dielectric strength between coil and contact
- Contact GAP  $\geq$  3.6mm
- 1 Form X contact arrangement

47.6 x 40 x 45.1 [mm]

### » Application Examples

- Solar Inverter
- Industrial Control
- Inverter precharge circuit control



### » Ordering Information

<b>NF56</b>	<b>100</b>	<b>E</b>	<b>100</b>	<b>L</b>	<b>12</b>	<b>V</b>	<b>Nil</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>9</b>	<b>10</b>
1. Type:	NF56			6. Pin layout:			L = Standard Pin Layout for Contact Rating $\leq$ 100A S = Larger Pins on load-side <sup>1)</sup> H = Pin Layout for Contact Rating > 100A
2. Contact configuration:	100 = 1NO (1 form X)			7. DC Coil voltage:	12 = 12V; 24 = 24V; 48 = 48V		
3. Contact material:	E = Ag Alloy			9. Protection:	V = Vented (Flux-tight, RTII)		
4. Contact rating:	60 = 60A 80 = 80A 100 = 100A 130 = 130A 150 = 150A 160 = 160A			10. Special Suffix:	Nil = Standard		

1) Available for 100A Type only.

### » Contact Data

Contact Arrangement	1 form X (NO)	
Contact Material	Ag Alloy	
Contact Rating	60A-Type	Make/Break 60A, Carry 60A, 277VAC
		Make/Break 30A, Carry 60A, 690VAC
	80A-Type	Make/Break 60A, Carry 80A, 277VAC
		Make/Break 30A, Carry 80A, 690VAC
	100A-Type	Make/Break 60A, Carry 100A, 277VAC
		Make/Break 30A, Carry 100A, 690VAC
	130A-Type	Make/Break 60A, Carry 130A, 277VAC
Make/Break 40A, Carry 130A, 690VAC		
150A-Type	Make/Break 60A, Carry 150A, 277VAC	
	Make/Break 40A, Carry 150A, 690VAC	
160A-Type	Make/Break 45A, Carry 160A, 690VAC	
Max. Switching Voltage	690VAC	
Max. Switching Current	60A - 160A	
Max. switching power	690 x Max. Switching Current [VA]	
Contact Resistance	$\leq$ 100m $\Omega$ @6VDC, 1A (initial)	
Min. Switching Capacity	100mA, 48VAC	
Electrical endurance	30 x 10 <sup>3</sup>	
Mechanical endurance	1 x 10 <sup>6</sup>	

### » Coil Rating

Rated Coil Voltage [VDC]	Nominal Current [mA]	Coil Resistance R[ $\Omega$ ] $\pm$ 10%	Pull-in Voltage [VDC]	Drop-out Voltage [VDC]	Coil Power
12	267	45	9	0.60	3.200
24	133	180	18	1.2	
48	67	720	36	2.4	

The data shown in Coil Rating tables are initial values

## » Specification

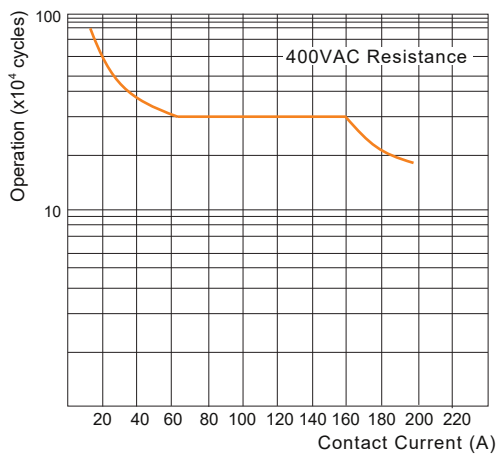
Initial Dielectric Strength	between open contacts 1.300VAC, 50/60 Hz for 1 min between contact and coil 4.000VAC, 50/60 Hz for 1 min
Surge voltage between coil and contacts	6.000V (1.2/50µs)
Insulation resistance	1.000 M[Ω] (@ 500VDC)
Operate Time / Release Time	≤ 30ms (@nominal voltage)
Operate Voltage / Release Voltage	≤ 75% / ≥ 5% of nominal voltage
Vibration Resistance (Malfunction)	10 to 55 Hz , 1.5mm double amplitude
Shock Resistance	Malfunction: 100m/s <sup>2</sup> ; Destruction: 1.000m/s <sup>2</sup>
Ambient Operating Temperature <sup>1) 2)</sup>	-40 to +85°C
Ambient Operating Humidity <sup>1)</sup>	20% to 85%
Environmental Protection	RTII (Flux tight)
Weight	Approx. 165g
Packing Unit	25pcs per Tray / 50pcs per Box

1) Without icing or condensation

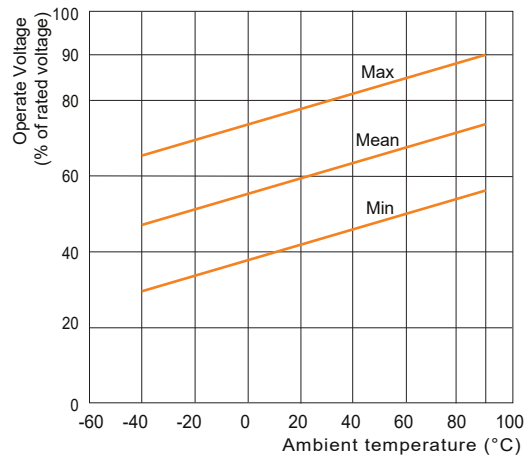
2) For AC690V load, operated voltage with rated coil voltage for 100ms and then reduced to 55%~70% of rated coil voltage for steady-state conditions.

## » Engineering Data

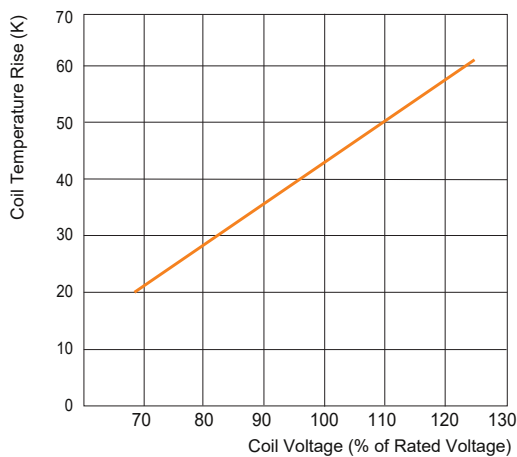
### Life expectancy



### Coil Operate/Release Voltage & Temperature Cure

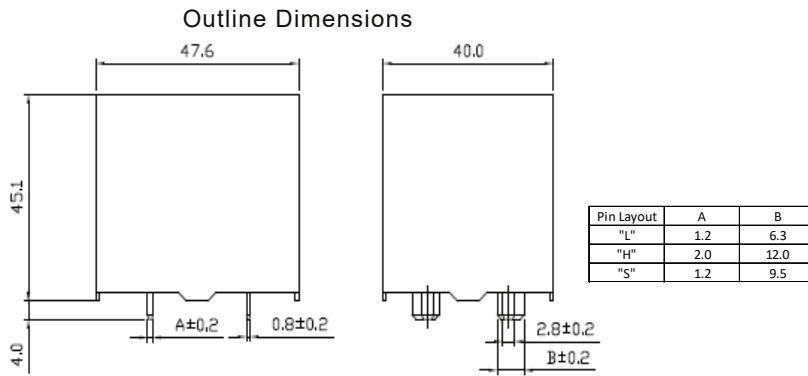


### Coil Temperature rise

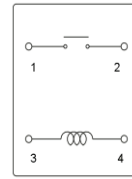


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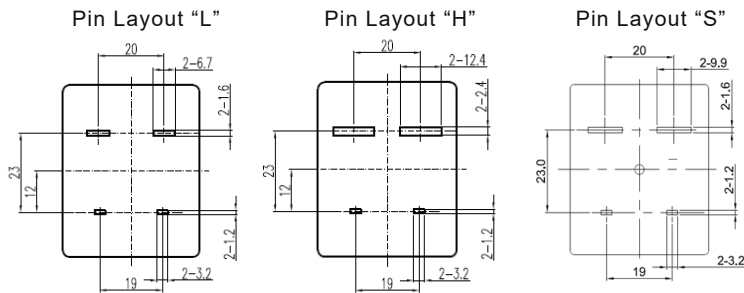
## » Dimensions



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.