



19 x 15,5 x 15,4

RoHS compliant

WR8

c us E90631

40048247

Features	Application Examples
● Sugar cube relay with universal terminal footprint ● 10A switching capacity ● Max. ambient temperature 105°C ● UL insulation system: class F ● Accordance with IEC60335-1 Ed. 5	● Household electrical appliances ● Building automation ● Machinery electrical facilities

Ordering Information						
<u>WR8</u> 1	<u>100</u> 2	<u>E</u> 3	<u>24</u> 4	<u>S</u> 5	<u>P</u> 6	<u>XXXX</u> 7
1. Type:	WR8		5. Protection:	Nil = Flux tight S = Sealed washable		
2. Contact configuration:	100 = 1NO (1 form A) 001 = 1CO (1 form C)		6. Material:	Nil = CTI ≥ 250 P = CTI ≥ 175		
3. Contact material:	E = Ag alloy		7. Special code:	XXXX = Letters and / or number for special customer design		
4. Coil voltage:	5 = 5VDC; 6 = 6VDC; 9 = 9VDC; 12 = 12VDC; 24 = 24VDC;					

Contact Data

Contact Arrangement	1 form C (CO) or 1 form A (1NO)
Contact Material	Ag alloy (Cd free)
Contact Rating	10A, 250VAC by 105°C
Max. Switching Voltage	277VAC
Max. Switching Current	15A
Min. Switching Capacity	100mA, 5VDC
Contact Resistance	≤ 100mΩ (by voltage drop 6VDC/1A)
Electrical endurance	10 ⁵
Mechanical endurance	10 ⁷

Coil Rating (at 23°C)

Rated Coil Voltage	Coil Resistance	Pull-in Voltage	Drop-out Voltage	Coil Power	Max. Applied Voltage
[VDC]	R[Ω] ± 10%	[VDC]	[VDC]	[mW]	[VDC]
5	70	Max.75% of nominal voltage (Initial)	Min.5% of nominal voltage (Initial)	360	Max.130% of nominal voltage (Initial)
6	100				
9	225				
12	400				
24	1600				

Specification

Creepage / Clearance Distance	Min. 2,6mm / Min. 2,6mm
Initial Dielectric Strength	between open contacts 750Vrms, 50/60Hz for 1 min
	between contact and coil 1500Vrms, 50/60Hz for 1 min
Impulse withstand voltage	between contact and coil 2,5kV (1.2 x 50 μs)
Material Group of Insulation Parts	IIIa
Over Voltage Category	II
Tracking Index	CTI 175V min for P material; CTI 250V min. for standard material;



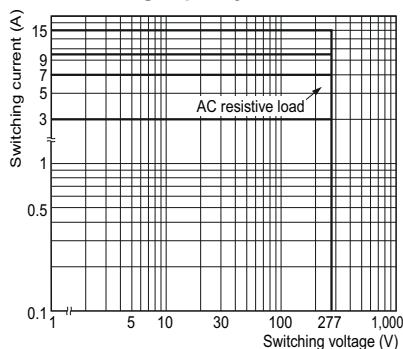
Specification (continued)

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. 20ms / Max. 10ms
Frequency of Operation	360/ hour (With load)
	18000 / hour (Without load)
Vibration Resistance (Malfunction)	10 to 55 to 10 Hz, 1.5mm double amplitude
Shock Resistance (Malfunction)	Energized 98m/s ² , De-energized 98m/s ²
Ambient Operating Temperature* ¹	-40 to +105°C
Ambient Operating Humidity* ¹	20% to 85%
Weight	Approx. 9g
Packing Unit	34 pcs / tube; 1700 pcs / box;

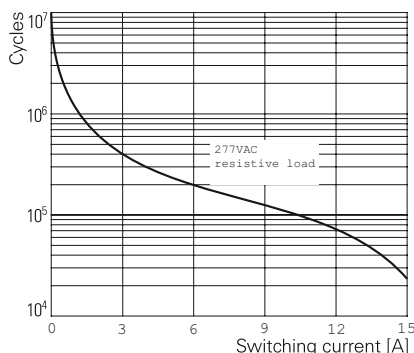
*1. Without icing or condensation

Engineering Data

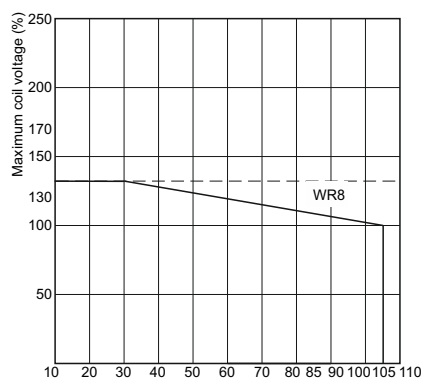
Max. switching capacity



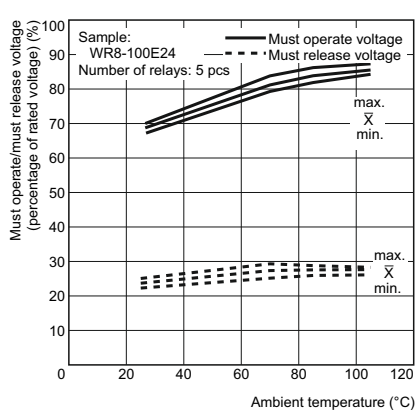
Electrical Endurance



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.

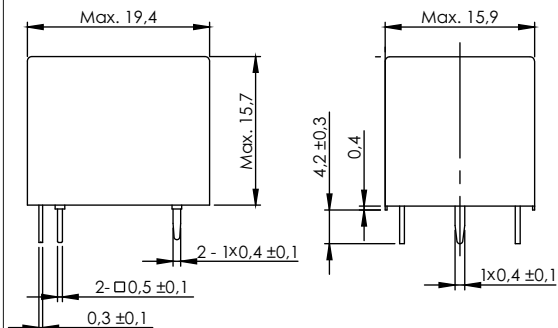
Safety approvals (Pending)

Approvals	VDE File No. 40048247	UL File No. E90631	
WR8	10A, 277VAC, 105°C, 100k ops.; 12A, 277VAC, 85°C, 25k ops.; 15A, 277VAC, 85°C, 25k ops.;	10A, 277VAC, 105°C, 100k ops.; 15A, 250VAC, 105°C, 50k ops.; 1/4 HP, 240VAC, 105°C, 30k ops.; TV-5, 250VAC, 105°C, 50k ops.;	

Dimensions

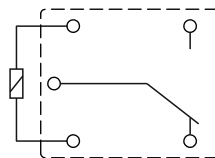
mm

WR8 001E...

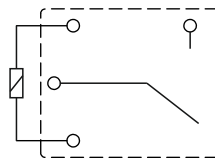
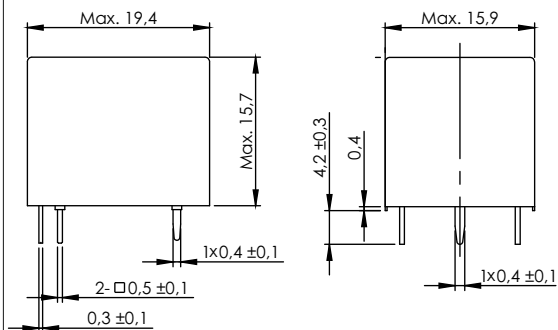


PCB Mounting Holes
(Bottom View)
Tolerance: $\pm 0,3$ mm

Wiring Diagram



WR8 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.