High Power Sugar Cube Relay



» Features

- 1 form A (NO) contact
- · 32A switching capability
- 1,67W or 2,8W coil power
- Contact gap ≥2,1mm
- Low coil holding voltage (36%) to save power
 Dielectric strength 4kV between coil and contact

» Application Examples

- PV inverter
- EV charger (wallbox, IC-CPD)
- HVAC (heating, ventilation, air conditioning)



E352916

H x W x D: 21,1 x 22 x 16,2 [mm]

» Ordering Information

NF32	-	<u> 100</u>	<u>E</u>	<u>32</u>	<u>12</u>	<u>L</u>	<u>V</u>
1		2	3	4	5	6	7

NF32 1. Type:

2. Contact configuration: 100 = 1NO (1 form A)

3. Contact material: $E = AgSnO_2$

4. Contact rating: 32 = 32A 5. DC Coil voltage: 05 = 5V; 09 = 9V; 12 = 12V; 24 = 24V; 48 = 48V

6. Coil Power: L = 1670 mW

 $H = 2800 \text{mW} (9 \sim 24 \text{V only})$

7. Protection: V = Vented (flux-tight)

S = Sealed (washable)

» Contact Data

Contact Arrangement	1 form A (NO)
Contact Material	AgSnO ₂
Contact Rating (Resistive Load)	32A, 277VAC
Max. Switching Voltage	400VAC
Max. Switching Current	32A
Max. Switching Power	8864VA
Initial Contact Resistance	≤100mΩ (voltage drop test 6VDC/1A)
Electrical Endurance	10 x 10 ³
Mechanical Endurance	500 x 10 ³

» Coil Rating

Rated Coil Voltage [VDC]	Nominal Current [mA]	Coil Resistance [Ω] ± 10%	Max. Pull-in Voltage [VDC]	Min. Drop- out Voltage [VDC]	Coil Power [mW]
5	334,0	15	4,00	0,25	1670
9	185,6	49	7,20	0,45	1670
12	139,2	86	9,60	0,60	1670
24	69,6	345	19,20	1,20	1670
48	34,8	1380	38,40	2,40	1670
9	311,1	29	7,20	0,45	2800
12	233,3	51	9,60	0,60	2800
24	116,7	206	19,20	1,20	2800



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» Specification

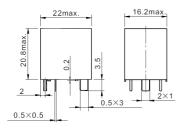
Insulation resistance	≥1000MΩ (at 500VDC)		
Initial Dielectric Strength	between open contact: 2000 Vrms, 50/60Hz for 1min between contact and coil: 4000 Vrms, 50/60Hz for 1min		
Operate Time / Release Time	≤15ms / ≤10ms (at nominal voltage)		
Environmental Protection	RTII (flux-tight) or RTIII (washable)		
Shock Resistance	Malfunction: 98m/s ² Destruction: 980m/s ²		
Vibration Resistance	Malfunction: 10 ~ 55Hz, 1,0mm double amplitude		
Ambient Operating Temperature (without icing or condensation)	-40 ∼ +85°C		
Ambient Operating Humidity	5% ~ 85% RH		
Weight	Approx. 16g		
Packaging Unit	25 pcs/tube, 40 tubes/box		

» Safety Approvals

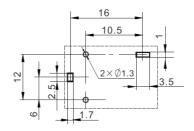
Approval	File No.	Rating(s)
UL	E352916	2,8W: 32A @ 277VAC @ 85°C 1,67W: 32A @ 277VAC @ 105°C

» Dimensions

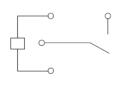
Outline Dimensions



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 \leq 5mm, reference tolerance is \pm 0.3mm; outline dimension >5mm, reference tolerance is \pm 0.5mm.

2) The reference tolerance for PC Board layout is ± 0.1 mm.

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.

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