



# Relays & Solenoids

## NAIS\_PCB Relays

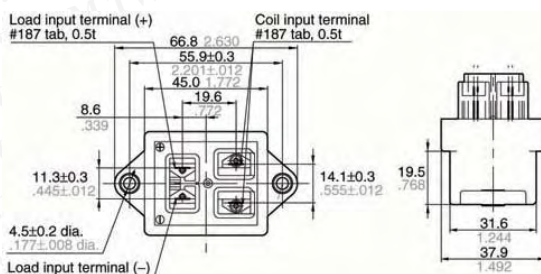
Detailed product specifications are available on: [us.100y.com.tw](http://us.100y.com.tw)



### SPECIFICATIONS

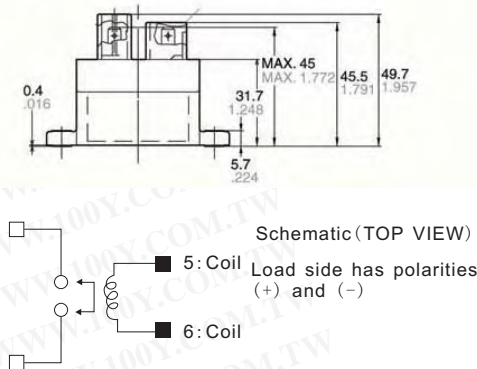
#### Contact

Type	10A type	
Arrangement	1 Form A	
Rating	Nominal switching capacity (resistive load)	10A 400V DC
	Short term current	15A (2min), 30A (30sec) (2mm <sup>2</sup> )
	Min. switching capacity #1	1A 12V DC
	Overload opening/closing rating	30A 400V DC (50 cycles) <sup>#3</sup>
	Reverse direction cut-off	-10A 200V DC (2.5x10 <sup>4</sup> cycles) <sup>#3</sup>
Contact voltage drop	Max. 0.5V (When current is 10A per 1 contact set)	
Expected life (min. Operations)	Mechanical	10 <sup>5</sup>
	Electrical	10A 400V DC 7.5x10 <sup>4</sup> (L/R ≤ 1ms) <sup>#2</sup>



### Characteristics

Initial insulation resistance	Min. 100MΩ (at 500 V DC) <sup>*1</sup>	
Initial breakdown voltage	Between open contacts	AC 2,500 Vrms for 1min. <sup>*2</sup>
	Between contact and coil	AC 2,500 Vrms for 1min. <sup>*2</sup>
Operate time (at 20°C 68°F)	For 10A type: Max. 50ms <sup>*3</sup>	
	For 80A type: Max. 50ms <sup>*3</sup>	
	For 300A type: Max. 30ms <sup>*3</sup>	
Release time (without diode) (at 20°C 68°F)	For 10A type: Max. 30ms <sup>*4</sup>	
	For 80A type: Max. 30ms <sup>*4</sup>	
	For 300A type: Max. 10ms <sup>*4</sup>	
Shock resistance	Functional	For 10A type: Min. 196m/s <sup>2</sup> {20 G} <sup>*5</sup> For 80A, 300A type (ON): Min. 196m/s <sup>2</sup> {20 G} <sup>*5</sup> For 80A, 300A type (OFF): Min. 98m/s <sup>2</sup> {10 G} <sup>*5</sup>
	Destructive	Min. 490 m/s <sup>2</sup> {50 G} <sup>*6</sup>
Vibration resistance	Functional	For 10A, 80A type: 10 Hz to 200 Hz, Min. 4.3 m/s <sup>2</sup> {4.4 G} <sup>*7</sup> For 300A type: 10 Hz to 200 Hz, Min. 4.4 m/s <sup>2</sup> {4.5 G} <sup>*7</sup>
	Destructive	For 10A, 80A type: 10 Hz to 200 Hz, Min. 4.3 m/s <sup>2</sup> {4.4 G} <sup>*8</sup> For 300A type: 10 Hz to 200 Hz, Min. 4.4 m/s <sup>2</sup> {4.5 G} <sup>*8</sup>
Conditions for operation, transport and storage (Not freezing and condensing at low temperature)	Ambient temperature	For 10A, 80A type: -40°C to +80°C -40 to +176°F <sup>*9</sup> For 300A type: -40°C to +85°C -40 to +185°F <sup>*9</sup>
	Humidity	5% R.H. to 85% R.H.
Mass	10A type: 80g 2.82 oz 80A type: 400g 14.11 oz    300A type: 750g 26.46 oz	



Part No.	Product No.	Manufacturer	Description	Coil Voltage	Type
47112	AEV110242	NAIS	CAPSULE CONTACT MECHANISM AND HIGH-CAPACITY CUTOFF COMPACT RELAY	24V	EV

### FEATURES

#### • Compact slim body saves space

Thanks to the small surface area of 5.7 mm × 10.6 mm .224 inch × .417 inch and low height of 9.0 mm .354 inch, the packaging density can be increased to allow for much smaller designs.

#### • Outstanding surge resistance.

Surge withstand between open contacts: 1,500 V 10×160 μs (FCC part 68) Surge withstand between contacts and coil: 2,500 V 2×10 μs (Telcordia)

#### • The use of twin crossbar contacts ensures high contact reliability.

AgPd contact is used because of its good sulfide resistance. Adopting low-gas molding material. Coil assembly molding technology which avoids generating volatile gas from coil.

#### • Increased packaging density

Due to highly efficient magnetic circuit design, leakage flux is reduced and changes in electrical characteristics from components being mounted close-together are minimized. This all means a packaging density higher than ever before.

#### • Nominal operating power: 140 mW

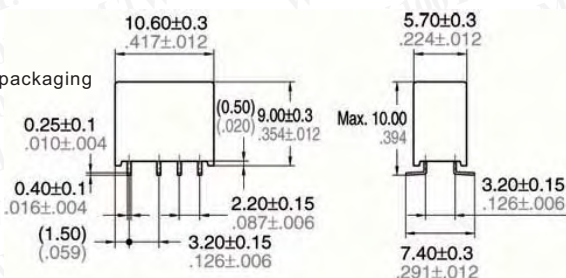
#### • Outstanding vibration and shock resistance.

Functional shock resistance: 750 m/s<sup>2</sup> {75G}  
Destructive shock resistance: 1,000 m/s<sup>2</sup> {100G}  
Functional vibration resistance: 10 to 55 Hz (at double amplitude of 3.3 mm .130 inch)  
Destructive vibration resistance: 10 to 55 Hz (at double amplitude of 5 mm .197 inch)

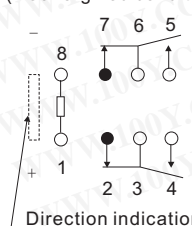
### SPECIFICATIONS

#### Contact

Arrangement	2 Form C		
Initial contact resistance, max. (By voltage drop 6 V DC 1A)	100 mΩ		
Contact material	Stationary: AgPd+Au clad Movable: AgPd		
Rating	Nominal switching capacity (resistive load)	1 A 30 V DC 0.3 A 125 V AC	
	Max. switching power (resistive load)	30 W, 37.5 VA	
	Max. switching voltage	110 V DC, 125 V AC	
	Max. switching current	1 A	
Min. switching capacity (Reference value) <sup>#1</sup>	10 μA 10 mV DC		
Nominal operating power	Single side stable	140mW (1.5 to 12 V DC) 230mW (24 V DC)	
	1 coil latching	100mW (1.5 to 12 V DC) 120mW (24 V DC)	
Expected life (min. Operations)	Mechanical (at 180 cpm)	5 × 10 <sup>7</sup>	
	Electrical (at 20 cpm)	1 A 30 V DC resistive	10 <sup>5</sup>
		0.3 A 125 V AC resistive	10 <sup>5</sup>



#### Single side stable (Deenergized condition)



#### 1 coil latching (Reset condition)

