ASEV50 Series
High Voltage DC Contactor
50 Amps / 900 Vdc

Certification information

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

Application

ASEV50 Series are suitable for low current applications such as small battery disconnection, telecommunication equipment, electronic control systems and electric vehicles

Features

Low Weight and Small Size
Compact contactor that saves weight and is easy to install
COMPACT STRUCTURE, LOW NOISE
Contact design yields reduced unit size, low noise while carrying or switching currents.
HIGH SAFETY
There is no arc leakage due to tight sealing.
HIGHLY RELIABLE CONTACT
Stable contact resistance no matter how harsh the environment.

Nomenclature

ASEV50 – **B** –

Series code:
ASEV50 = ASEV50 Series

Coil Voltage:
"B" = 12VDC
"C" = 24VDC
"E" = 48VDC

Options:
Blank = Coil Pin
"W" = Wire Coil Leads (390 ± 10 mm)

Performance Data

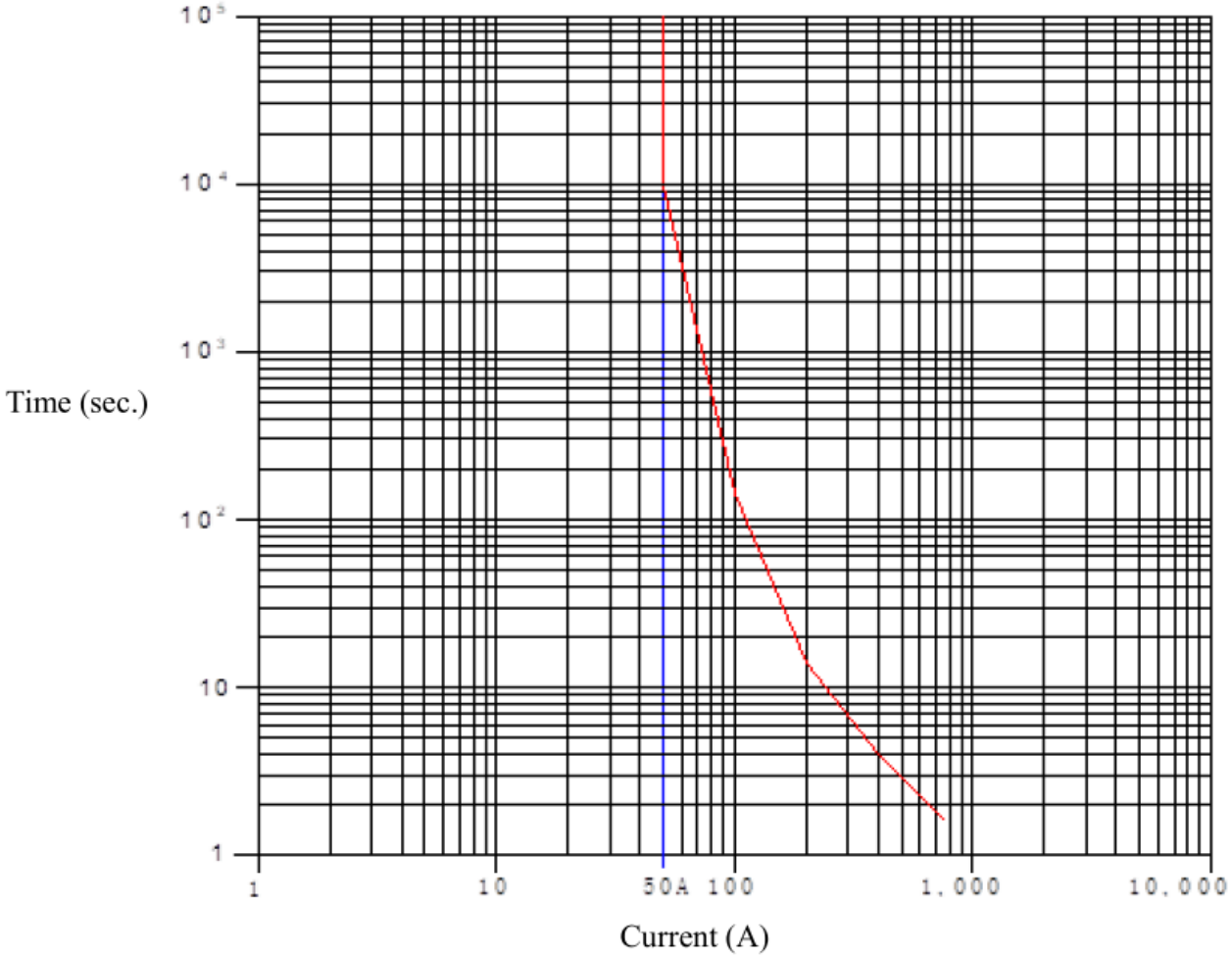
Main Contact			Expected Life		
Contact Arrangement		1 Form X (SPST-NO)	Electrical Endurance	Make / Break	50A @650VDC 1,500 cycles 50A @450VDC 10,000
Max. Switching Voltage		900 VDC			
Rated current		50A	Mechanical Life		200,000 Cycles
Max. Short Circuit Current		1,250 (1s)			
Short Term Current		100A (3min)			
Dielectric Withstanding Voltage (Initial)	Between Open Contacts	4000VDC 1mA			
	Between Contacts to Coil	2500VAC 1mA			
Insulation Resistance (Initial)	Terminal to Terminal	≥1000 MΩ @1000VDC			
	Terminals to Coil				
Contact Voltage Drop(initial)		Max. 50mV			
Limit breaking		3500A @ 450VDC, 1 Cycle			

Environmental Data			Operate / Release Time	
Shock	Functional	196m/s2 Sine half-ware pulse	Operate Time (includes bounce)	25ms，Max. @20C
	Destructive	490m/s2 Sine half-ware pulse		
Operating Temperature		-40 - +85℃	Release Time	10ms，Max. @ 20C
Humidity		5% - 85%RH		
Weight		0.44 Lb（0.2kg）		

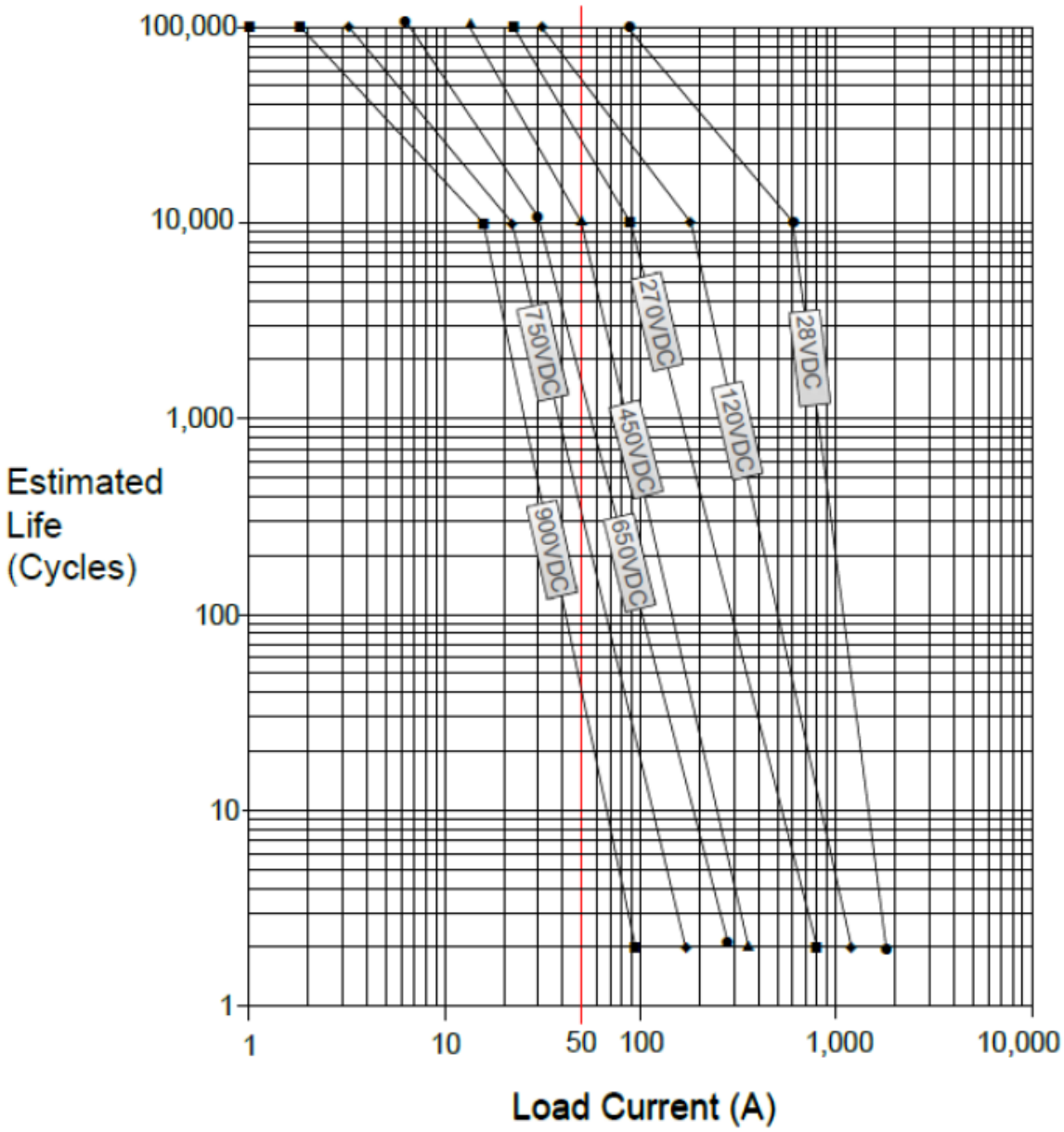
Coil Data			
Coil Code	**B**	**C**	**E**
Nominal Voltage	12Vdc	24Vdc	48Vdc
Max. Pick-up Voltage （20℃）	9.6Vdc	19.2Vdc	38.4Vdc
Min. Drop-out Voltage （20℃）	0.8Vdc	1.6Vdc	3.3Vdc
Coil Current （20℃）	0.45A	0.21A	0.122mA
Rated Coil Resistance ±5%（20℃）	26Ω	96Ω	392Ω

Performance Charts

Current Carry vs Time (85°C Ambient)



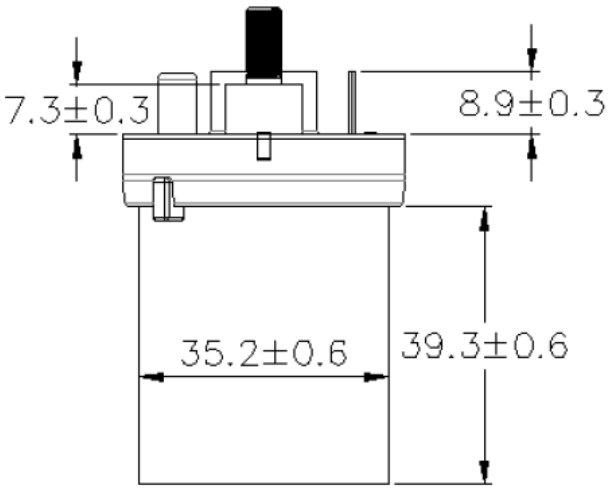
Electrical Endurance

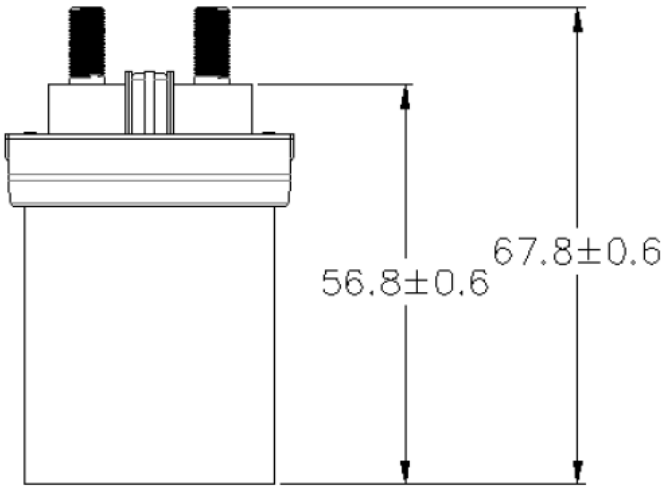


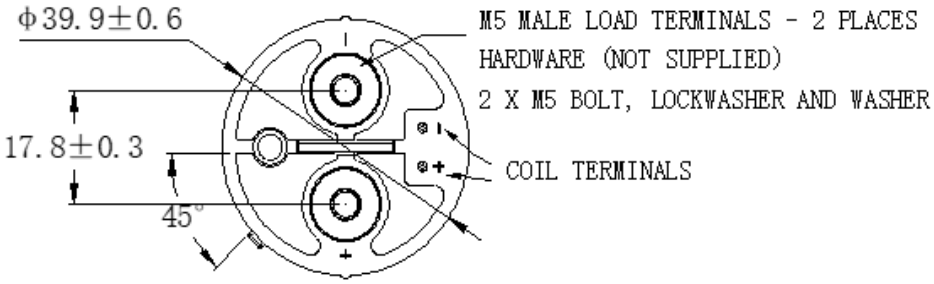
Note：

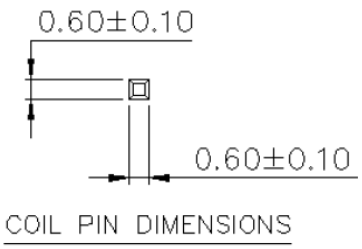
1. W = Coil wire lead 390±10 mm, white, 22AWG.

Outline Dimensions (mm)









Application Notes

1. Be sure to use washers to prevent screws from loosening, all the terminals or copper bars 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.
   - Main Terminals 2.3 – 4.5 N.m
   - Mounting Torque 2.3 N.m Max
2. This is a polar product, please be sure to follow the product label for correct use.
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 resistance of the coil will increase due to the increase of the temperature of the coil, so that the suction voltage of the product 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 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 and lead 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 > 1ms, 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. Drive power must be greater than coil power or it will reduce performance capability.
9. 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 out-going 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 copper bar with an appropriate cross-section to prevent overheating affecting the life of the contactor.
11. Do not use if dropped.
12. It is impossible to determine all the performance parameters of relays in each specific application area, Therefore, customers should choose the products matching them according to their own conditions of use. If in doubt, contact Altran. However, customer will be responsible for what they chosen it is the user's responsibility.
13. Altran reserves the right to make changes. Customers should reconfirm the contents of the specification before first orders and ask for us to supply a new specification if necessary.