

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 ENVIRONMENTS

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

AEVT600

B

-

Series code:
"AEVT600" = AEVT600

Coil Voltage Code:
"B" = 12VDC
"C" = 24VDC

Options (applied in this order):
Blank = Std. Options (Bottom Mount, Without Aux)(Without Aux. Contact & non-polarized Load Terminals)
"A" = With Aux. Contact (SPST-NO)

High Voltage DC Contactor
AEVT600 Series
600A+/1800VDC



Product Data Sheet

MAIN CONTACT

MAIN CONTACT		
Contact Arrangement		1 From X (SPST-NO)
Rated Operating Voltage		1800 VDC
Rated Current		600A
Max Short Circuit Current		3000A (1s)
Dielectric Withstanding Voltage (initial)	Between Open Contacts	6000VDC 1mA 1min
	Between Contacts to Coil	2500VAC 1mA 1min
Insulation Resistance (initial)	Terminal to Terminal	Min. 100 M Ω @500VDC
	Terminals to Coil	
Contact Voltage Drop(initial)		$\leq 10\text{mV}$ (@ 20A)
Breaking Limit		3000A @ 800VDC, 1 Cycle

OPERATE / RELEASE TIME

Operate Time	$\leq 40\text{ms}$ @ 20°C
Release Time	$\leq 20\text{ms}$ @ 20°C

ENVIRONMENTAL DATA

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

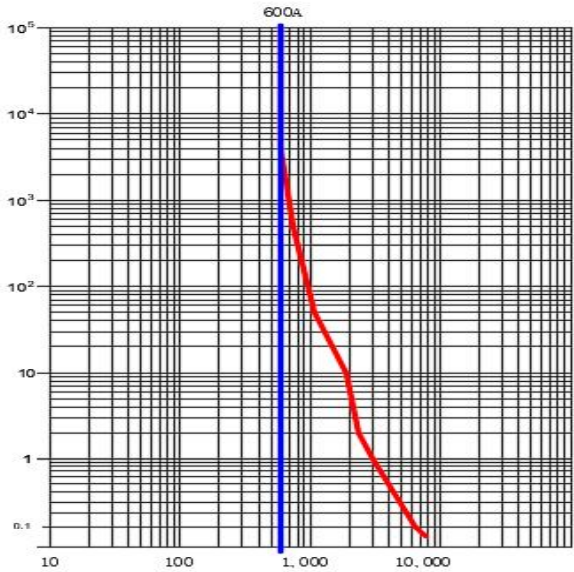
EXPECTED LIFE

Electrical Endurance (Make/Break) 600A @ 450VDC	2,000 Cycles
Electrical Endurance (Make/Break) 600A @ 650VDC	800 Cycles
Mechanical life	200,000 cycles

COIL DATA

Nominal Voltage	12VDC	24VDC
Min. Holding Voltage (20°C)	10VDC	20VDC
Pick-up Voltage (20°C)	$\leq 10\text{VDC}$	$\leq 20\text{VDC}$
Drop-out Voltage (20°C)	$\geq 1.2\text{VDC}$	$\geq 2.4\text{VDC}$
Max Inrush Current (20°C, Nominal Voltage)	3.7A	2.2A
Holding Current (20°C, Nominal Voltage)	0.67A	0.35A

Current Carry Curve



AUX. CONTACT

Aux. Contact Arrangement	1 Form A
Aux. Contact Resistance	$\leq 0.5\Omega$
Aux. Contact Max. current	2A

Note:

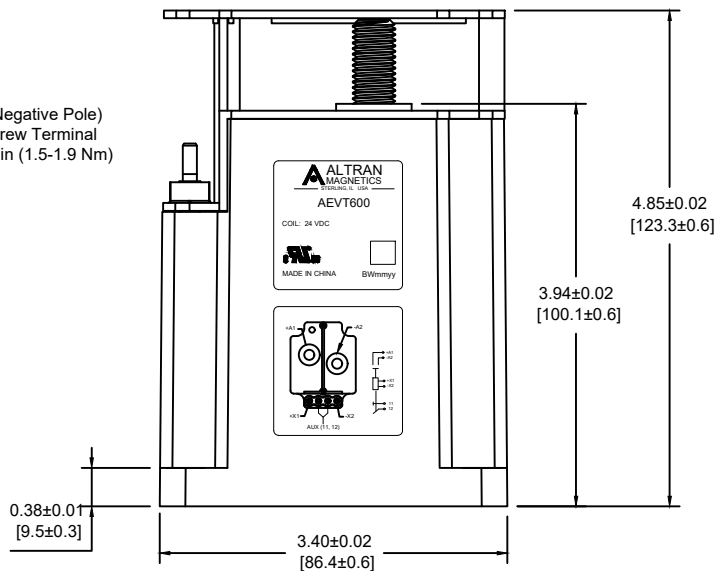
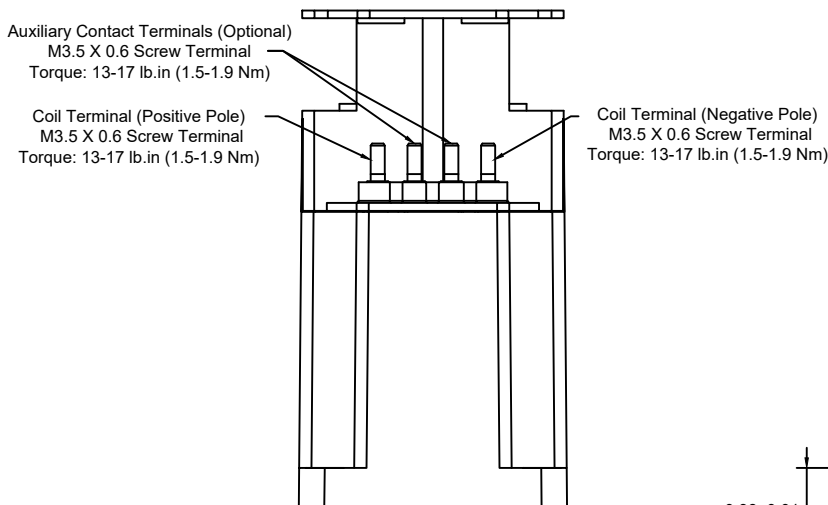
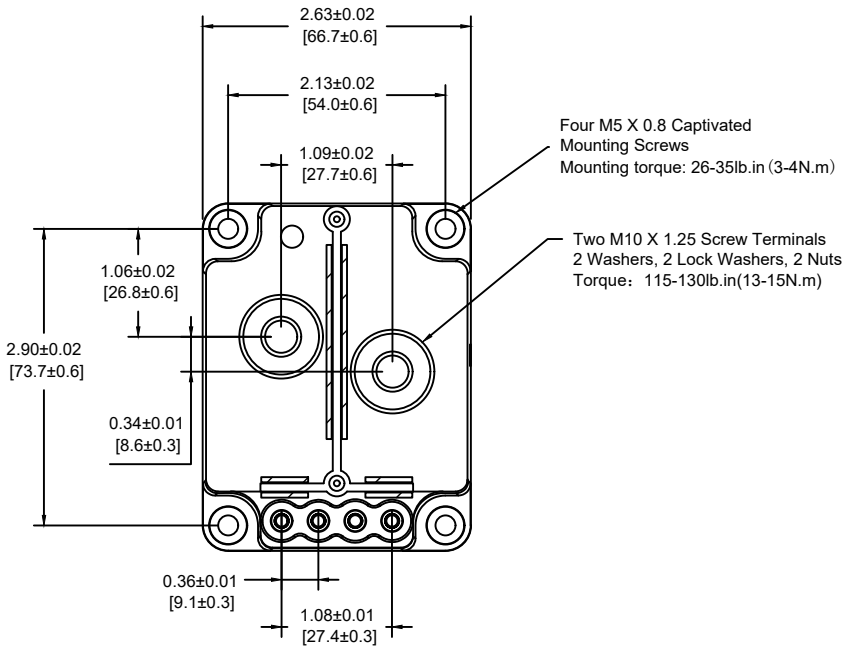
- Do not meet dielectric & IR after the test.
- ON/OFF = 0.6s/5.4s

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Product Data Sheet

Outline Dimensions : inches (mm)



Application Notes

1. To prevent loosening, split washers should be used whenever the contactor is installed. All terminals or conductors must be in direct contact with the contactor's main terminals. Please control the tightening torque of each part within the specified range in the table below. If the torque exceeds the recommended range, it may cause damage to the sealed cavity and thread damage.
 - Main Terminal torque: 115 lb. in - 132.7 lb. in (13-15 N.m) Max.
 - Mounting torque: 15 lb. in - 29.2 lb. in (1.7-3.3 N.m)
2. Products with polarity marked on the load end must be used correctly according to the product label. When the load connection polarity is reversed, the electrical characteristics in this data sheet cannot be guaranteed.
3. Products with a coil economizer are already equipped with back EMF circuits, so there is no need to use surge protectors.
4. Avoid installing the contactor in a strong magnetic field environment (near transformers or magnets) and avoid placing the contactor near objects with heat radiation.
5. When continuous current is applied to the contacts of the relay, and the coil is turned on immediately after the power is cut off. At this time, as the temperature of the coil increases, the resistance of the coil will also increase, which will increase the pull-in voltage of the product, which may result in exceeding the rated pull-in voltage. In this case, the following measures should be taken to reduce the load current; limit the continuous power-on time or use a coil voltage higher than the rated pull-in voltage.
6. When the voltage applied to the coil exceeds the maximum allowable applied voltage, the coil temperature may rise and lead to coil damage and inter-layer short circuit.
7. The rated values in the contact parameters are values for resistive load.
8. When using an inductive load with $L/1\text{ms}$, please connect a surge current protection device to the inductive load in parallel. If no measures are taken, the electrical life may be reduced, and the continuity may be poor. Please consider sufficient margin space in the design.
9. Do not use if dropped.
10. It is impossible to determine all the performance parameters of contactors in each specific application, therefore, customers should choose the products matching them according to their own conditions of use. If in doubt, contact Altran.
11. The load conductor must have the corresponding current load capacity and heat dissipation capacity (it is recommended to use a copper bar with a min 100mm^2), to prevent overheating and affecting the life of the contactor.
12. Please do not allow debris and oil to adhere to the main terminals; make sure that the main terminals are in reliable contact with the load conductor, otherwise the temperature rise of the terminal / conductor connection may be too high due to the excessive contact resistance.
13. Coil drive power must be greater than coil power or it will reduce performance capability.
14. Altran reserves the right to make changes as needed. Customers should reconfirm the contents of the specification or ask for us to supply a new specification if necessary.