

## Features

### HIGH CURRENT CARRY AND HIGH VOLTAGE

Inert gas filled arc chamber suitable for high voltage switching

### COIL ECONOMIZER

Economized coil for low power consumption

### SAFE FOR EXPLOSIVE ENVIRONMENT

No arc leakage due to a hermetically sealed design

### HIGH RELIABILITY DESIGN

Hermetic sealing creates a stable environment for high voltage switching

### NO SPECIFIC MOUNTING ARRANGEMENT

Mountable in any orientation without reduction of performance

### VARIOUS APPLICATIONS

Battery disconnect, EV charging, energy storage systems, photovoltaics, power control, circuit protection and much more

## Sealing Type: Ceramic

- ✓ Bi-directional switching



## Certification Information

1. Meet RoHS (2011/65/EU)
2. CE certified

## Nomenclature

AEVT1000

C

-

### Series code:

“AEVT1000” = AEVT1000

### Coil Voltage Code:

“B” = 12VDC

“C” = 24VDC

### Options (applied in this order):

Blank = Std. Options (Bottom Mount, Without Aux. Contact & Non-polarized Load Terminals)

“A” = With Aux. Contact (SPST-NO)

“U” = With Busbars

**Product Data Sheet**

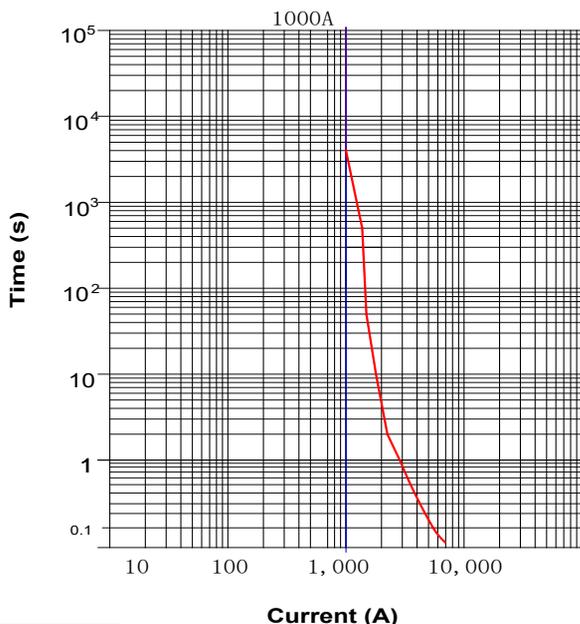
**MAIN CONTACT**

Contact Arrangement	1 Form X (SPST-NO)	
Max. Switching Voltage	1800 VDC	
Rated Current	1000A	
Max Short Circuit Current	3000A (1s)	
Dielectric Withstanding Voltage (initial)	Between Open Contacts	6000 VDC, $\leq 1\text{mA}$
	Between Contacts to Coil	2500 VAC, $\leq 1\text{mA}$
Insulation Resistance (initial)	Terminal to Terminal	Min 1000M $\Omega$ @1000VDC
	Terminals to Coil	
Contact Voltage Drop(initial)	Max. 10mV (@20A)	
Limit breaking	3000A@800VDC, 1 Cycle	

**EXPECTED LIFE**

Electrical Life (make/break) 600A@800VDC	500 Cycles
Electrical Life (make/break) 750A@800VDC	200 Cycles
Electrical Life (make/break) 600A@1000VDC	350 Cycles
Mechanical Life	200,000 Cycles

**Performance Data**



**OPERATE/RELEASE TIME**

Operate Time (includes bounce)	40ms, Max. @20°C
Release Time	20ms, Max. @20°C

**ENVIRONMENTAL DATA**

Shock	Functional	196m/s <sup>2</sup> Sine half-wave pulse
	Destructive	490m/s <sup>2</sup> Sine half-wave pulse
Operating Temperature	-40 to +85°C	
Humidity	5% to 85%RH	
Weight	3.37Lb (1.53kg)	

**COIL DATA**

Nominal Voltage	12 VDC	24 VDC
(Max.) Pick-up Voltage (20°C)	10 VDC	20 VDC
(Min.) Drop-out Voltage (20°C)	1.2 VDC	2.4 VDC
Max Inrush Current (20°C, Nominal Voltage)	3.7A	2.0A
Holding Current (20°C, Nominal Voltage)	0.67A	0.35A

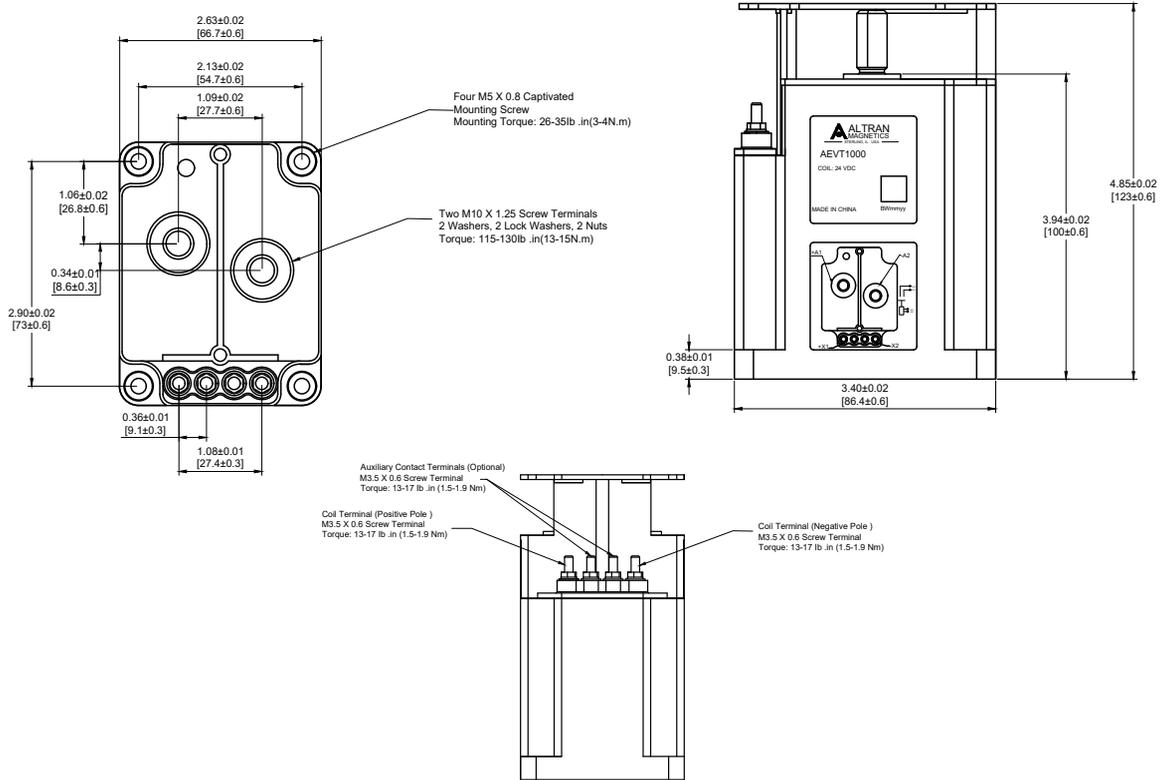
**AUX. CONTACT**

Aux. Contact Arrangement	1 Form A
Aux. Contact Resistance Max.	0.5ohms
Aux. Contact Max Current	2.0A

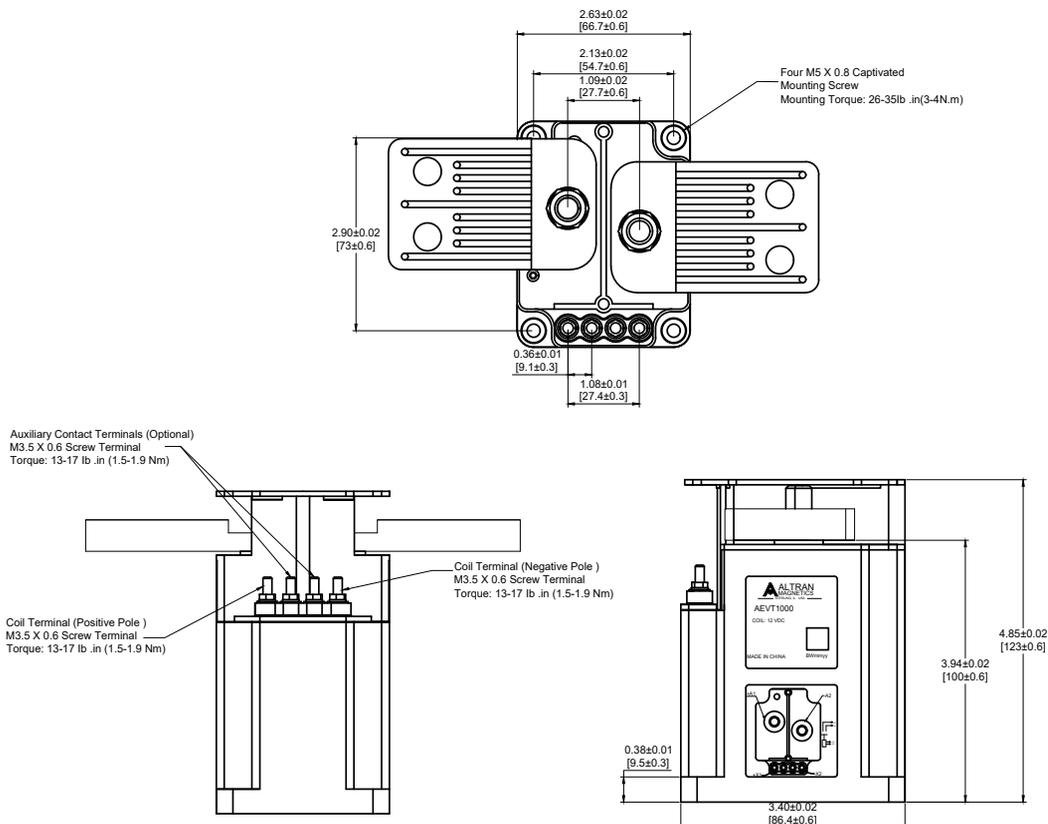
Notes:

1. Does not meet dielectric & IR after the test.
2. ON:OFF= 0.6s:5.4s.
3. The ambient environment of the application should not cause any dewing or icing inside the relay. Otherwise, the relay may fail to work.

Outline Dimensions : inches (mm)



Outline Dimensions with copper busbars: inches (mm)



## Application Notes

1. Be sure to use the split washer to prevent nuts from loosening; all the terminals or conductors must be in direct contact with the contactor's terminals. Nut tightening torque is specified below. Exceeding the maximum torque can lead to product failure.
  - Contact torque: 115 lb. in - 132.8 lb. in (13-15 N.m)
  - Mounting torque: 15 lb. in - 29.2 lb. in (1.7-3.3 N.m)
2. Load side marked with the polarity of the product; please be sure to follow the product label for correct use. When the polarity of the load connection is reversed, the electrical characteristics in this data sheet cannot be guaranteed.
3. Products with circuit boards are already equipped with reverse surge absorption circuits, so there is no need to use surge protectors.
4. Avoid installing in a strong magnetic field (close to a transformer or magnet) or near a heat source.
5. The coil and contact of the relay are continuously energized, and the power supply is cut off and immediately connected. At this time, the coil's resistance will increase due to the increase in the coil's temperature, so the product's suction voltage will increase, which may lead to the excess of the rated suction voltage. In this case, the following measures should be taken: reduce the load current, limit continuous power, or use coil voltage higher than the rated suction voltage.
6. When the voltage applied to both ends of the coil exceeds the maximum allowable applied voltage, the coil temperature may rise, leading to coil damage and inter-layer short circuit.
7. The rating in the contact parameters is the value at the time of the resistive load. When using an inductive load with  $L/R > 1\text{ms}$ , connect a surge current protection device in parallel with the inductive load. If no measures are taken, the electrical life may be degraded, and the continuity may be poor. Please consider sufficient margin space in the design.
8. Coil drive power must be greater than coil power, or it will reduce performance capability.
9. Please do not allow debris and oil to adhere to the main lead end; make sure that the external terminals are in reliable contact with the main outgoing end of the product. Otherwise, the temperature rise of the outgoing end may be too high due to the excessive contact resistance.
10. The lead wire connected with the high voltage end of the product must have the corresponding current load capacity and heat dissipation capacity (it is recommended to use a wire with a minimum of  $6\text{mm}^2$ ) to prevent overheating from affecting the life of the contactor.
11. After the products with energy-saving panels are connected to the power supply, the circuit will automatically switch about 100ms later. Please do not repeat the on-off operation during this period, or the energy-saving panel of the contactor may be damaged.
12. Do not use if dropped
13. It is impossible to determine all the performance parameters of relays in each application area. Therefore, customers should choose the products matching them according to their conditions of use. If in doubt, contact Altran Magnetics. The customer will be responsible for validating that the products meet their application.
14. Altran Magnetics reserves the right to make changes. Customers should reconfirm the contents of the specification first orders and ask us to supply a new specification if necessary.