



19,5 x 15,6 x 15,3 RoHS compliant

NF6

UL[®] E352915 40034617 1300209951

Features	Application Examples
<ul style="list-style-type: none"> ● Sugar cube relay with universal terminal footprint ● 12A switching capacity ● Max. ambient temperature 105°C ● UL insulation system: class F ● Accordance with IEC60335-1 Ed. 5 ● Accordance with IEC60079-15:2010, clause 22.4 (Pending) 	<ul style="list-style-type: none"> ● Household electrical appliances ● Building automation ● Machinery electrical facilities

Ordering Information					
<u>NF6</u> 1	<u>100</u> 2	<u>E</u> 3	<u>24</u> 4	<u>S</u> 5	<u>XXXX</u> 6
1. Type:	NF6 Standard NF6T High temperature type		4. Coil voltage:		5 = 5VDC; 6 = 6VDC; 9 = 9VDC; 12 = 12VDC; 24 = 24VDC; 48 = 48VDC;
2. Contact configuration:	100 = 1NO (1 form A) 001 = 1CO (1 form C)		5. Protection:		Nil = Flux tight S = Sealed washable
3. Contact material:	E = Ag alloy		6. Special code:		XXXX = Letters and / or number for special customer design

Contact Data

Type	NF6	NF6T
Contact Arrangement	1 form C (CO) or 1 form A (1NO)	
Contact Material	Ag alloy (Cd free)	
Contact Rating	12A, 250VAC by 85°C	12A, 250VAC by 105°C
Max. Switching Voltage	400VAC, 110VDC	
Max. Switching Current	12A	
Min. Switching Capacity	100mA, 6VDC	
Contact Resistance	≤ 100mΩ (by voltage drop 6VDC/1A)	
Electrical endurance	10 ⁵	
Mechanical endurance	10 ⁷	

Coil Rating (at 23°C)

Rated Coil Voltage [VDC]	Coil Resistance R[Ω] ± 10%	Pull-in Voltage [VDC]	Drop-out Voltage [VDC]	Coil Power [mW]	Max. Applied Voltage [VDC]
5	70	Max.75% of nominal voltage (Initial)	Min.10% of nominal voltage (Initial)	360	Max.170% of nominal voltage (Initial)
6	100				
9	225				
12	400				
24	1600				
48	6400				

Specification

Creepage / Clearance Distance	Min. 1.8mm / Min. 1.5mm
Initial Dielectric Strength	between open contacts 750Vrms, 50/60Hz for 1 min
	between contact and coil 1000Vrms, 50/60Hz for 1 min
Impulse withstand voltage	between contact and coil 4.0kV (1.2 x 50 μs)
Material Group of Insulation Parts	IIIa
Over Voltage Category	II
Tracking Index	CTI 250V min.

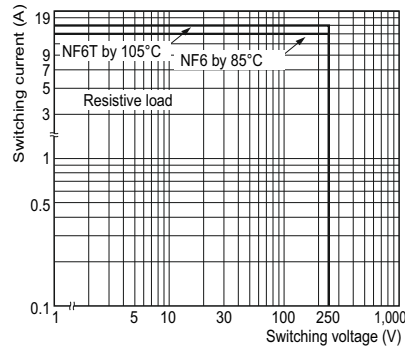
Specification (continued)

Glow wire according to IEC60335-1	GWFI 850°C and GWIT 775°C
Environmental Protection	RTII (Flux tight) / RTIII (Sealed)
Operate Time / Release Time	Max. 10ms / Max. 5ms
Frequency of Operation	450 / hour (With load)
	18000 / hour (Without load)
Vibration Resistance (Malfunction)	10 to 55 to 10 Hz, 1.5mm double amplitude
Shock Resistance (Malfunction)	Energized 100m/s ² , De-energized 100m/s ²
Ambient Operating Temperature*1	-40 to +105°C
Ambient Operating Humidity*1	5% to 85%
Weight	Approx. 9.4g
Packing Unit	34 pcs / tube; 1700 pcs / box;

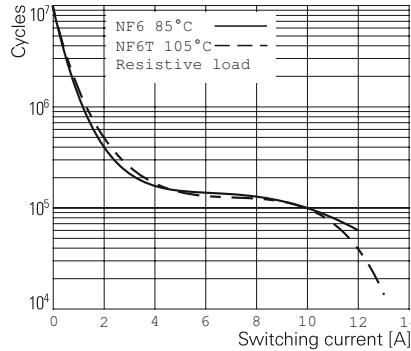
*1. Without icing or condensation

Engineering Data

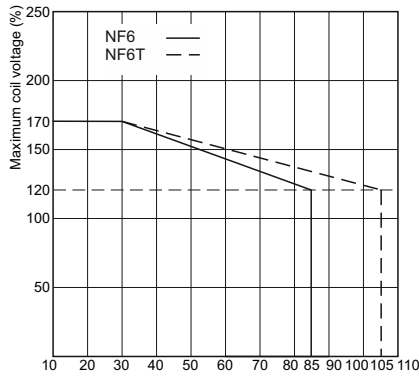
Max. switching capacity



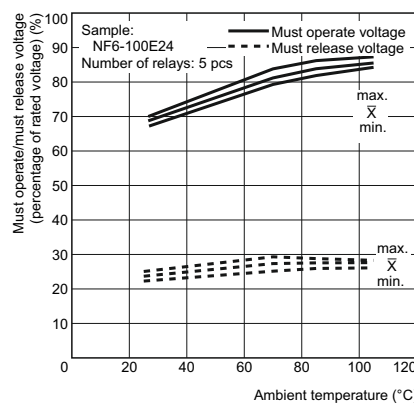
Electrical Endurance



Ambient Temperature vs. Maximum Coil Voltage



Ambient Temperature vs. Must Operate and Must Release Voltages



Note: The max. coil voltage refers to the max. value in a varying range of operating power voltage, not a continuous voltage.

Safety approvals

Approvals	VDE File No. 40034617	UL File No. E352915	CQC File No. CQC1300209951
NF6	10A, 250VAC, 85°C, 100k cycles; 12A, 250VAC, 85°C, 60k cycles;	10A, 277VAC, 85°C, 100k cycles; 12A, 277VAC, 85°C, 60k cycles;	10A, 250VAC, 85°C, 100k cycles; 12A, 250VAC, 85°C, 60k cycles;
NF6T	10A, 250VAC, 105°C, 100k cycles; 12A, 250VAC, 105°C, 30k cycles; 13A, 250VAC, 105°C, 15k cycles;	10A, 277VAC, 105°C, 100k cycles; 12A, 277VAC, 105°C, 60k cycles; 15A, 125VAC, 105°C, 20k cycles;	10A, 250VAC, 105°C, 100k cycles; 12A, 250VAC, 105°C, 60k cycles;

Dimensions	mm	
NF6 001E... / NF6T 001E...	PCB Mounting Holes (Bottom View) Tolerance: $\pm 0,3\text{mm}$	Wiring Diagram
NF6 100E... / NF6T 100E...		

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. We recommend to complete our questionnaire and to request our technical service. Any responsibility for the application of the product remains with the customer only. All specifications are subject to change without notification. All rights of NF Forward GmbH & NF Forward USA Inc. are reserved.