

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

"M" Coil economized 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

- ✓ Compact design
- ✓ Auxiliary contacts available
- ✓ Bi-directional options
- ✓ Side Mount available

Certification Information

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



Nomenclature

AREVS150

B

N

Series code:

"AREVS150" = AREVS150

Coil Voltage Code:

"B" = 12VDC

"C" = 24VDC

"E" = 48VDC

"M" = 12 - 24VDC

Options (applied in this order):

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

"A" = With Aux. Contact (SPST-NO)

"N" = Non-Polar Load Terminals

"S" = Side Mount

Product Data Sheet

MAIN CONTACT

Contact Arrangement	1 Form A (SPST-NO)	
Rated Operating Voltage	12-900 VDC	
Continuous (Carry) Current	200A	
Short Time Over Current 50mm ²	300A (2 minutes)	
	400A (30 seconds)	
Limit Break Current	1,500A @320VDC, 1 Cycle	
Dielectric Withstanding Voltage (initial)	Between Contacts to Coil	2,200Vrms, ≤1mA
Insulation Resistance (Initial)	Terminal to Terminal	New: Min 100 M.Ω@500VDC End of Life: 50 M.Ω@500VDC
	Terminals to Coil	
Contact Resistance	≤45mV	

OPERATE / RELEASE TIME

Operate Time Close (includes bounce)	30ms, Max.
Aux. Contact Current, Max.	5ms, Max.
Aux. Contact Resistance, Max.	10ms, Max.

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	
Vibration, Sine, Peak, 20G	80 to 2,000Hz	
Altitude	<4000m	
Weight	0.52Lb (0.240kg)	

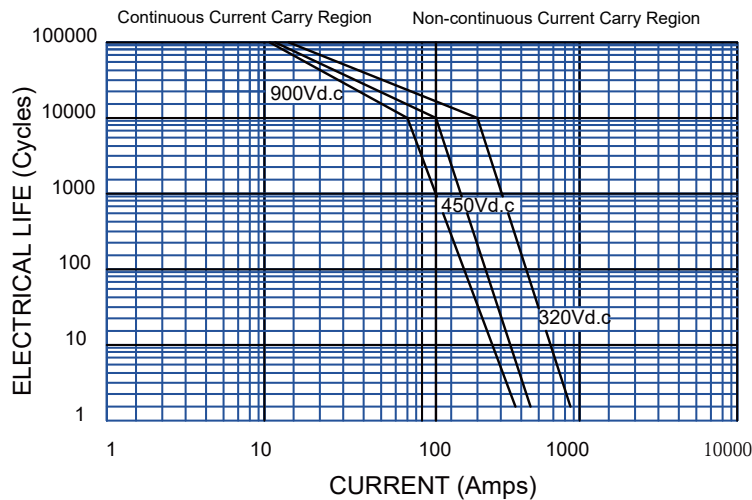
EXPECTED LIFE

Electrical Life	200A/450VDC 10,000 Cycles
Mechanical Life	200,000 Cycles

AUX. CONTACT

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

Make & Break Power Switching Ratings

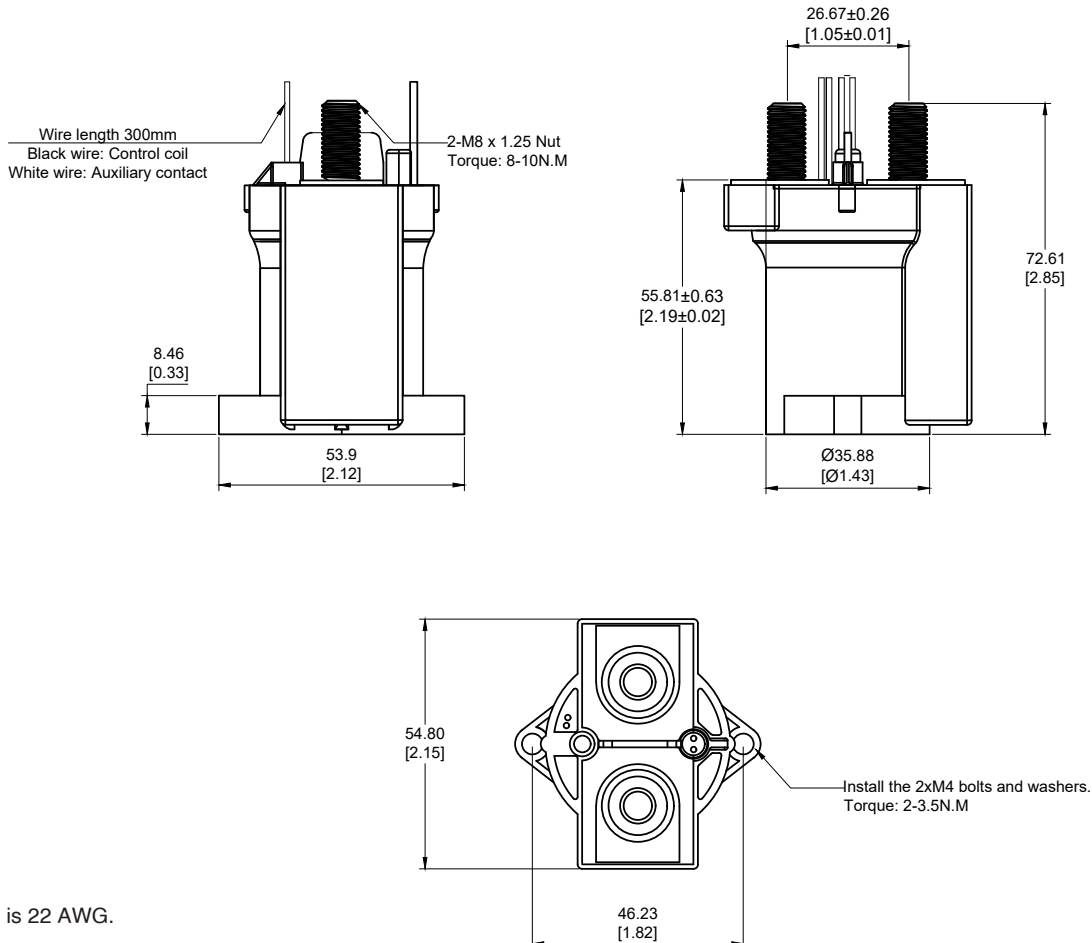


Product Data Sheet

COIL DATA				
Coil Voltage Code	B: Single Coil	C: Single Coil	E: Single Coil	M: PWM
Nominal Voltage	12VDC	24VDC	48VDC	12-24VDC
Max Operate Voltage	16VDC	28VDC	52VDC	36VDC
Pickup voltage (20°C) Max	9VDC	18VDC	36VDC	9VDC
Dropout voltage (20°C) Min	0.8VDC	1.6VDC	3.2VDC	6VDC
Coil current (20°C, @rated voltage)	0.461A	0.250A	0.122A	Inrush: 1.5A
				Holding: 0.18A
Coil power (20°C, @rated voltage)	6W	6W	6W	2W
Pickup voltage (85°C) Max	9.6VDC	19.2VDC	38.4VDC	9.6VDC
Rated coil resistance ±10% (20°C)	26 Ω	96 Ω	392Ω	4.7Ω

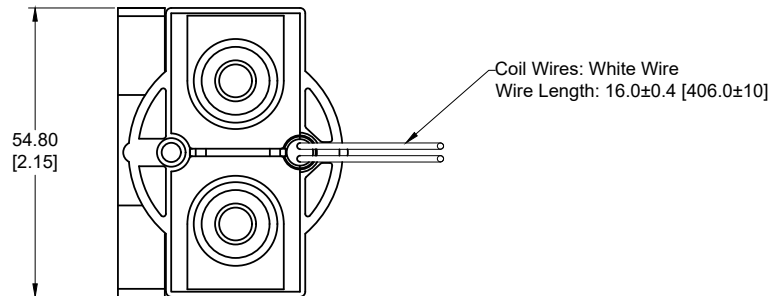
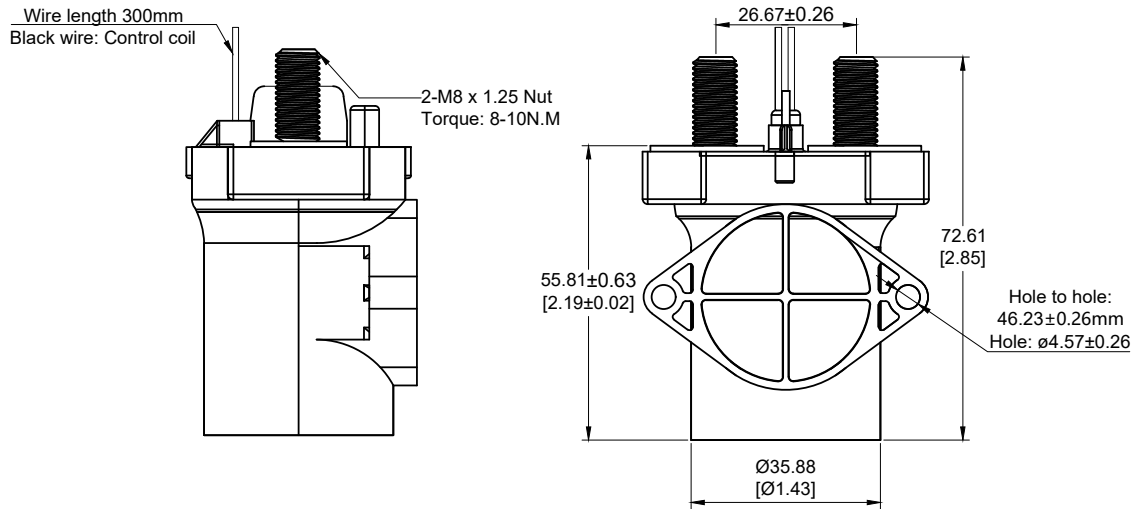
Outline Dimensions : inches (mm)

1. Bottom Mount:



*Note: The wire size is 22 AWG.

2. Side Mount:



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.
 - Contact torque: 30 - 40 lb.in (8 - 10 N.m) Max.
 - Mounting torque: 20 lb.in (2.3 N.m)
2. Products with a coil economizer are already equipped with back EMF circuits, so there is no need to use surge protectors.
3. Avoid installing the contactor in a strong magnetic field environment (near transformers or magnets) and avoid placing the contactor near objects with heat radiation.
4. 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.
5. When the voltage is applied to products with a coil economizer, the circuit will automatically switch to the holding voltage about 100ms later. Please do not repeat the on-off operation during this time period, or the coil economizer of the contactor may be damaged.
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 interlayer short circuit.
7. The rated values in the contact parameters are values for resistive load. When using an inductive load with $L / R > 1\text{ms}$, 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.
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 the excessive contact resistance.
10. The load conductor must have the corresponding current load capacity and heat dissipation capacity (it is recommended to use a copper bar with min 50mm^2), to prevent overheating and affecting the life of the contactor.
11. It is impossible to determine the performance parameters of contactors in each specific application, therefore, customers should choose the products 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.
12. Do not use if dropped.
13. Altran reserves the right to make product changes as needed. Customers should reconfirm the contents of the specification or ask for us to supply a new specification if necessary.