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PRODUCT BROCHURE

DC contactors

JENNINGS TECHNOLOGY®

Jennings Technology®
DC contactors

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

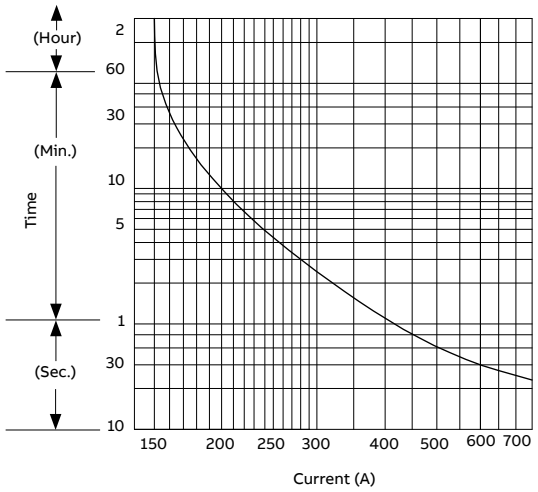
JEV100 series DC contactors

JEV100-24S-A

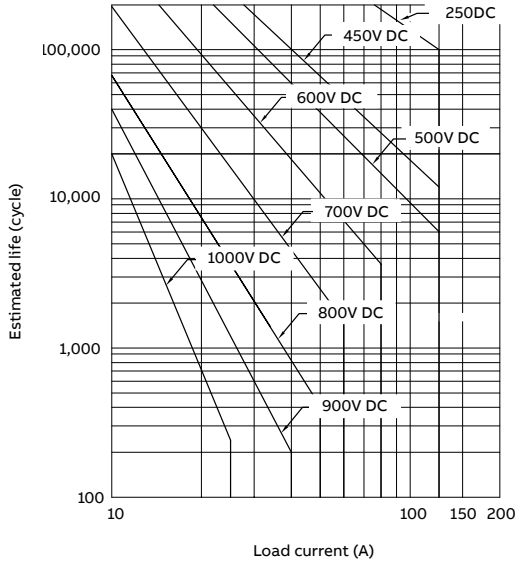
- 100 Amp current rating
- RoHS compliant
- Hermetically sealed, intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coils or contacts during long periods of nonoperation
- Rugged, compact contactor for switching voltages from 50 VDC to 1000+ VDC
- High-efficiency 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		150A
Max. switching current		125A
Contact rating switching voltages		12–1200 VDC
Max. switching capacity @ max. voltage		20A @ 1200 VDC
General aux. contact current, max.		2A 30 VDC/3A 125 VAC
General aux. contact current, min.		100mA 8 VDC
Gold alloy aux. contact current, max.		0.1A 30 VDC/0.1A 30 VAC
Gold alloy aux. contact current, min.		1mA 5 VDC/1mA 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, 125A; 100,000 @ 250 VDC, 125A
Other		
Weight		300g (0.66 lb.)
Operating and storage temperature		-40° F ~ 185° F (-40° C ~ 85° C)
Relative humidity		5–85%

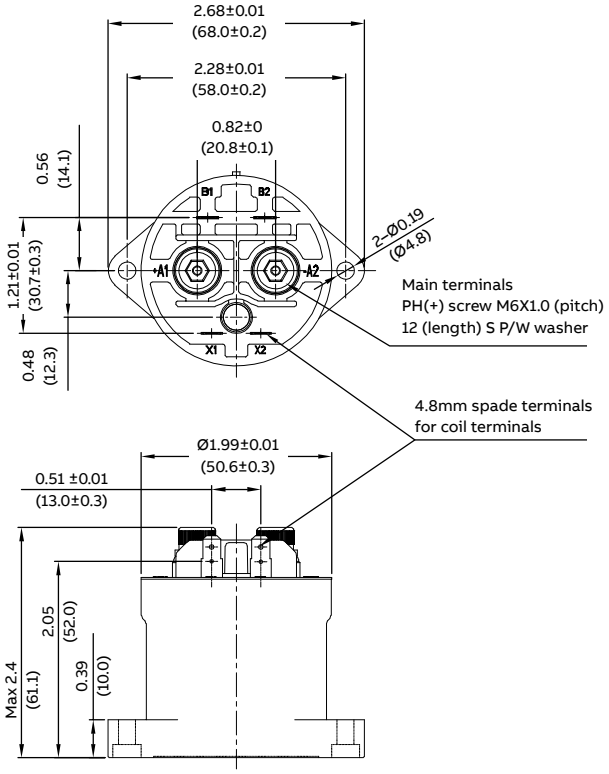
Continuous carrying 150A

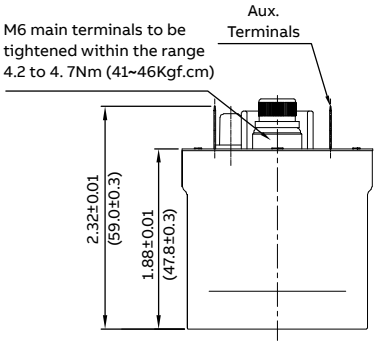


Make and break switching rating (resistive load)



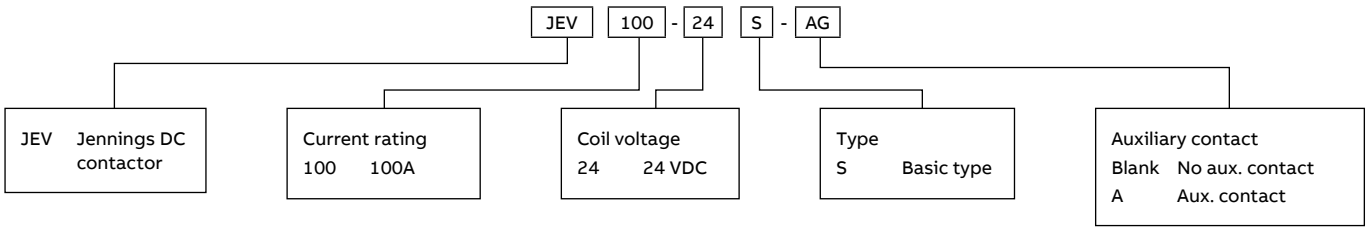
Illustrations





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.

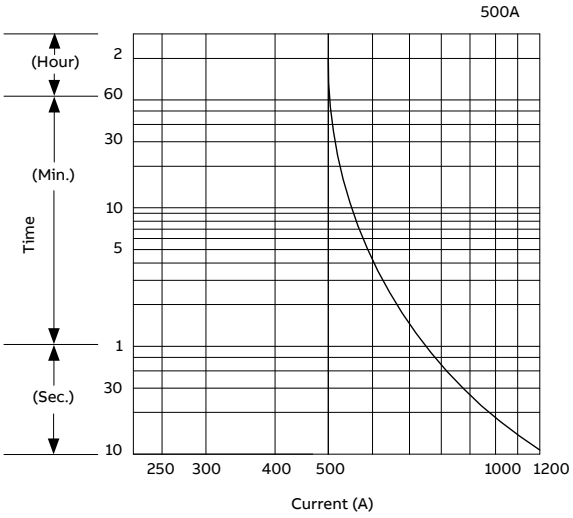
JEV250 series DC contactors

JEV250-24B-A

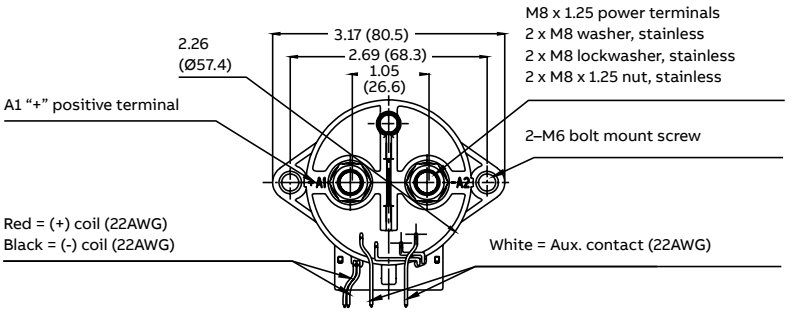
- 250 Amp current rating
- UL508 Listed for the U.S. and Canada
- RoHS compliant
- Hermetically sealed, intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coils or contacts during long periods of nonoperation
- Rugged, compact contactor for switching voltages 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

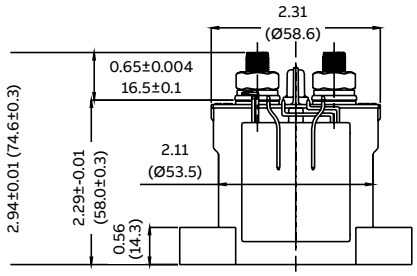
Specifications		
Contact ratings		
Contact arrangement	1 Form A, SPST-NO	
Max. continuous current	500A	
Max. switching current	250A	
Contact rating switching voltages	12–1200 VDC	
Max. switching capacity @ max. voltage	200A @ 900VDC	
General aux. contact current, max.	2A 30 VDC/3A 125 VAC	
General aux. contact current, min.	100mA 8 VDC	
Gold alloy aux. contact current, max.	0.1A 30 VDC/0.1A 30 VAC	
Gold alloy aux. contact current, min.	1mA 5 VDC/1mA 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.)	2.4A	1.3A
Holding coil current (mA)	0.29A	0.17A
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, 250A; 3,000 @ 750 VDC, 250A	
Other		
Weight	460g (0.93 lb.)	
Operating and storage temperature	-40° F ~ 185° F (-40° C ~ 85° C)	
Relative humidity	5–85%	

Continuous carrying

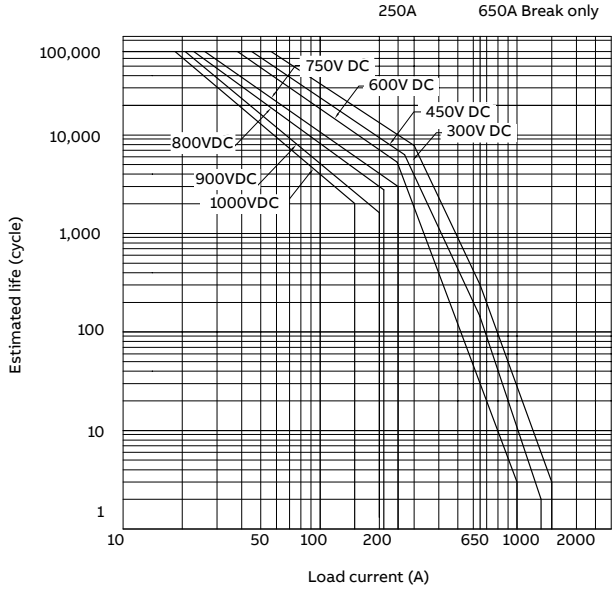


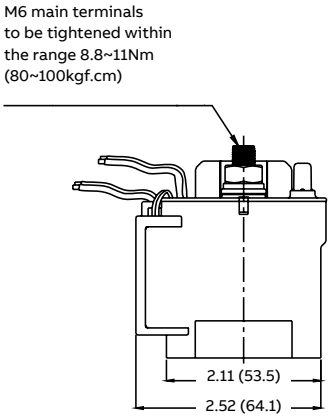
Illustrations





Make and break switching rating (resistive load)





Measurements are in inches (mm)

Catalog number configurator

JEV | 250 | - | 12 | B | - | AG

JEV	Jennings DC contactor	
Current rating		
250	250A	
Coil voltage		
12	12 VDC	
24	24 VDC	
Type		
S	Basic type	
B	Bolt-on type	
Auxiliary contact		
Blank	No aux. contact	
A	Aux. contact	
AG	Gold alloy aux. contact	

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

JEV400 series DC contactors

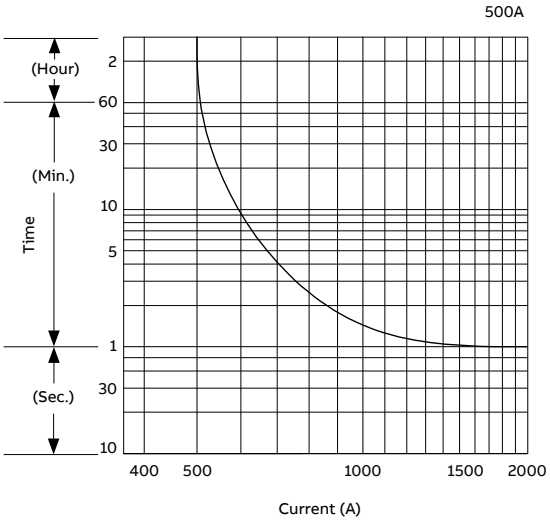
JEV400-24S-A

JEV400-24SC

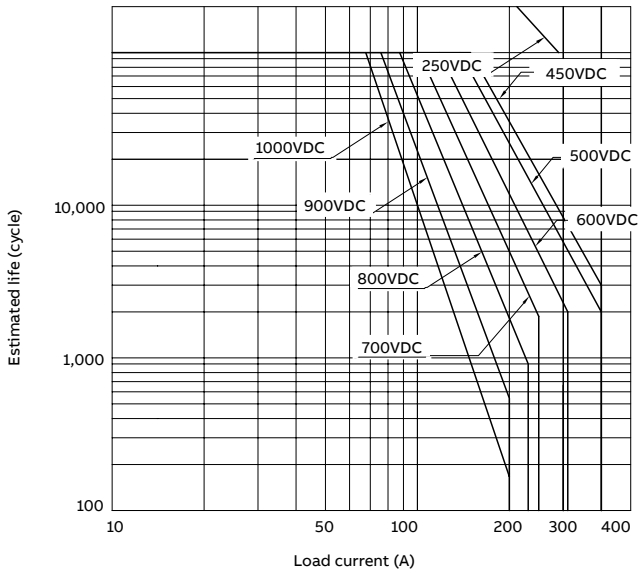
- 400 Amp current rating
- UL508 Listed for the U.S. and Canada
- RoHS compliant
- Hermetically sealed, intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coils or contacts during long periods of nonoperation
- Rugged, compact contactor for switching voltages 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				500A
Max. switching current				400A @ 450 VDC (UL) (NO version only) 80A @ 1200 VDC (UL) 90A @ 1000 VDC (UL) 100A @ 1000 VDC (CE) (NO version only)
Contact rating switching voltages				12–1500 VDC
Max. switching capacity @ max. voltage				200A @ 1000 VDC
General aux. contact current, max.				2A 30 VDC/3A 125 VAC
General aux. contact current, min.				100mA 8 VDC
Gold alloy aux. contact current, max.				0.1A 30 VDC/0.1A 30 VAC
Gold alloy aux. contact current, min.				1mA 5 VDC/1mA 5 VAC
Operating time at nominal voltage				30ms
Release time at nominal voltage				10ms
Coil ratings				
Nom. voltage (V)	12-NO	24-NO	12-NC	24-NC
Inrush coil current	1.2A	0.6A	3.8A	2.7A
Holding coil current	0.32A	0.16A	0.3A	0.3A
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, 400A; 100,000 @ 250 VDC, 400A; 10,000 @ 1,000 VDC, 100A
Other				
Weight				660g (1.45 lb.)
Operating and storage temperature				-40° F ~ 185° F (-40° C ~ 85° C)
Relative humidity				5–85%

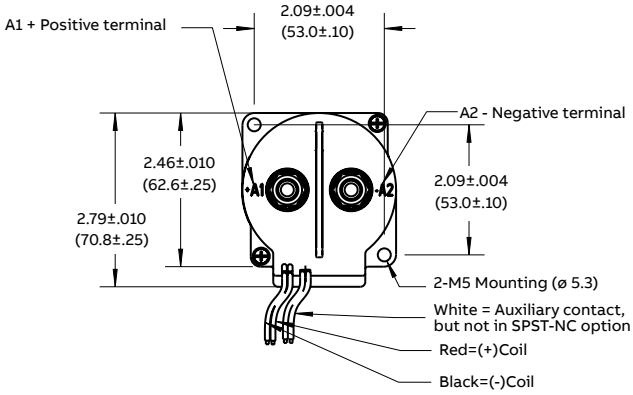
Continuous carrying

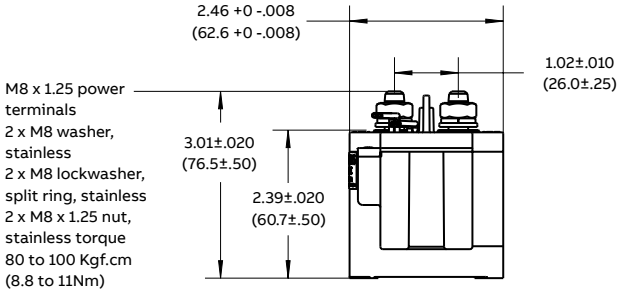


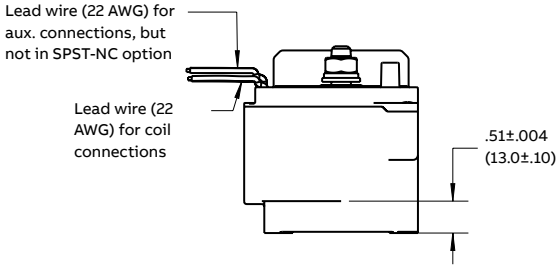
Make and break switching rating (resistive load)



Illustrations

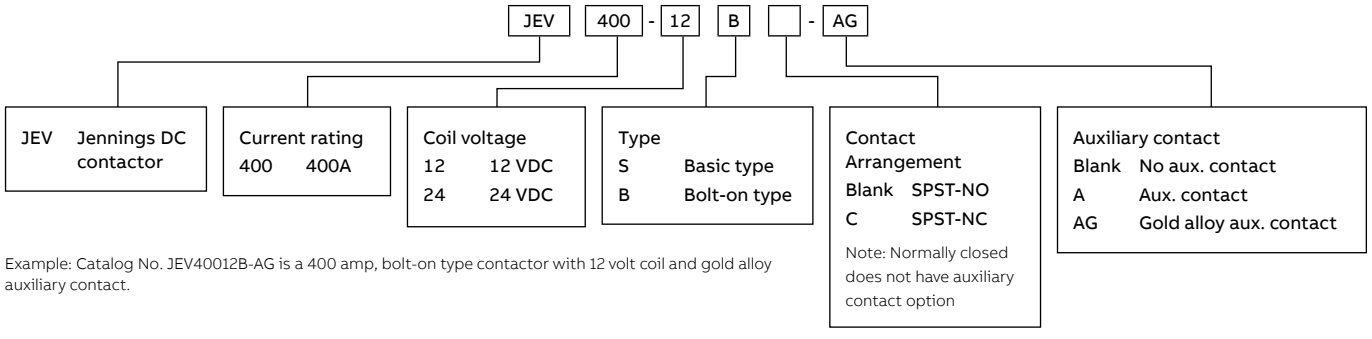






Measurements are in inches (mm)

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.

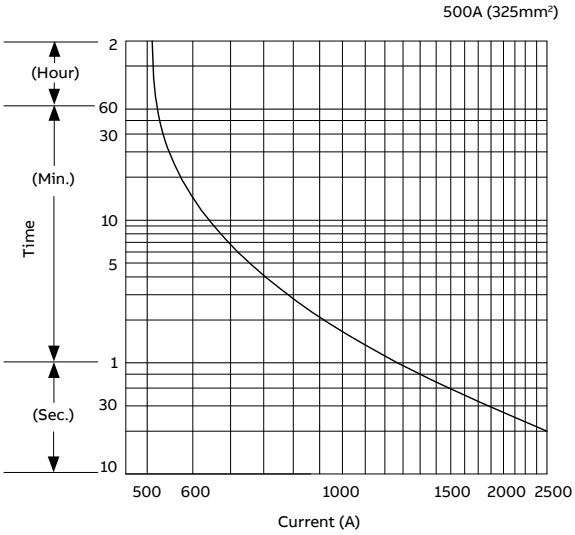
JEVB500 series DC contactors

JEVB500-24S-A

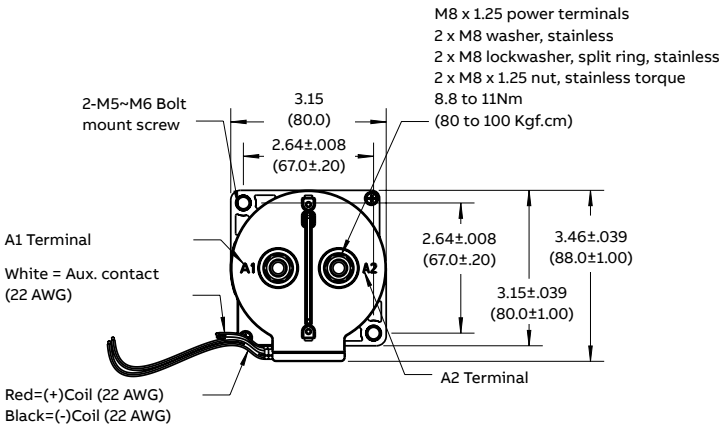
- 500 Amp current rating
- Bidirectional switching device
- A simple solution for applications that require charging and discharging because it safely cuts off the current flowing through the main contact in the opposite direction
- UL508 Listed for the U.S. and Canada
- RoHS compliant
- Hermetically 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	500A	
Max. switching current	500A @ 750 VDC (UL) 300A @ 1000 VDC (UL) 100A @ 1500 VDC (UL)	
Contact rating switching voltages	12–1500 VDC/1000 VAC	
Max. switching capacity @ max. voltage	300A @ 1500 VDC	
General aux. contact current, max.	2A 30 VDC/3A 125 VAC	
General aux. contact current, min.	100mA 8 VDC	
Gold alloy aux. contact current, max.	0.1A 30 VDC/0.1A 30 VAC	
Gold alloy aux. contact current, min.	1mA 5 VDC/1mA 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.)	1.4A	1.1A
Holding coil current (mA)	0.32A	0.16A
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%	

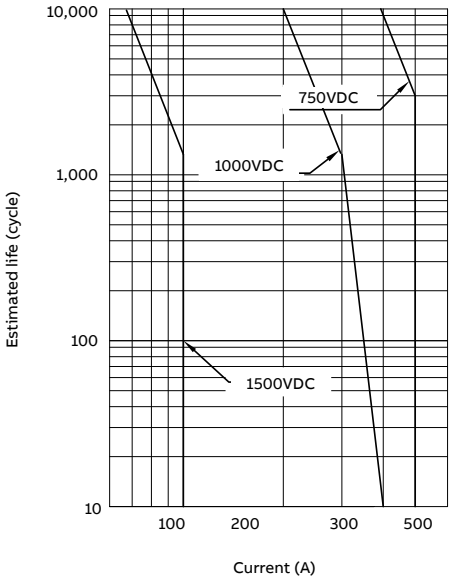
Continuous carrying

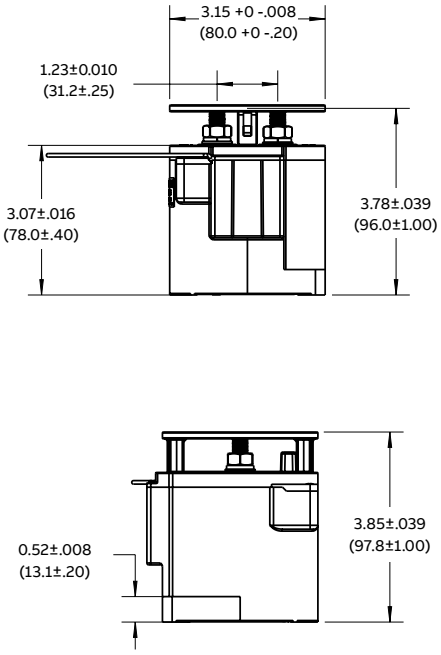


Illustrations



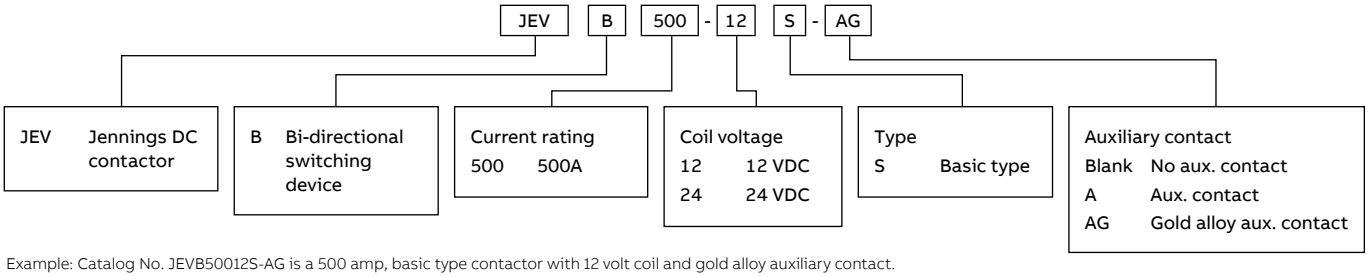
Make and break switching rating (resistive load)





Measurements are in inches (mm)

Catalog number configurator



Example: Catalog No. JEVB50012S-AG is a 500 amp, basic type contactor with 12 volt coil and gold alloy auxiliary contact.

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All Thomas & Betts products meet or exceed applicable industry specifications or codes which are detailed in the appropriate T&B product literature.

IEEE ANSI IEC

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