

Features

HIGH CURRENT CARRY AND HIGH VOLTAGE

Inert gas filled arc chamber suitable for high voltage switching

COMPACT STRUCTURE, LOW NOISE

Small, low-profile design with low noise while carrying or switching loads

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



Certification Information

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

Nomenclature

AEVT200

B

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Series code:

“AEVT200” = AEVT200 Series

Coil Voltage Code:

“B” = 12VDC

“C” = 24VDC

Options (applied in this order):

Blank = Std. Options (Bottom Mount Size: 64.5x27, Coil Wires, Without Aux. Contact & Polarized Load Terminals)

S=Side Mount

01=Bottom mounting size 63.6×26;

L= Bottom Mount & wires lead, mounting size 63.6×26

Product Data Sheet

MAIN CONTACT

Contact Arrangement	1 Form X (SPST-NO)	
Rated Operating Voltage	750 VDC	
Rated current	200A @450VDC	
Max. Short Term Current	2,500A (1s)	
Short Term Current	300A (10min)	
Dielectric Withstanding Voltage (initial)	Between Open Contacts	5,000VDC 1mA 1min
	Between Contacts to Coil	2,500VAC, 1mA 1min
Insulation Resistance (initial)	Terminal to Terminal	Min. 1000 M Ω @1000 VDC
	Terminals to Coil	
Contact Voltage Drop (initial)	$\leq 10\text{m}\Omega$ (1A 6V)	
Limit Breaking	1750A@450VDC, 1 Cycle	

OPERATE / RELEASE TIME

Operate Time	30ms, Max @20°C
Release Time	10ms, Max @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	0.84Lb (0.38kg)	

EXPECTED LIFE

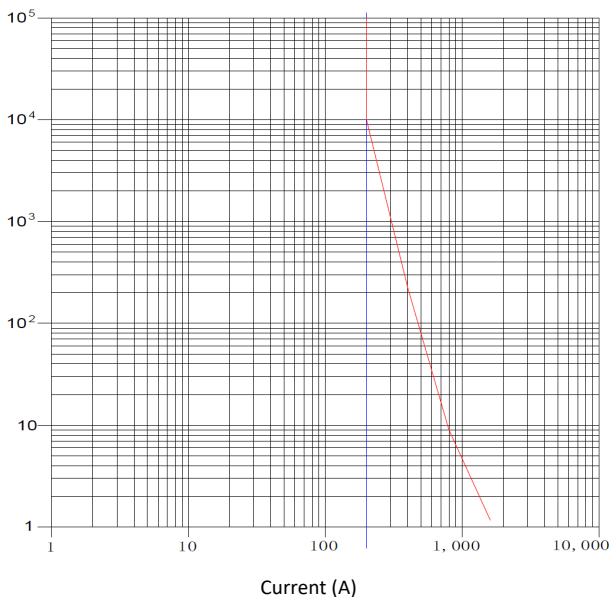
Electrical Endurance (Make/Break) 200A@450VDC	5,000 Cycles
Electrical Endurance (Make/Break) 200A@650VDC	2000 Cycles
Mechanical Life	200,000 Cycles

COIL DATA

Nominal Voltage	12VDC	24VDC
Max. Pick-up Voltage (20°C)	9VDC	18VDC
Min. Drop-out Voltage (20°C)	1VDC	2.0VDC
Coil Power 20°C at Nominal Voltage	6W	6W
Rated Coil Resistance $\pm 10\%$ (20°C)	24 Ω	96 Ω

Current Carry Curve

Current Carry (85C Ambient)

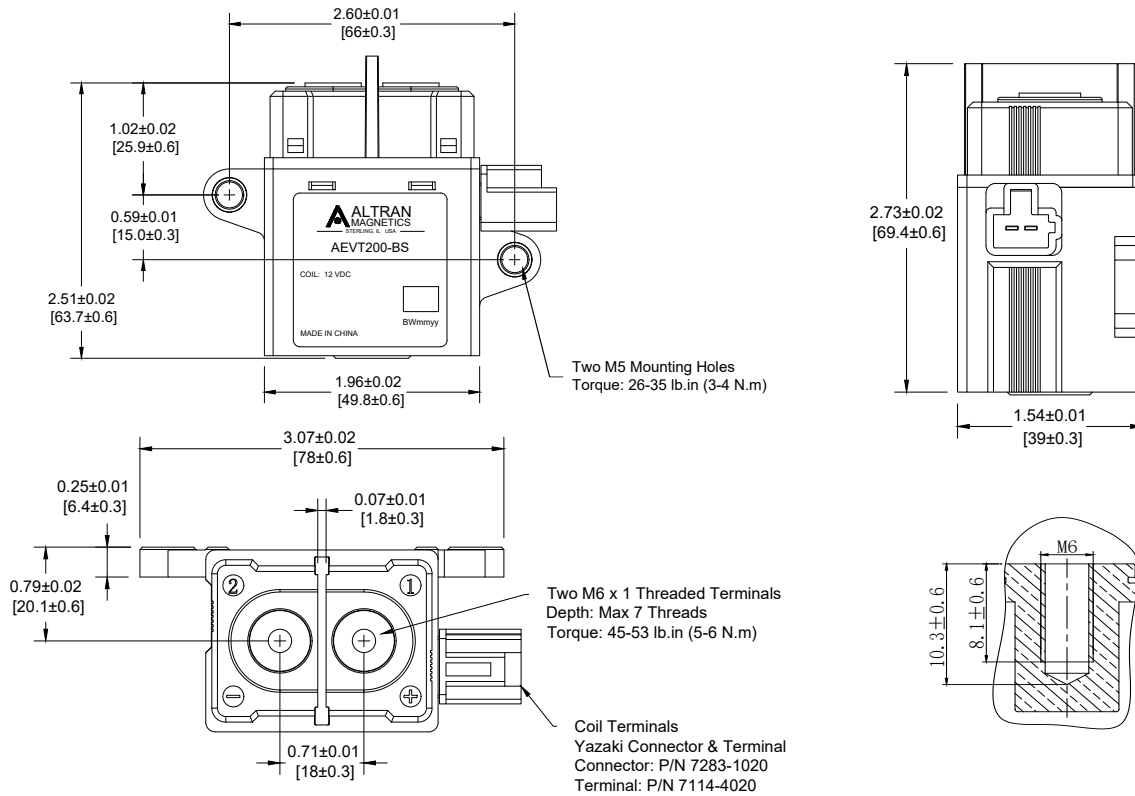


Note:

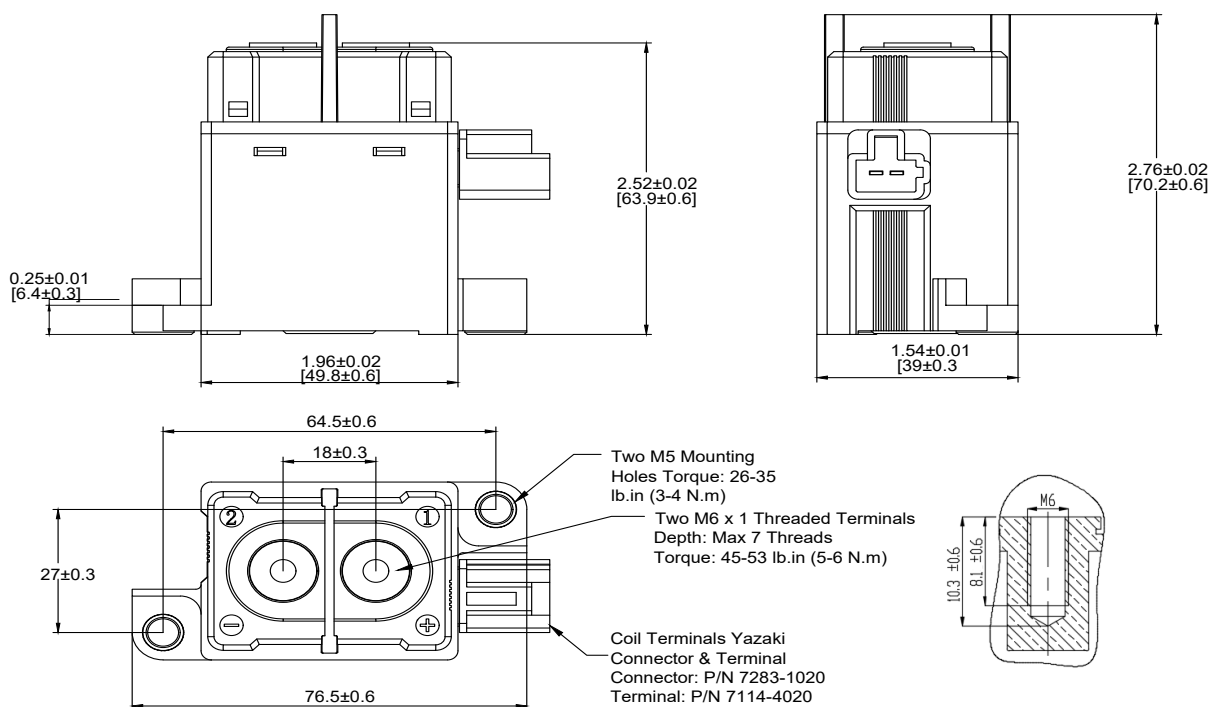
1. Do not meet dielectric & IR after the test.
2. ON:OFF= 1s:9s.
3. The ambient environment of application should not cause any dewing or icing inside the relay. Otherwise, the relay may fail to work.

Outline Dimensions : (mm)

Side Mount "AEVT200-BS"

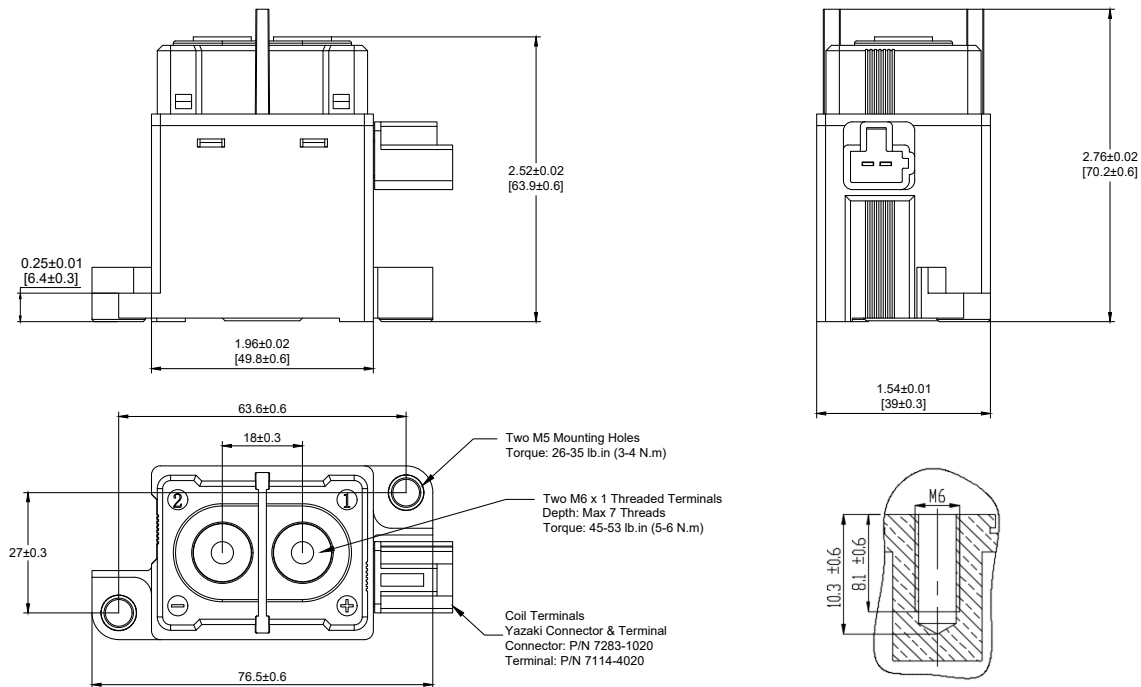


Bottom Mount 1. "AEVT200-B"

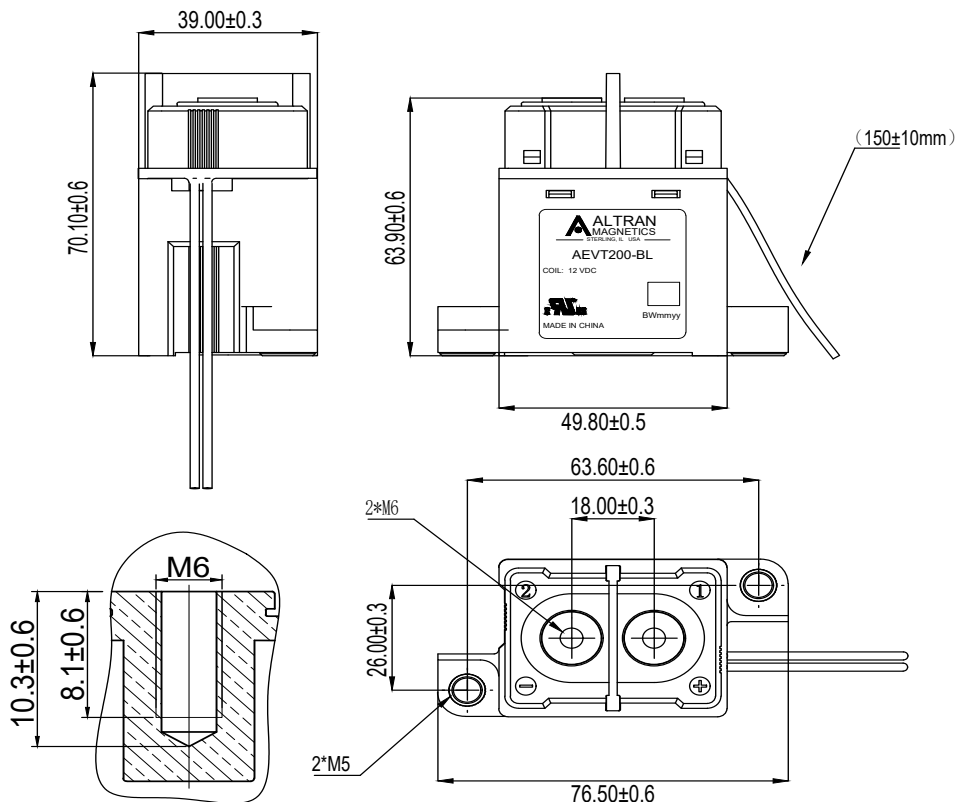


*Note: The wire size is 20AWG-22AWG, diameter 1.5mm including insulation layer

Bottom Mount 2. "AEVT200-B-01"



Bottom Mount & Wires Lead



*Note: The wire size is 20AWG-22AWG, diameter 1.5mm including insulation layer

Application Notes

1. To prevent loosening, split washers should be used whenever the contactor is installed. All terminals or conductors must directly contact 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.
 - a. Static contact torque: 53.1 lb. in - 70.8 lb. in (6.0-8.0 N.m)
 - b. Installation torque: 26.5 lb. in - 35.4 lb. in (3.0-4.0 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. It is necessary to design a surge-absorbing circuit to absorb the reverse electromotive force of the contactor coil. The use of diodes should be avoided. Diodes connected in parallel with coils will significantly prolong the release time of contactors, which may reduce the service life of products. Products with polarity marked on the load end must be used correctly according to the product marking. When the load connection polarity is reversed, the electrical characteristics promised in this manual cannot be guaranteed.
4. Avoid installing the contactor in a strong magnetic field environment (near transformers or magnets) and placing it near objects with heat radiation.
5. When continuous current is applied to the relay contacts, the coil is turned on immediately after the power is cut off. At this time, as the coil's temperature increases, the coil's resistance 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 both ends of the coil exceeds the maximum allowable applied voltage, the coil temperature may rise, leading to coil damage and an 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 measures are taken, the electrical life may be maintained, and the continuity may be suitable. 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 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 excessive contact resistance.
10. The load conductor must have the corresponding current load capacity and heat dissipation capacity (it is recommended to use wire with a minimum of 4mm^2) to prevent overheating and affect the life of the contactor.
11. Do not use if dropped.
12. It is impossible to determine all the performance parameters of contactors in each specific application; therefore, customers should choose products that match them according to their own conditions of use. If in doubt, contact Altran. The customer will be responsible for validating that the products meet their application.
13. Altran reserves the right to make changes as needed. Customers should reconfirm the specification's contents or ask us to supply a new specification if necessary.