

DC contactors

Overview

Engineered to exceed expectations.

With the ever increasing acceptance of environment-friendly technology such as renewable energy and electric vehicles, one product is critical to the safety of the electrical circuit: the DC contactor. With the consumer now adapting to this new green technology, quality and reliability are paramount in today's emerging markets where performance needs to be optimal.

Jennings research has once again enhanced the DC contactor by enabling this new technology to aid in lowering the world's carbon footprint. Its innovative and compact design reduces the weight of the device but still allows for very high mechanical life. Minimizing power consumption creates higher power efficiencies for all controlling circuitry, reducing load consumption. All of this allows the Jennings DC contactor to operate in critical circuits and applications with the highest reliability and performance.

The contactor's rugged design and their total value proposition as a small, lightweight device with high voltage and current ratings allows for endless applications: from cars, trucks and trains using DC power systems to energy-saving devices like solar inverters and DC charge stations.



JEV100-24S-A



JEV250-24B-A



JEV400-24S-A



JEV400-24SC



JEVB500-24S-A



DC contactors

JEV100 series



JEV100-24S-A

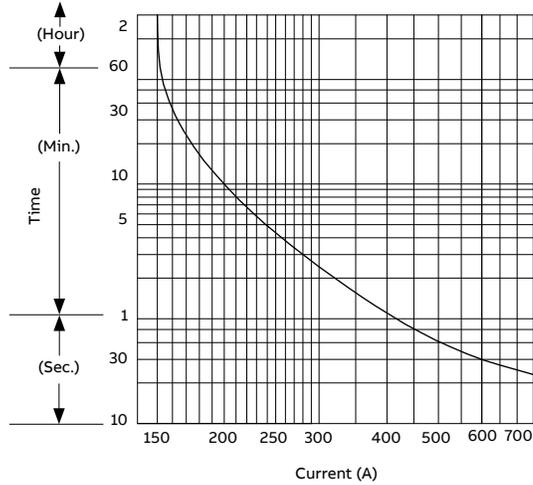
- 100 Amp current rating
- RoHS compliant
- Hermetically sealed, intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coils or contacts during long periods of nonoperation
- Rugged, compact contactor for switching voltages from 50 VDC to 1000+ VDC
- High-efficiency DC coils — very low 12 and 24 VDC continuous power coils with no EMI emissions or cross-talk on your system control power

Specifications		
Contact ratings		
Contact arrangement	1 Form A, SPST-NO	
Max. continuous current	150 A	
Max. switching current	125 A	
Contact rating switching voltages	12–1200 VDC	
Max. switching capacity @ max. voltage	20 A @ 1200 VDC	
General aux. contact current, max.	2 A 30 VDC/3 A 125 VAC	
General aux. contact current, min.	100 mA 8 VDC	
Gold alloy aux. contact current, max.	0.1 A 30 VDC/0.1 A 30 VAC	
Gold alloy aux. contact current, min.	1 mA 5 VDC/1 mA 5 VAC	
Operating time at nominal voltage	20ms	
Release time at nominal voltage	5ms	
Coil ratings		
Nom. voltage	12 VDC	24 VDC
Nominal coil current (mA)	480	245
Coil resistance (Ω)	25	110
Pick-up voltage (V) max.	75%	75%
Drop-out voltage (V) min.	10%	10%
Max. voltage (V)	130%	130%
Coil power (W) dissipation	5.6–5.9	5.6–5.9
Expected life		
Mechanical life (min.)	2,000,000 operations	
Electrical life (min.)	10,000 @ 450 VDC, 125 A; 100,000 @ 250 VDC, 125 A	
Other		
Weight	300g (0.66 lb.)	
Operating and storage temperature	-40° F ~ 185° F (-40° C ~ 85° C)	
Relative humidity	5–85%	

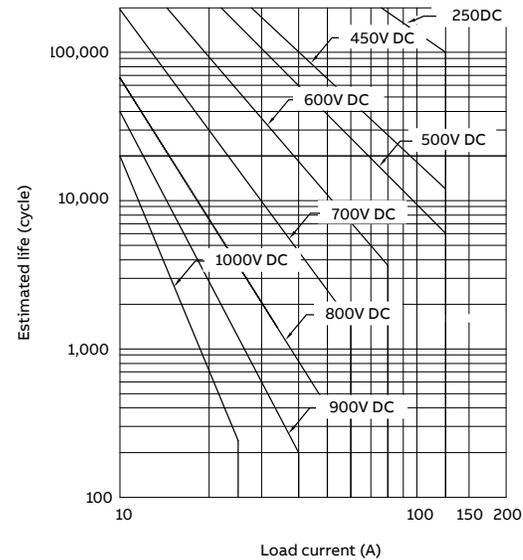
DC contactors

JEV100 series

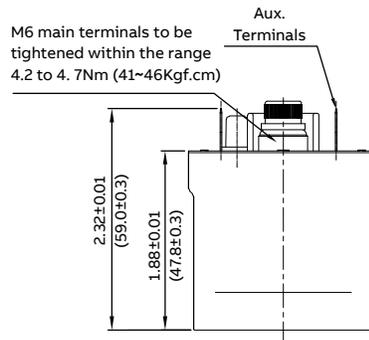
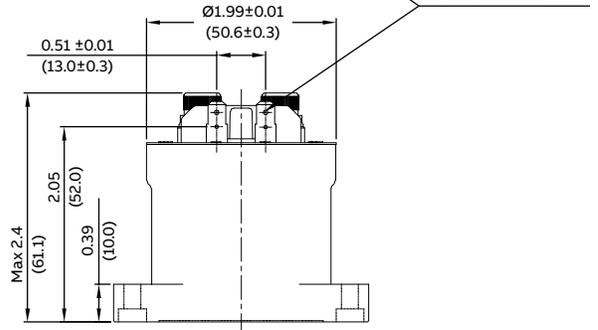
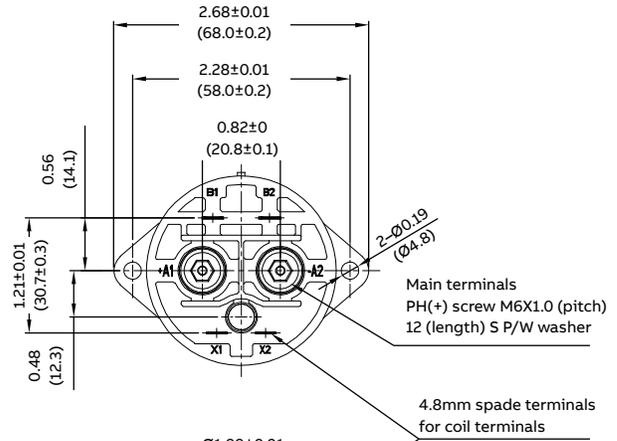
Continuous carrying 150 A



Make and break switching rating (resistive load)

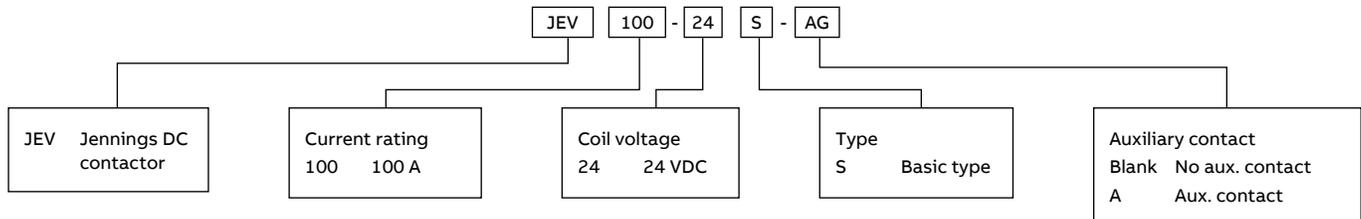


Illustrations



Measurements are in inches (mm)

Catalog number configurator



Example: Catalog No. JEV10024S-A is a 100 amp, basic type contactor with 24 volt coil and auxiliary contact.

DC contactors

JEV250 series



JEV250-24B-A

- 250 Amp current rating
- UL508 Listed for the U.S. and Canada
- RoHS compliant
- Hermetically sealed, intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coils or contacts during long periods of nonoperation
- Rugged, compact contactor for switching voltages from 50 VDC to 1000+ VDC
- High-efficiency DC coils — very low 12 and 24 VDC continuous power coils with no EMI emissions or cross-talk on your system control power

Specifications

Contact ratings

Contact arrangement	1 Form A, SPST-NO
Max. continuous current	500 A
Max. switching current	250 A
Contact rating switching voltages	12–1200 VDC
Max. switching capacity @ max. voltage	200 A @ 900 VDC
General aux. contact current, max.	2 A 30 VDC/3 A 125 VAC
General aux. contact current, min.	100 mA 8 VDC
Gold alloy aux. contact current, max.	0.1 A 30 VDC/0.1 A 30 VAC
Gold alloy aux. contact current, min.	1 mA 5 VDC/1 mA 5 VAC
Operating time at nominal voltage	30ms
Release time at nominal voltage	10ms

Coil ratings

Nom. voltage	12	24
Inrush coil current 100ms (max.)	2.4 A	1.3 A
Holding coil current (mA)	0.29 A	0.17 A
Pick-up voltage (V) max.	9 VDC	18 VDC
Drop-out voltage (V) min.	6 VDC	12 VDC
Holding voltage (V) min.	7.5 VDC	13.5 VDC
Max. voltage (V)	18 VDC	32 VDC

Expected life

Mechanical life (min.)	2,000,000 operations
Electrical life (min.)	7,000 @ 450 VDC, 250 A; 3,000 @ 750 VDC, 250 A

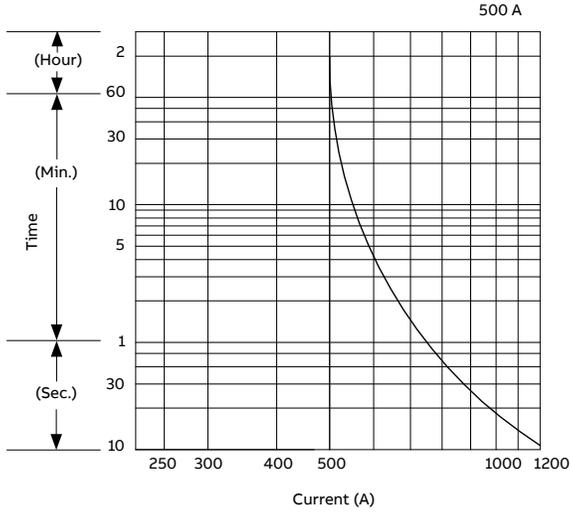
Other

Weight	460g (0.93 lb.)
Operating and storage temperature	-40° F ~ 185° F (-40° C ~ 85° C)
Relative humidity	5–85%

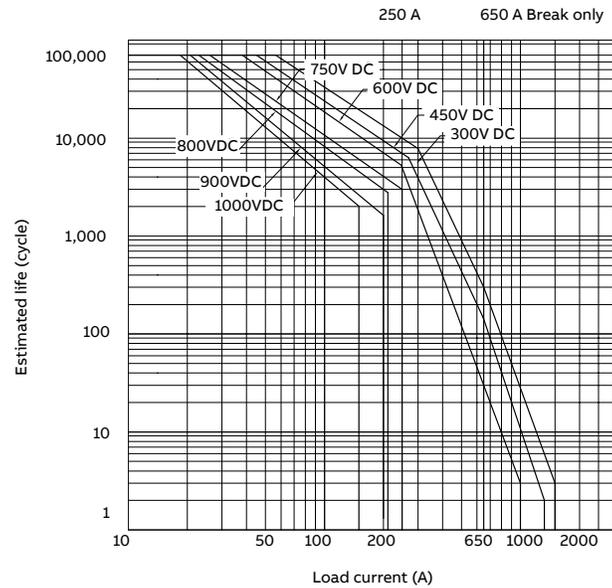
DC contactors

JEV250 series

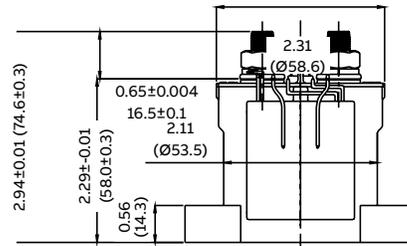
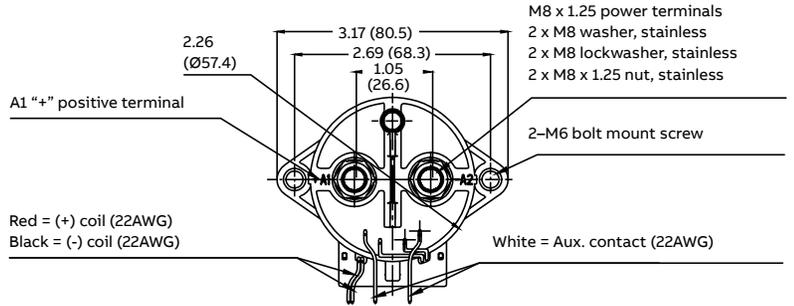
Continuous carrying



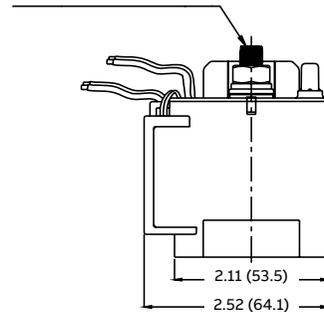
Make and break switching rating (resistive load)



Illustrations

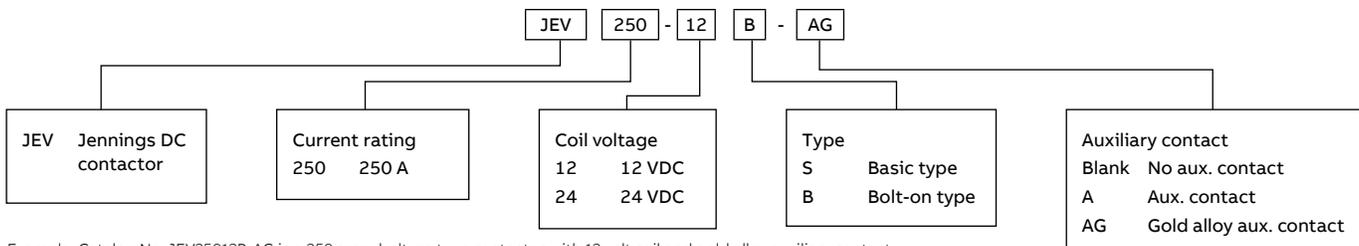


M6 main terminals to be tightened within the range 8.8~11Nm (80~100kgf.cm)



Measurements are in inches (mm)

Catalog number configurator



Example: Catalog No. JEV25012B-AG is a 250 amp, bolt-on type contactor with 12 volt coil and gold alloy auxiliary contact.

DC contactors

JEV400 series



JEV400-24S-A



JEV400-24SC

- 400 Amp current rating
- UL508 Listed for the U.S. and Canada
- RoHS compliant
- Hermetically sealed, intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coils or contacts during long periods of nonoperation
- Rugged, compact contactor for switching voltages from 50 VDC to 1000+ VDC
- High-efficiency DC coils — very low 12 and 24 VDC continuous power coils with no EMI emissions or cross-talk on your system control power

Specifications

Contact ratings

Contact arrangement	1 Form A, SPST-NO or 1 Form B, SPST-NC
Max. continuous current	500 A
Max. switching current	400 A @ 450 VDC (UL) (NO version only) 80 A @ 1200 VDC (UL) 90 A @ 1000 VDC (UL) 100 A @ 1000 VDC (CE) (NO version only)
Contact rating switching voltages	12–1500 VDC
Max. switching capacity @ max. voltage	200 A @ 1000 VDC
General aux. contact current, max.	2 A 30 VDC/3 A 125 VAC
General aux. contact current, min.	100 mA 8 VDC
Gold alloy aux. contact current, max.	0.1 A 30 VDC/0.1 A 30 VAC
Gold alloy aux. contact current, min.	1 mA 5 VDC/1 mA 5 VAC
Operating time at nominal voltage	30ms
Release time at nominal voltage	10ms

Coil ratings

	12-NO	24-NO	12-NC	24-NC
Nom. voltage (V)	12-NO	24-NO	12-NC	24-NC
Inrush coil current	1.2 A	0.6 A	3.8 A	2.7 A
Holding coil current	0.32 A	0.16 A	0.3 A	0.3 A
Pick-up voltage (V) max.	9 VDC	18 VDC	9 VDC	18 VDC
Drop-out voltage (V) min.	6 VDC	12 VDC	6 VDC	12 VDC
Holding voltage (V) min.	7.5 VDC	13.5 VDC	7.5 VDC	13.5 VDC
Max. voltage (V)	18 VDC	32 VDC	18 VDC	32 VDC

Expected life

Mechanical life (min.)	2,000,000 operations
Electrical life (min.)	3,000 @ 450 VDC, 400 A; 100,000 @ 250 VDC, 400 A; 10,000 @ 1,000 VDC, 100 A

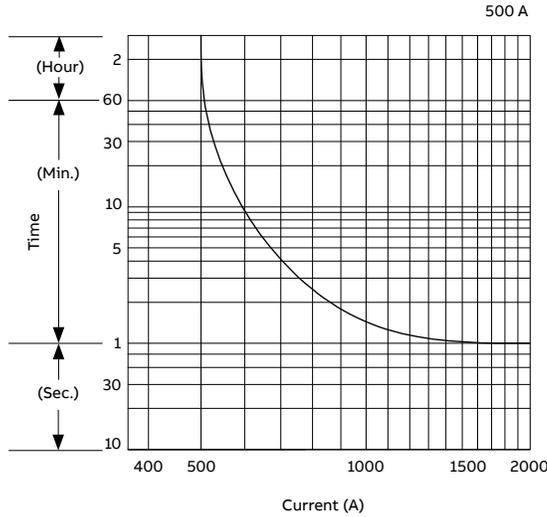
Other

Weight	660g (1.45 lb.)
Operating and storage temperature	-40° F ~ 185° F (-40° C ~ 85° C)
Relative humidity	5–85%

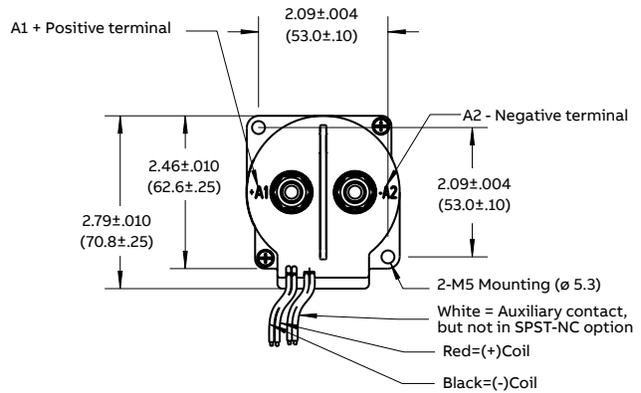
DC contactors

JEV400 series

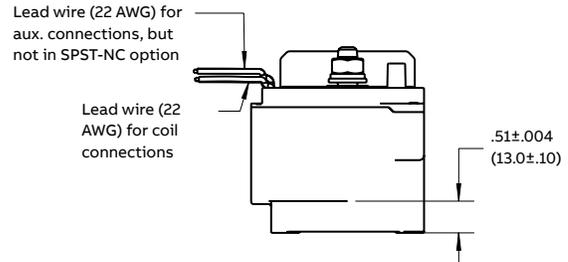
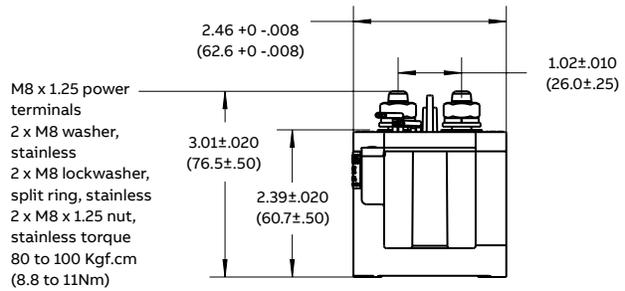
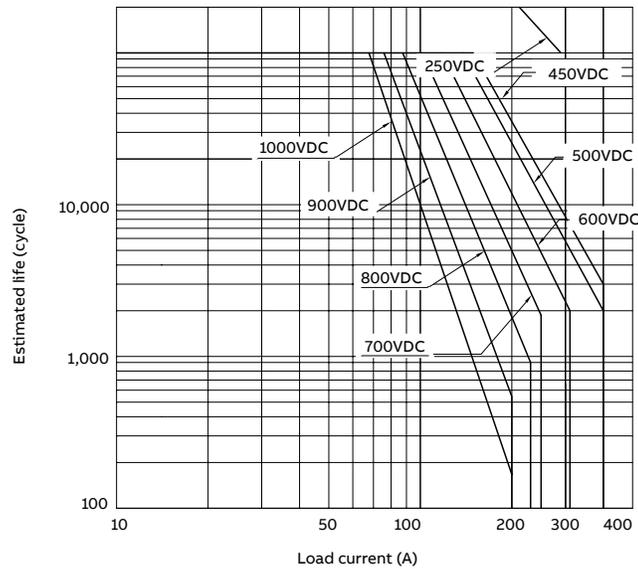
Continuous carrying



Illustrations

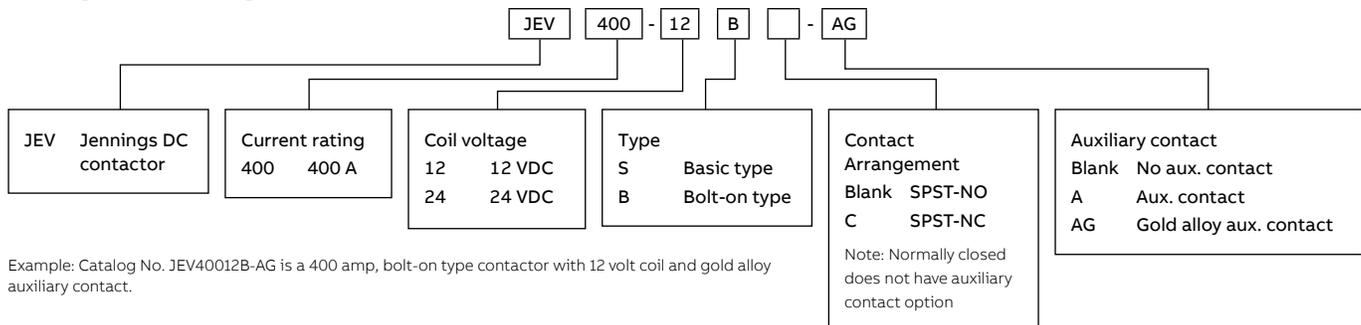


Make and break switching rating (resistive load)



Measurements are in inches (mm)

Catalog number configurator



Example: Catalog No. JEV40012B-AG is a 400 amp, bolt-on type contactor with 12 volt coil and gold alloy auxiliary contact.

DC contactors

JEVB500 series



JEVB500-24S-A

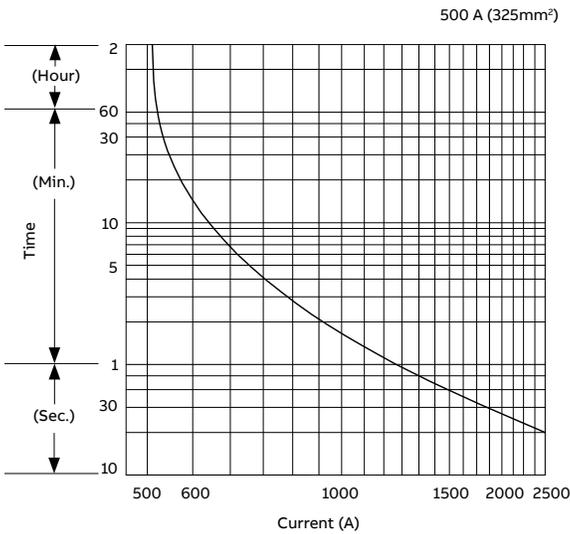
- 500 Amp current rating
- Bidirectional switching device
- A simple solution for applications that require charging and discharging because it safely cuts off the current flowing through the main contact in the opposite direction
- UL508 Listed for the U.S. and Canada
- RoHS compliant
- Hermetically sealed, intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coils or contacts during long periods of nonoperation
- Rugged, compact contactor for switching voltages from 50 VDC to 1000+ VDC
- High-efficiency DC coils — very low 12 and 24 VDC continuous power coils with no EMI emissions or cross-talk on your system control power

Specifications	
Contact ratings	
Contact arrangement	1 Form A, SPST-NO
Max. continuous current	500 A
Max. switching current	500 A @ 750 VDC (UL) 300 A @ 1000 VDC (UL) 100 A @ 1500 VDC (UL)
Contact rating switching voltages	12–1500 VDC/1000 VAC
Max. switching capacity @ max. voltage	300 A @ 1500 VDC
General aux. contact current, max.	2 A 30 VDC/3 A 125 VAC
General aux. contact current, min.	100 mA 8 VDC
Gold alloy aux. contact current, max.	0.1 A 30 VDC/0.1 A 30 VAC
Gold alloy aux. contact current, min.	1 mA 5 VDC/1 mA 5 VAC
Operating time at nominal voltage	40ms
Release time at nominal voltage	10ms
Coil ratings	
Nom. voltage	12 24
Inrush coil current 100ms (max.)	1.4 A 1.1 A
Holding coil current (mA)	0.32 A 0.16 A
Pick-up voltage (V) max.	9 VDC 18 VDC
Drop-out voltage (V) min.	6 VDC 12 VDC
Holding voltage (V) min.	7.5 VDC 13.5 VDC
Max. voltage (V)	18 VDC 32 VDC
Expected life	
Mechanical life (min.)	2,000,000 operations
Electrical life (min.)	1,000 @ 750 VDC (+), (-) 500A 1,000 @ 1,000 VDC (+), (-) 300A 1,000 @ 1,500 VDC (+), (-) 100A
Other	
Weight	980g (2.16 lb.)
Operating and storage temperature	-40° F ~ 185° F (-40° C ~ 85° C)
Relative humidity	5–85%

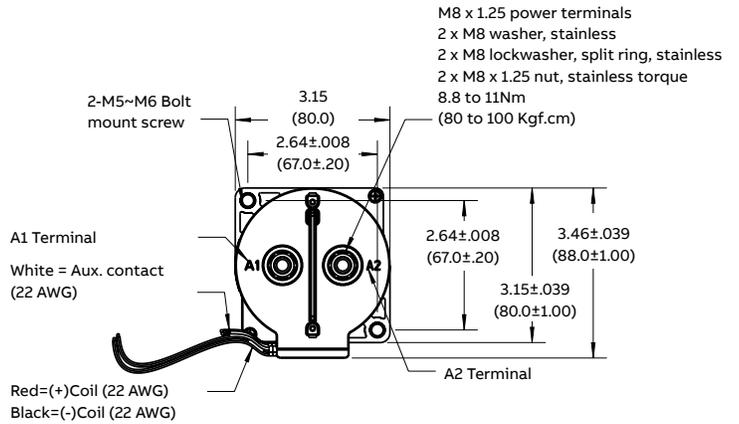
DC contactors

JEBV500 series

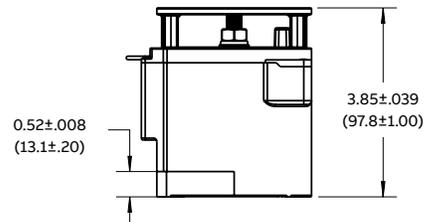
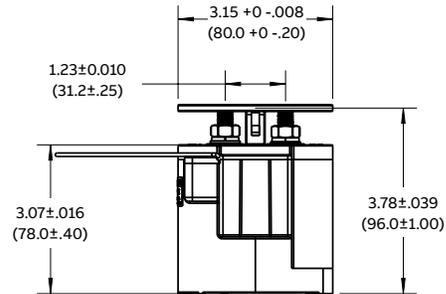
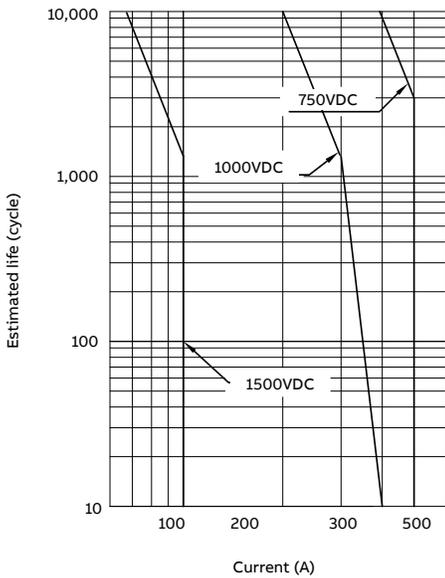
Continuous carrying



Illustrations

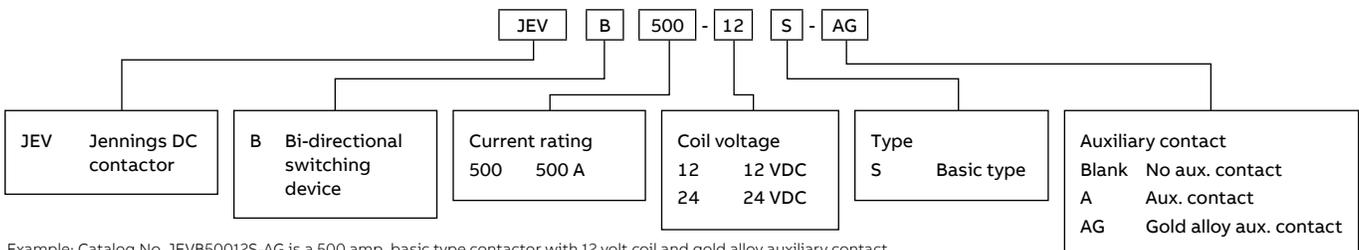


Make and break switching rating (resistive load)



Measurements are in inches (mm)

Catalog number configurator



Example: Catalog No. JEBV50012S-AG is a 500 amp, basic type contactor with 12 volt coil and gold alloy auxiliary contact.