

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: Ceramic



Certification Information

1. Meet RoHS (2011/65/EU)
2. CE Certified
3. UL Approved

Nomenclature

AEVT400

B

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Series code:

“AEVT400” = AEVT400

Coil Voltage Code:

“B” = 12VDC

“C” = 24VDC

Options:

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

“A” = With Aux. Contact (SPST-NO)

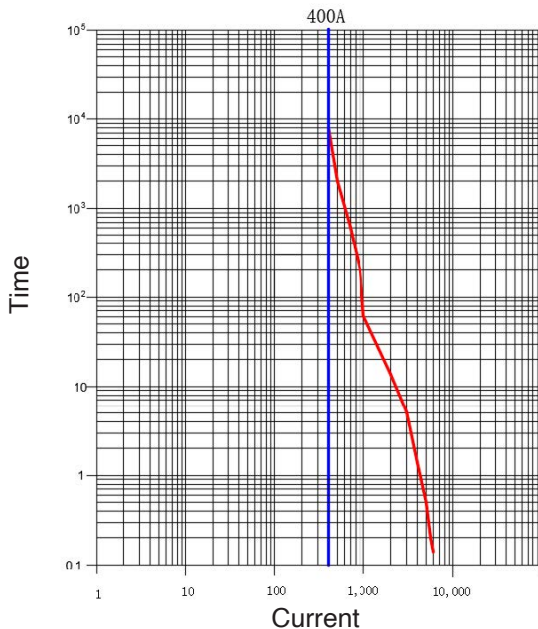
MAIN CONTACT

Contact Arrangement	1 Form X (SPST-NO)	
Rated Operating Voltage	12-1,800VDC	
Continuous (Carry) Current	400A *1	
Short Term Carry Current	450A (6.5 minutes) *2	
Max short circuit current	2,300A @ 450VDC (1 cycle)	
Dielectric Withstanding Voltage (initial)	Between Open Contacts	4,000VDC (leakage $\leq 1\text{mA}$)
	Between Contacts to Coil	2,200Vrms (leakage $\leq 1\text{mA}$)
Insulation Resistance (initial)	Terminal to Terminal	New: Min 100M Ω @500VDC
	Terminals to Coil	
Voltage Drop (@400A)	$\leq 120\text{mV}$	

EXPECTED LIFE

Electrical Endurance (make/break) 400A @ 450VDC	2,000 Cycles
Electrical Endurance (make/break) 400A @ 650VDC	500 Cycles
Mechanical Life	200,000 Cycles

Current Carry Curve



OPERATE / RELEASE TIME

Close (includes bounce)	18ms, Max.
Bounce (after close)	5ms, Max.
Release	15ms, Max.

ENVIRONMENTAL DATA

Shock	Functional	196m/s ² Sine half-wave pulse
	Destructive	490m/s ² Sine half-wave pulse
Vibration, Sine, Peak, 20G		10 to 1,000Hz
Operating Temperature		-40 to +85°C
Noise (@100mm)		70dB(a)
Altitude		<4000m
Weight		1.76 lb (0.8 kg)

COIL DATA

Nominal Voltage	12VDC	24VDC
Pick-up Voltage (25°C)	10VDC	19VDC
Drop-out Voltage (25°C)	4VDC	9VDC
Inrush current @ nominal voltage	2.8A	1.8A
Holding current @ nominal voltage	0.40A	0.11A

AUX. CONTACT

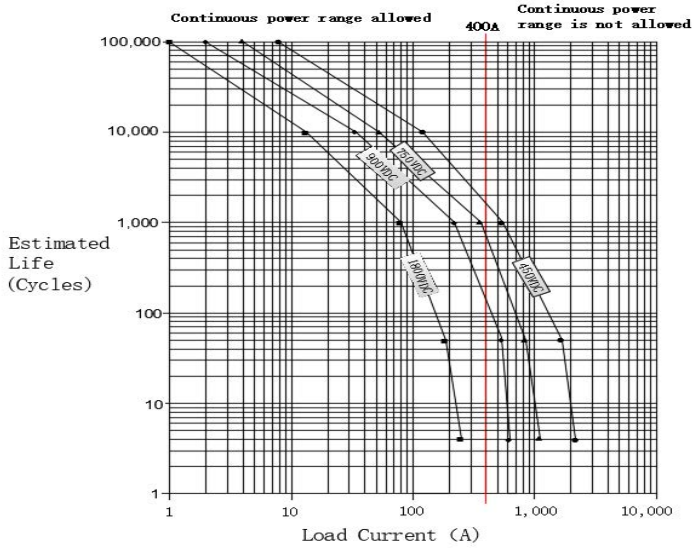
Aux. Contact Arrangement	SPST-NO (1 Form A)
Aux. Contact Rating (Max Wattage)	10W
Aux. Contact Rating (Max Voltage)	100 VDC
Aux. Contact Resistance (Max)	500m Ω

Note:

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

* 2: Ambient Temperature +65°C

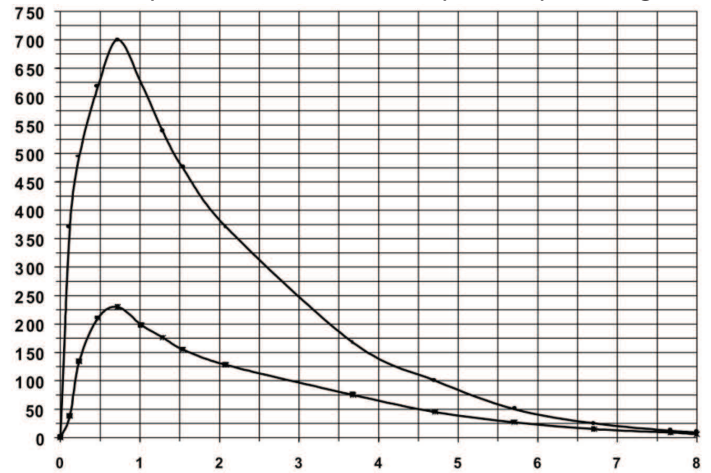
Contact Rating
Estimated Make & Break Resistive Load Ratings



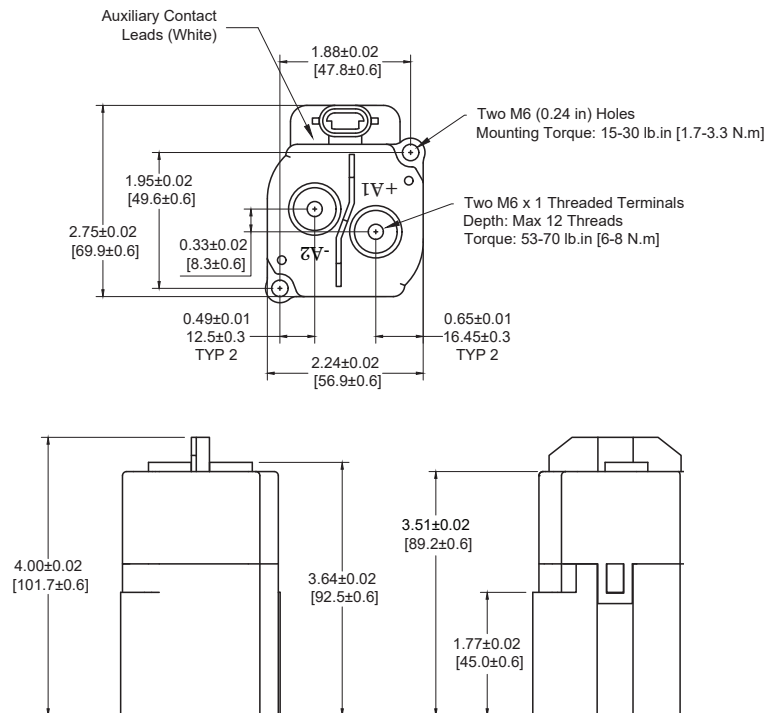
AEVT400 Capacitive Make Test Curves for Pre-Charged Motor Controller

CURRENT-TIME CURVE

Contact operate @70% and 90% capacitive pre-charge



Outline Dimensions (mm):



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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.
 - Contact Terminal Torque: 53 - 70 lb.in (6 - 8 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. There is a reverse surge absorption circuit so that it is not necessary to use a surge protective device.
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 considerations into account and to make sure power shall be cut off within 1 second.
6. Avoid debris or oil contamination of the main terminals to optimize contact and avoid excess heat generation.