

## KILOVAC CAP202 Series Aerospace Commercial Contactor with 2 Form X (DPST-NO), Contacts Rated up to 300 Amps, 12-600 Vdc

### Product Facts

- Hermetically sealed
- Up to 4X SPDT auxiliary switch outputs: 30 Vdc/2A max switching or 6V/5mA min. signal
- Integrated coil economizer with coil suppression
- EMC compliant - no radiated coil emission
- Bidirectional switching - main contacts not polarity sensitive
- Mount in any orientation - not position sensitive



### Description

2-pole single throw hermetically sealed DC contactor; 12-900 Vdc/350A per pole

Not position sensitive

Bi-directional switching

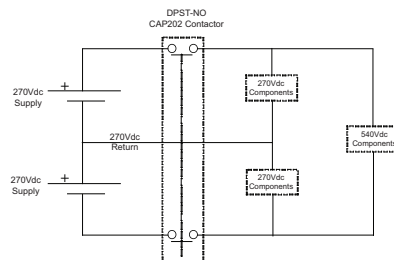
### Applications

High Voltage DC Converter Systems (ref schematic below)

Test Equipment

Power Distribution

Power Motion Control



### Electrical

Compact epoxy-sealed resin enclosure occupies only about 4 in<sup>3</sup> (65.5 cm<sup>3</sup>)

Contact arrangement: DPST-No (2 form X)

Voltage rating: 12-900 Vdc (main contacts); 30 Vdc (auxiliary)

Mechanical life: 100,000 cycles

### Physical or Other Properties

Weight: 0.79 Kg

Hermetically sealed

Safe for harsh/corrosive environments

No contacts oxidation over periods on non-use

Number of SPDT Auxiliary Contacts per Contactor Type:  
CAP202AS — None  
CAP202MS — Two  
CAP202FS — Four

### Performance Data

#### Physical Data

**Contact Arrangement** — Power Contacts — DPST-NO (2 Form X)  
Auxiliary Switches — SPDT (form C)

**Dimensions** — See drawings on next page

**Weight** — 0.79 Kg (1.74 lb.)

#### Electrical Data

**Voltage Rating** — Main Contacts — 12-900Vdc  
Auxiliary Contacts — 30Vdc

**Current Rating** — Main Contacts<sup>1</sup> — 350A/pole  
Auxiliary Contacts — 3A

**Contact Resistance** — Main Contacts — (2)  
100 mΩ max @ 1 amp  
0.3 mΩ max. @ 200A after 3 mins.  
Auxiliary Contacts — 200 mΩ max

#### Hot Switching Performance @ ± 400 Vdc (3) —

100A make/break — 10,000 cycles  
250A make/break — 2,500 cycles  
700A break only — 10 cycles

#### Hot Switching Performance @ ± 270 Vdc (4) —

100A make/break — 40,000 cycles  
250A make/break — 7,500 cycles  
2000A break only @ ±370Vdc (5) — 2 cycles

#### Maximum Make Current — 700A

**Dielectric Withstand Voltage over Life** — Terminal to Terminal/Terminals to Coil — 1mA max @ 2,200Vrms

**Insulation Resistance over Life** — Terminal to Terminal/Terminals to Coil — 50mΩ min @ 500Vdc

**Mechanical Life** — 100,000 cycles

#### Environmental Data

**Shock, 11ms 1/2 sine (operating)** — 20G peak

**Sine Vibration, 10G peak** — 55-2,000 Hz.

#### Random Vibration, 14 Grms —

15	100	300	900	2000 Hz
.01	.01	.2	.2	.01 G2/Hz

**Operating Temperature Range** — -55°C to +85°C

#### Notes:

<sup>1</sup> Using 4/0 conductor. Current rating is affected by attached conductor size and design. Keep terminals below 150°C max. continuous, 175°C for 2 hours max. and 200°C for 1 minute max. For mounting large conductors, request terminal adapter PN 3-1618396-7.

<sup>2</sup> Operational contact resistance is measured by millivolt drop across contacts at a > 100A current. Initial contact resistance may be higher than 0.3mΩ, but will drop below within 30 mins. max.

<sup>3</sup> Voltage applied to each contact set separately.

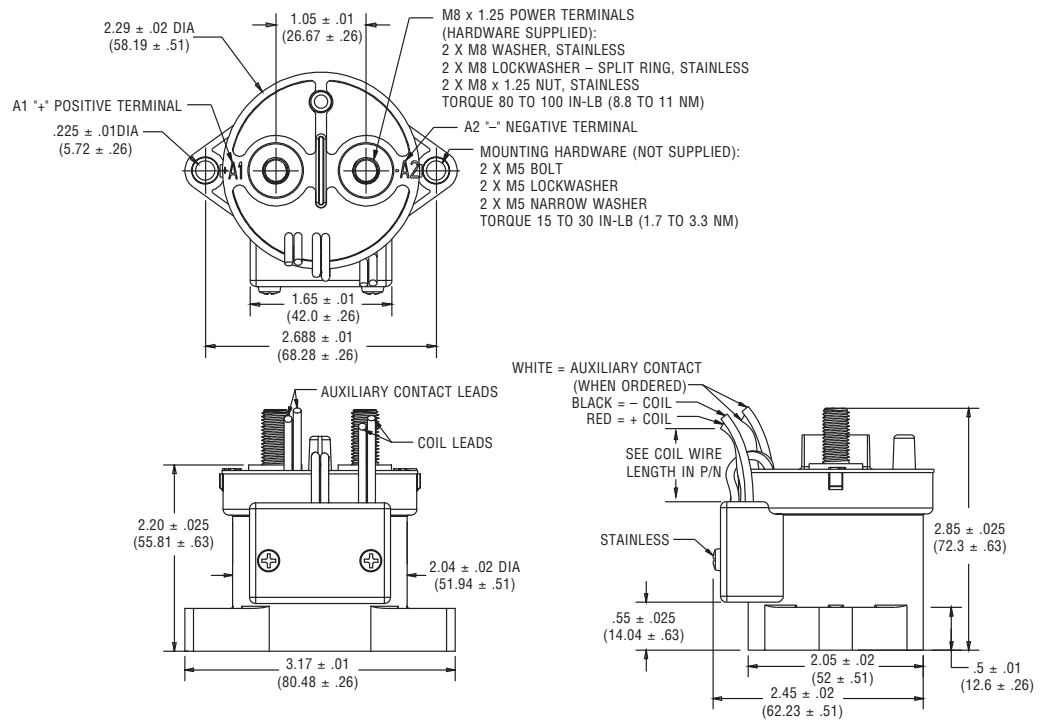
<sup>4</sup> Voltage applied across both contact sets in series.

<sup>5</sup> May not pass 2,200 Vrms dielectric testing after second interrupt cycle.

For factory-direct application assistance, dial 800-253-4560, ext. 2055, or 805-220-2055.

**KILOVAC CAP202 Series 12-900Vdc Contactors**

**Outline Dimensions\***



Coil Data (-40 to +85°C temp range unless otherwise noted)	
Voltage/Nominal Max.	28-32VDC
Pickup Voltage Max.	16VDC
Inrush Current @ 28 Vdc nominal / @32V maximum	3.4/6.0A
Inrush Time (nominal/maximum)	75/150mS
Hold Current @28V nominal / @32V maximum	0.27/0.48A
Drop Out Voltage	3 to 8Vdc
Internal Coil Suppression (max.)	60Vdc
Main Contacts: Operate Time, nominal/maximum	13/20mS
Main Contacts: Operate Bounce, nominal/maximum	3/10mS
Main Contacts: Release Time, nominal/maximum	25mS
Main Contacts: Release Time, maximum including Maximum arc time	7/12mS

**Ordering Information**

Typical Part Number ▶

**CAP202 M S B F D**

**Series:** CAP202 = 2 form X, DPST-N0-DM Contactor

**Auxiliary Contact Outputs (SPDT form C):**

- A = None
- M = Two
- F = Four

**Coil Voltage:** S = 28V (with built-in electronically switched dual coil economizer)

**Coil and Aux. Wire Length:**

- A = 15.3 inches
- B = 6 inches
- X = Customer Special

**Coil and Aux. Connector:** N = None  
 F = D Plug on flying leads (may affect wire length)

**Mounting & Power Terminals:** D = 2X M5 Bottom Mount with 4X, M6 x 1 Female thread terminals

Specifications are subject to change without notice.

For factory-direct application assistance, dial 800-253-4560, ext. 2055, or 805-220-2055.