New Product Information

16A low profile 15.7mm .618inch power relay
LZ-N relays

EN60335-1 GWT compliant low profile 1a/1c 16A power relay

Sales Points

1. Slim, low profile
Size: 12.5 (W) × 28.8 (L) × 15.7 (H) mm
.492 (W) × 1.134 (L) × .618 (H) inch

2. Superior heat resistance and tracking resistance
- Ambient temperature
  85°C 185°F (Class B insulation),
  105°C 221°F (Class F insulation)
- EN60335-1 GWT compliant

3. Conforms to various safety standards
- UL/C-UL and VDE in process

Applications

- Household electrical appliance
- Industrial equipment

Schedule of Release

To be released in September, 2017

Catalog

LZ-N relays PDF catalog will be provided.
For details, please refer to the PDF catalog.

Types

Contact arrangement	Rated coil voltage	Part No.		Standard packing	
		Class B insulation	Class F insulation	Carton	Case
1 Form C	5V DC	ALZN1B05W	ALZN1F05W	100 pcs.	500 pcs.
	9V DC	ALZN1B09W	ALZN1F09W		
	12V DC	ALZN1B12W	ALZN1F12W		
	18V DC	ALZN1B18W	ALZN1F18W		
	24V DC	ALZN1B24W	ALZN1F24W		
1 Form A	5V DC	ALZN5B05W	ALZN5F05W		
	9V DC	ALZN5B09W	ALZN5F09W		
	12V DC	ALZN5B12W	ALZN5F12W		
	18V DC	ALZN5B18W	ALZN5F18W		
	24V DC	ALZN5B24W	ALZN5F24W		

Rating

1. Coil data

Rated coil voltage	Operate voltage *1 (at 20°C 68°F)	Release voltage *1 (at 20°C 68°F)	Rated operating current (±10%, at 20°C 68°F)	Coil resistance (±10%, at 20°C 68°F)	Rated operating power	Max. allowable voltage
5V DC	70%V or less of rated coil voltage (Initial)	10%V or more of rated coil voltage (Initial)	80 mA	63 Ω	400mW	120%V of rated coil voltage (at 85°C 185°F: Class B insulation, at 105°C 221°F: Class F insulation)
9V DC			44.4 mA	203 Ω		
12V DC			33.3 mA	360 Ω		
18V DC			22.2 mA	810 Ω		
24V DC			16.7 mA	1440 Ω		

*1: Square, pulse drive

2. Specifications

Characteristics	Item	Specifications
Contact data	Arrangement	1 Form A, 1 Form C
	Contact resistance (initial)	Max. 100mΩ (By voltage drop 6V DC 1A)
	Contact material	$AgSnO_2$ type
	Contact rating (resistive)	16 A 250 V AC
	Max. switching power (resistive)	4,000 VA
	Max. switching voltage	440 V AC
	Max. switching current	16 A
	Min. switching load (reference value)*1	100 mA 5 V DC
Insulation resistance (initial)		Min. 1,000MΩ (at 500V DC) Measured portion is the same as the case of dielectric strength
Dielectric strength (initial)	Between open contacts	AC 1,000 Vrms for 1 min. (detection current: 10 mA)
	Between contact and coil	AC 5,000 Vrms for 1 min. (detection current: 10 mA)
Surge withstand voltage (initial)*2	Between contact and coil	10,000 V
Operate time (initial)		Max. 15 ms (at rated coil voltage, at 20°C 68°F, without bounce)
Release time (initial)		Max. 5 ms (at rated coil voltage, at 20°C 68°F, without bounce, without diode)
Shock resistance	Functional	100 m/s² (half-sine shock pulse: 11 ms; detection time: 10μs)
	Destructive	1,000 m/s² (half-sine shock pulse: 6 ms)
Vibration resistance	Functional	10 to 55 Hz at double amplitude of 1.5 mm (detection time: 10μs) (Only the NC contact of 1 Form C is 0.82mm)
	Destructive	10 to 55 Hz at double amplitude of 1.5 mm
Expected life	Mechanical	Min. 1×10^6 (at 180 times/min.)
Conditions	Conditions for operation, transport and storage*3	Ambient temperature: –40 to +85°C –40 to +185°F (Class B insulation), –40 to +105°C –40 to +221°F (Class F insulation), Humidity: 5 to 85% R.H. (Not freezing and condensing at low temperature)
Unit weight		Approx. 11 g .39 oz

Notes: *1. This value can change due to the switching frequency, environmental conditions, and desired reliability level, therefore it is recommended to check this with the actual load.
*2. Wave is standard shock voltage of ±1.2×50μs according to JEC-212-1981
*3. For the ambient temperature, please refer to Usage, transport and storage conditions in NOTES.
*Please note that some of the specifications listed above may not comply with overseas standards.

3. Expected electrical life

Condition: Resistive, at 20°C 68°F

Type		Switching capacity	Number of operations
1 Form A		16A 250V AC	Min. 1×10^5 (ON:OFF = 1.5s:1.5s)
1 Form C	NO contact	16A 250V AC	Min. 5×10^4 (ON:OFF = 1.5s:1.5s)
	NC contact	16A 250V AC	Min. 1×10^4 (ON:OFF = 1.5s:1.5s)

For the operating ambient temperature, please read the notes

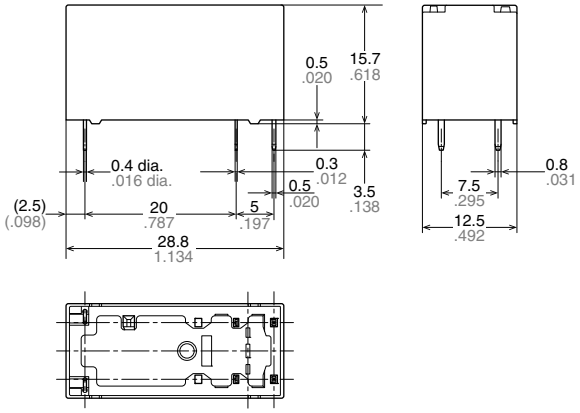
Dimensions (mm inch)

The CAD data of the products with a CAD mark can be downloaded from: http://industrial.panasonic.com/ac/e/

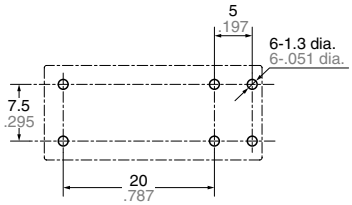
1. 1 Form A type

CAD

External dimensions

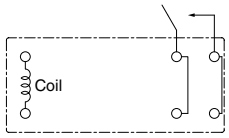


PC board pattern



Tolerance: ±0.1 ±.004

Schematic (Bottom view)

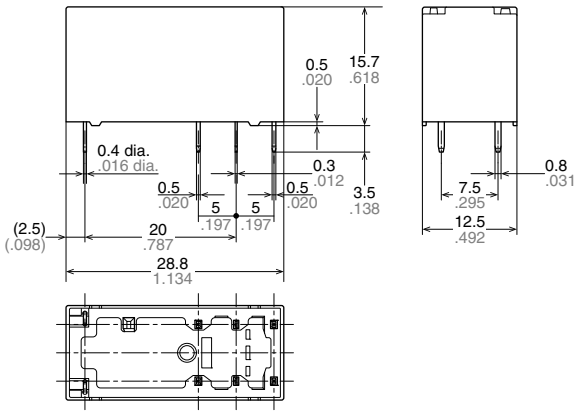


Dimension:	Tolerance
Less than 1mm .039inch:	±0.1 ±.004
Min. 1mm .039inch less than 3mm .118 inch:	±0.2 ±.008
Min. 3mm .118 inch:	±0.3 ±.012

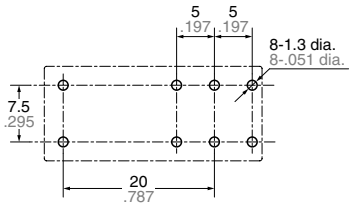
2. 1 Form C type

CAD

External dimensions

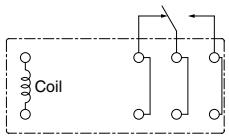


PC board pattern



Tolerance: ±0.1 ±.004

Schematic (Bottom view)



Dimension:	Tolerance
Less than 1mm .039inch:	±0.1 ±.004
Min. 1mm .039inch less than 3mm .118 inch:	±0.2 ±.008
Min. 3mm .118 inch:	±0.3 ±.012

Safety Standards

UL/C-UL and VDE in process