

# ASEV30 Series DC Contactor Specification



## Application

1. Power supply / motor control, circuit insulation, circuit protection and safety devices for industrial machinery
2. Charging pill, Electric vehicle etc.

## Features

### HIGH CURRENT AND HIGH VOLTAGE

Nitrogen sealed contacts to minimize arcing, up to 900VDC load is available.

### COMPACT STRUCTURE, LOW NOISE

Contact design yields reduced unit size, low noise while carrying or switching current.

### HIGH SAFETY

There is no arc leakage due to tight sealing.

### HIGH CONTACT RELIABILITY

Stable contact resistance no matter how harsh the environment with sealed contacts

### NO SPECIAL MOUNTING REQUIREMENT

Light weight actuator is less impacted by gravity with no special mounting orientation requirements.

### VARIOUS APPLICATIONS

Application includes battery switch and standby equipment, DC power control, circuit protection, etc.

### EU ROHS DIRECTIVE (2011/65/EU) COMPLIANT



## Nomenclature

Example

ASEV30 – B

Series code:

“ASEV30” = ASEV30 Series

Coil Voltage Code:

“B” = 12 VDC

“C” = 24 VDC

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## Performance Data

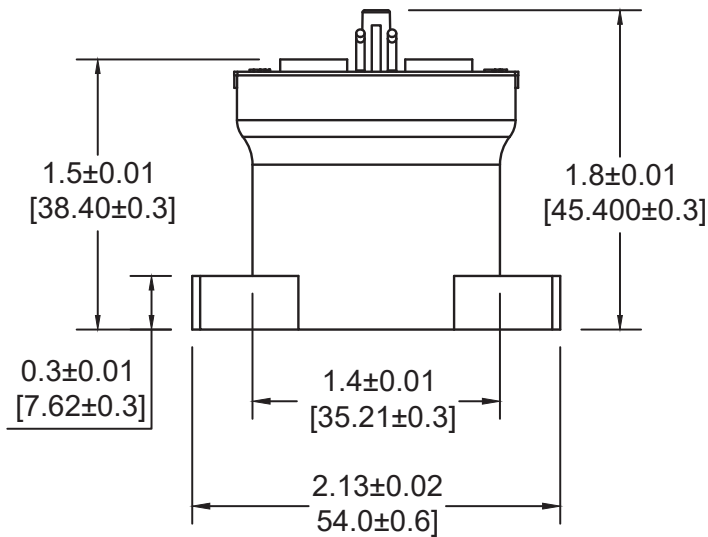
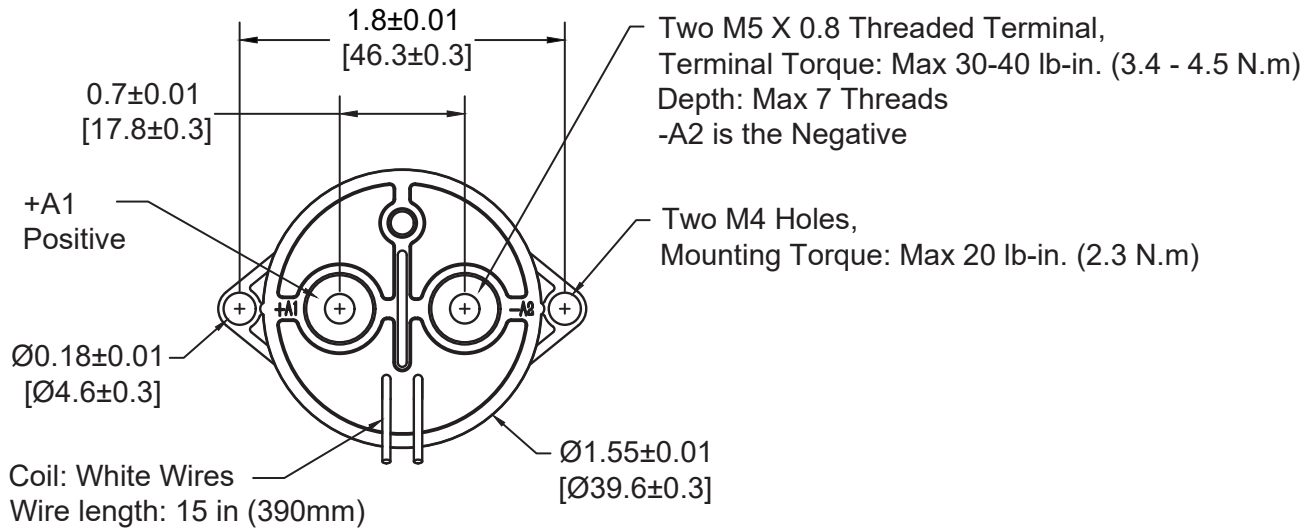
MAIN CONTACT		LIFE	
Contact arrangement	1 Form X (SPST-NO, DM)	30A @+450VDC (make/break)	10,000 cycles
Rated Operating Voltage	12-900VDC	30A @+750VDC (make/break)	4,000 cycles
Continuous (Carry) Current	30A <sup>*1</sup>	Mechanical life	200,000 cycles
Short term	50A (3 minutes) <sup>*2</sup>		
Max short circuit current	1,250A (1/2 cycle, 60Hz) (through closed contacts)		
Dielectric Withstanding Voltage	Between open contacts: 5,600Vrms/8,000Vdc		
	Between contact and coil: 2,200Vrms/4,000Vdc		
Insulation Resistance	Terminal to Terminal/ Terminal to coil		
	New: Min 100 MΩ @500Vdc End of life: Min 50 MΩ @500Vdc		
Voltage Drop (@30A)	≤60mV		
ENVIRONMENTAL DATA		OPERATE / RELEASE TIME	
Shock, 11ms ½ sine, operating	20G Peak	Close (includes bounce)	25ms, Max.
Vibration, Sine, Peak, 20G	55–2,000Hz	Release	10ms, Max.
Operating Ambient Temperature	-40 to +85°C		
Noise (@100mm)	70dB(a)		
Altitude	<4000m		
Weight	0.28 Lb (0.13 kg)		
COIL DATA			
Voltage rating	12Vdc	24Vdc	
Pickup voltage (25°C)	8Vdc	18Vdc	
Dropout voltage (25°C)	1.2Vdc	2.4Vdc	
Max Pickup voltage (85°C)	9.6Vdc	19Vdc	
Rated coil resistance±5% (25°C)	25Ω	92Ω	
Coil current (25°C)	480mA	260mA	
Coil watts (25°C)	6.0W	6.0W	

\*1: Current is relevant to the cross-sectional area of conductor.

\*2: Ambient temperature: +40°C, 3 minutes

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## Outline Dimensions: inches (mm)



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## Application Note:

1. Be sure to use washer to prevent screws from loosening, all the terminals or copper bar must be in direct contact with the contactor's terminals. Screw tightening torque is specified below. Exceeding the maximum torque can lead to product failure.
  - Contact torque: 30 - 40 lb.in (3.4 - 4.5 N.m) Max. Active length of thread is 7.0 mm
  - Mounting torque: 20 lb.in (2.3 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. 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.