

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

AEVT1200

C

-

Series code:

"AEVT1200" = AEVT1200

Coil Voltage Code:

"B" = 12VDC

"C" = 24VDC

"E" = 48VDC

Options (applied in this order):

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

"A" = With Aux. Contact (SPST-NO)

"B" = With Aux. Contact (SPST-NC)

"C" = With Aux. Contact (SPDT)

Product Data Sheet

MAIN CONTACT

Contact Arrangement	1 Form X (SPST-NO)	
Max. Switching Voltage	2500 VDC	
Rated Current	1200A	
Limiting Short-time Current	1200A: continuous 1500A:140s 2000A:82s 3000A:30s 4000A:18s	
Dielectric Withstanding Voltage (initial)	Between Open Contacts	≥5000VAC(1min)
	Between Contacts to Coil	
Insulation Resistance (initial)	Terminal to Terminal	≥1000MΩ (2500VDC)
	Terminals to Coil	
Contact Voltage Drop(initial)	≤0.24V(at 1200A)	
Max. Breaking Current (Resistive Load)	3000A 1000VDC 5times (ops)	

AUX. CONTACT

Aux. Contact Arrangement	SPST-NO
Aux. Contact Resistance Max.	≤200mΩ(at 100mA)
Aux. Contact Range	100mA/8VDC~2A/30VDC

OPERATE/RELEASE TIME

Operate Time	40ms, Max. @20°C
Release Time	20ms, Max. @20°C

ENVIRONMENTAL DATA

Shock	Functional	10g Half-Sine Wave 11ms
	Destructive	50g Half-Sine Wave 6ms
Operating Temperature	-40 to +85°C	
Vibration Resistance/Functional	5.79G (10~500Hz, Random)	
Weight	3.230 kg (7.12 lb)	

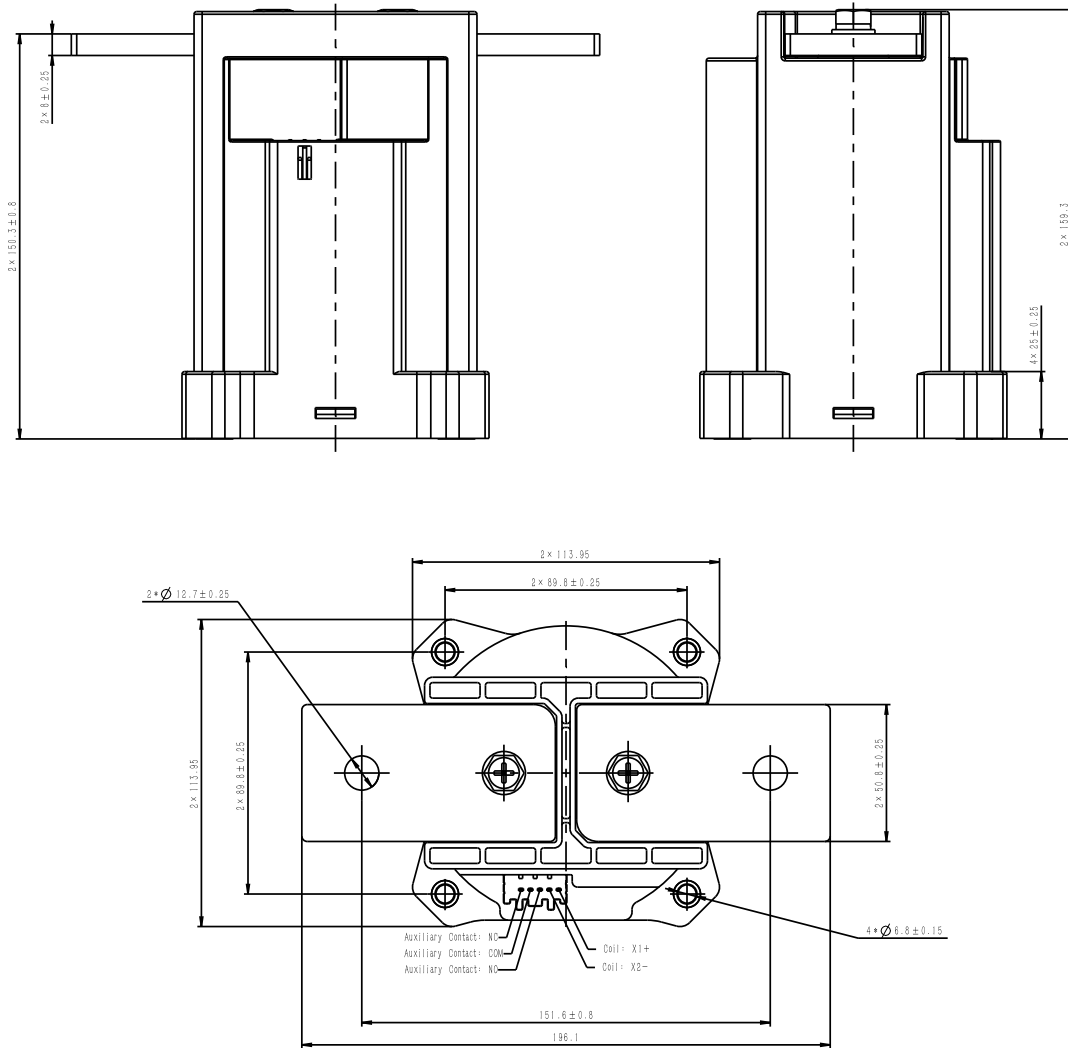
COIL DATA

Nominal Voltage	12VDC	24VDC	48VDC
Max. Allowable Voltage	16VDC	32VDC	64VDC
Pick-up Voltage (20°C)	≤9VDC	≤18VDC	≤36VDC
Drop-out Voltage (20°C)	≥1.2VDC	≥2.4VDC	≥4VDC
Rated Operating Power	50W (Start); 10W (Hold)	50W (Start); 10W (Hold)	50W (Start); 10W (Hold)

EXPECTED LIFE

Electrical Life (break only) 1200A@1000VDC	20 Cycles
Electrical Life (break only) 1000A@1500VDC	200 Cycles
Electrical Life (break only) 1000A@2000VDC	300 Cycles
Electrical Life (break only) 1000A@2500VDC	30 Cycles
Short Circuit Current Withstanding	10000A (2ms) No smoke, no fire

Outline Dimensions : inches (mm)



Main loading installation part				Contactor shell installation department		
Installation method	Torque requirements	Diameter of busbar	Busbar thickness	Installation method	Torque requirements	Diameter of baseboard
M10 Screw + Nut	20N·m ~ 25N·m	$\phi 10\text{mm} \sim \phi 10.5\text{mm}$	$\geq 8\text{mm}$	M6 Screw	6N·m ~ 8N·m	M6

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: 177.01 lb·in ~ 221.27 lb·in (20N·m~25N·m)
 - Mounting torque: 53.10 lb·in ~ 70.81 lb·in (6N·m~8N·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 6mm^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.