

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

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: Epoxy/Resin

- ✓ Bottom mount/side mount options available



Certification Information

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

Nomenclature

ALEV200

C

T

Series code:

“ALEV200” = ALEV200 Series

Coil Voltage Code:

“B” = 12VDC

“C” = 24VDC

“E” = 48VDC

“F” = 72VDC

Options (applied in this order):

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

“A” = With Aux. Contact (SPST-NO)

“S” = Side Mount Version

“T” = Threaded Coil Terminal (not available with Aux contact)

# High Voltage DC Contactor

## ALEV200 Series

### 500A+/900VDC



#### Product Data Sheet

##### MAIN CONTACT

Contact Arrangement		1 Form X (SPST-NO)
Operating Voltage		12-900VDC
Rated current		500A
Max. Short Circuit Current		2,000A@320VDC 1 cycle
Withstand Voltage *1	Between Open Contacts	4,000 VDC, ≤ 1mA
	Between Contacts to Coil	2,500VAC, ≤ 1mA
Insulation Resistance*1	Terminal to Terminal	New product: Minimum 100 MΩ @500VDC
	Terminals to Coil	
Voltage Drop (@200A)		≤80mV

Note:

\*1: Does not meet Dielectric & IR after test.

##### EXPECTED LIFE

200A @ 450VDC	5000 Cycles
Mechanical Life	200,000 Cycles

## Current Carry Curve



Note:

\*When we using a higher conductor size, the current will increase

##### OPERATE/RELEASE TIME

Close (not including bounce)	30ms, Max. @20°C
Release Time	12ms, Max. @20°C

##### ENVIRONMENTAL DATA

Shock 11ms % Sine Operating	20G Peak
Vibration Sine, Peak 20G	80 to 2,000Hz
Operating Temperature	-40 to +85°C
Humidity	5% to 85%RH
Weight	1.32 lb. (0.60 kg)

##### AUXILIARY CONTACT

Aux. Contact Arrangement	1 Form A
Aux. Contact Current Max	2A@30VDC/3A@125VAC
Aux. Contact Current Min	100mA@8V
Aux. Contact Resistance	0.417 ohms @320VDC 0.150 ohms @125VAC

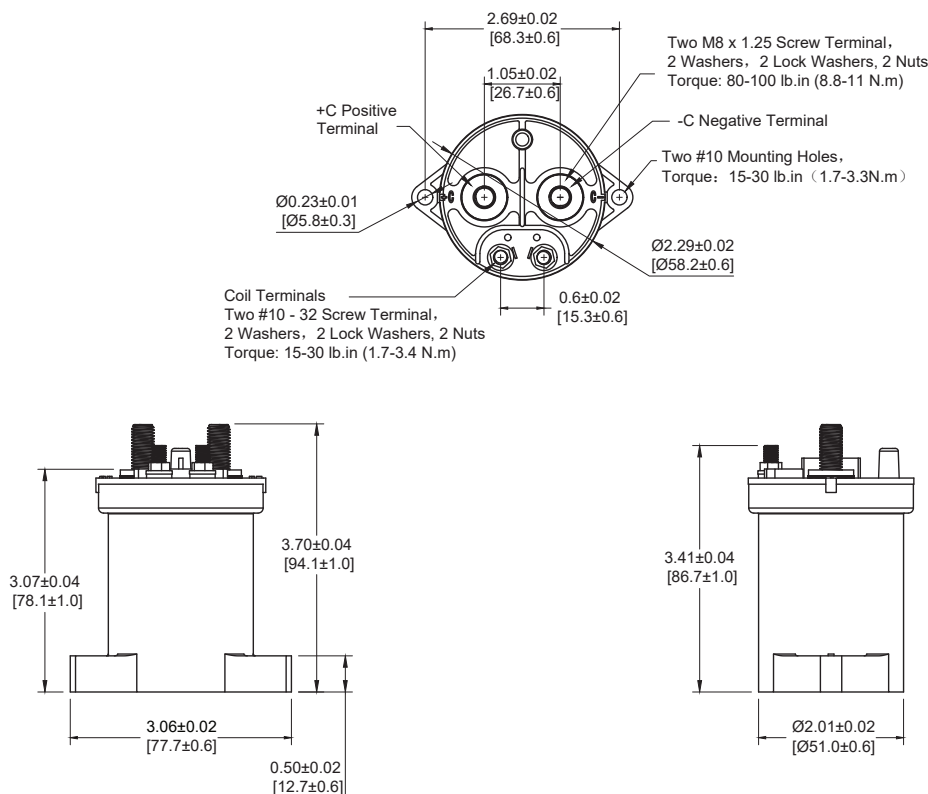
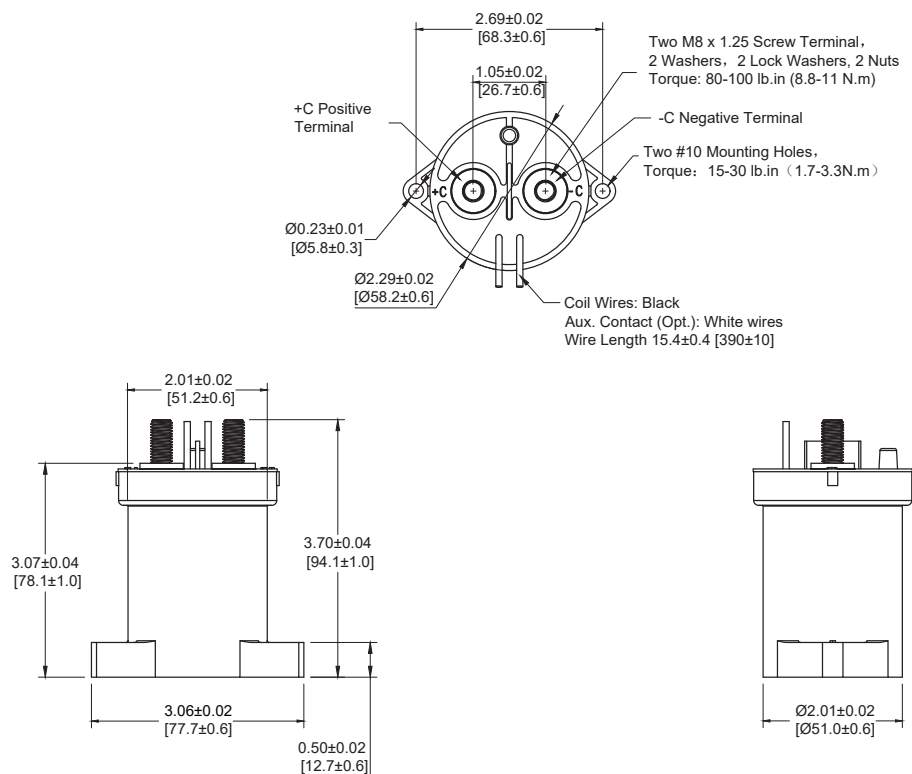
##### COIL DATA

Voltage Rating	12 VDC	24 VDC	48 VDC	72 VDC
Voltage (Max.)	15 VDC	30 VDC	60 VDC	90 VDC
(Max.) Pick-up Voltage (20 °C)	9.0 VDC	19.0 VDC	38.0 VDC	57.0 VDC
(Min.) Drop-out Voltage (20 °C)	0.5 - 4.0 VDC	1.0 - 6.0 VDC	3.0 - 10.0 VDC	4.0 - 14.0 VDC
Coil Current (20° C, Nominal Voltage)	1.1A	0.6A	0.3A	0.2A
Rated Coil Resistance $\pm 5\%$ (20°C)	11 $\Omega$	40 $\Omega$	145 $\Omega$	357 $\Omega$

Product Data Sheet

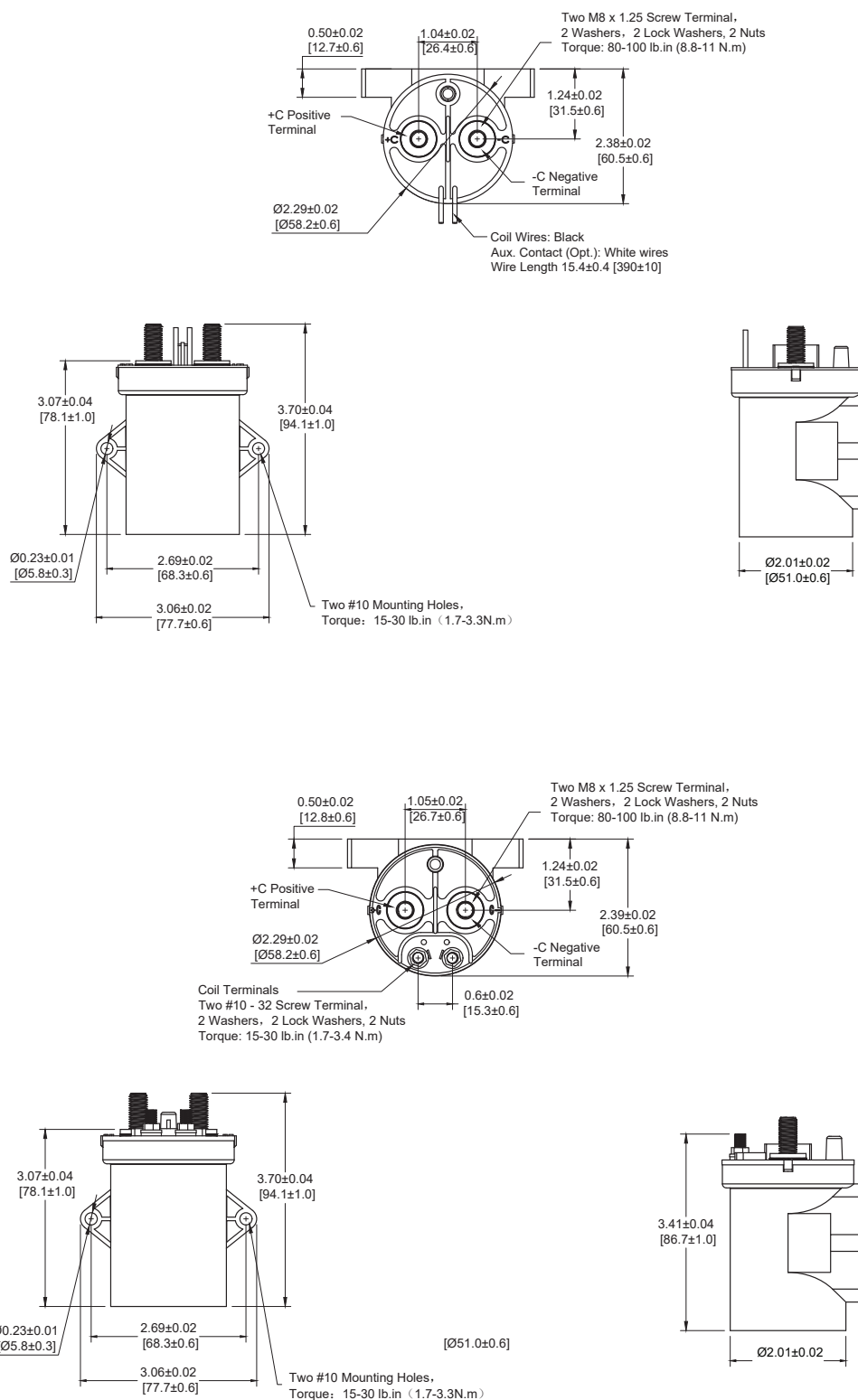
## Outline Dimensions : inches (mm)

### A. Bottom Mount:



## Product Data Sheet

### B. Side Mount:



\*Note: The wire size is 22 AWG.

\*When stud terminals are specified for coil connections, the electrical connection is made at the base of the stud.

## Application Notes

1. Be sure to use split washers 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 (M8): 80 - 100 lb.in (8.8 - 11 N.m)
- Mounting torque: 15 - 30 lb.in (1.7 - 3.3 N.m)

2. Contact terminals are polarized so refer to drawing during connecting. We suggest using a varistor rather than diode as a surge protector.

3. Do not use if dropped.

4. Avoid installing in a strong magnetic field (close to a transformer or magnet), or near a heat source.

5. Electrical life:

Use per load capability and life cycle limits so as not to cause a function failure (treat the contactor as a product with specified life and replace it when necessary). It is possible to make parts burn around the contactor once operating failure occurs. It is necessary to take layout into account and to make sure power shall be cut off within 1 second.

6. Lifetime of internal gas diffusion:

The contactor is sealed and filled with gas, lifetime of gas diffusion is determined by temperature in contact chamber (ambient temperature + temperature generated by contact operation). Operate only in an ambient temperature from -40 to +85 °C.

7. Coil drive power must be greater than coil power or it will reduce performance capability.

8. Avoid debris or oil contamination on the main terminals to optimize contact and avoid excess heat generation.

9. After continuous rated voltage / current has been applied to the coil and contacts, turning off the coil and immediately re-energizing the coil will result in a higher pick-up voltage than the rated value. This is due to increased coil resistance (coil temperature rise) of the device.