



KILOVAC CAP202 Contactors

Rugged, Hermetically Sealed for Harsh Environments
and Rated for 350 Amp, 12 to 900 VDC

CAP202 Contactors

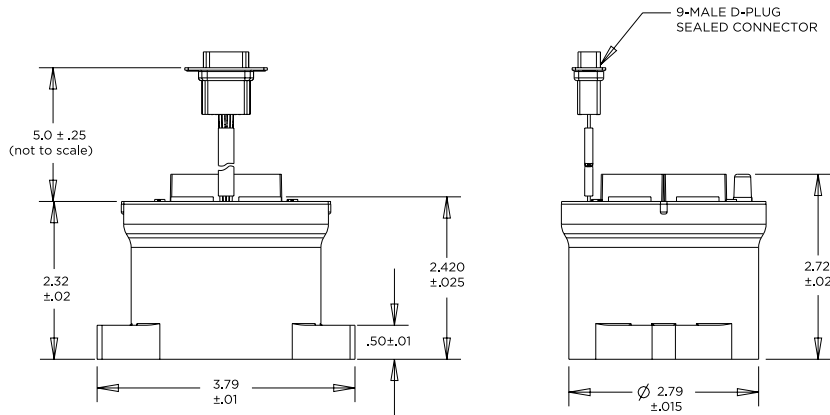
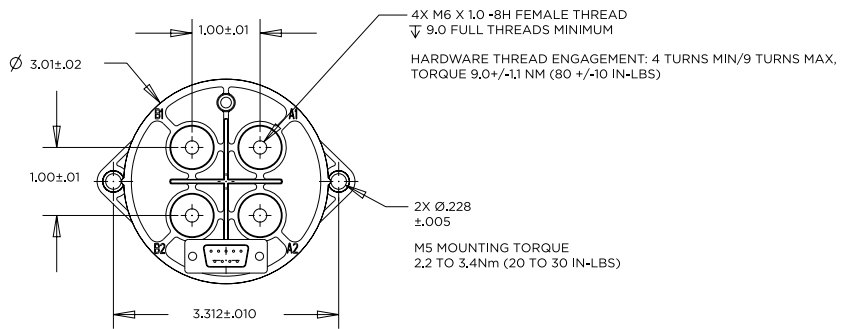
2-Pole Single-Throw Hermetically Sealed DC Contactors



Description

TE Connectivity's (TE) KILOVAC CAP202 series contactors are two-pole, single-throw hermetically sealed devices capable of handling 350 A per pole over a voltage range of 12 to 900 VDC.

PRODUCT DIMENSIONS



HERMETICALLY SEALED

- Safe for application in harsh and corrosive environments
- No contact oxidation over periods of non-use

VERSATILE

- 350 A per pole over a voltage range of 12 to 900 VDC
- Up to four SPDT auxiliary switch outputs: 30 VDC/2 A switching or 6 V/5 mA signal
- Bidirectional switching — main contacts not polarity sensitive
- Not position sensitive: mounts in any orientation

EFFICIENT

- Integrated coil economizer reduces the power required to hold the contacts closed
- Coil suppression reduces radiated coil emissions for EMC compliance

APPLICATIONS

- High-voltage DC converter systems
- Test equipment
- Power distribution
- Power motion control
- Battery management systems

ORDERING INFORMATION

Typical Part Number

CAP202 - M - S - B - F - D

SERIES

CAP202 2 form X, DPST-NO-DM Contactor

AUXILIARY CONTACT OUTPUTS (SPDT FORM C)

A None, **M** Two, **F** Four

COIL VOLTAGE

S 28 V (with built-in electronically switched dual coil economizer)

COIL AND AUXILIARY WIRE LENGTH

A 15.3 inches, **B** 6 inches, **X** Customer special

COIL AND AUXILIARY CONNECTOR

N None, **F** D Plug on flying leads (may affect wire length)

MOUNTING AND POWER TERMINALS

D Two M5 bottom mount with four M6 female thread terminals



MECHANICAL/ENVIRONMENTAL

- **Contact Arrangement:** Power Contacts
 - DPST-NO (2 Form X)
 - Auxiliary Switches: SPDT (Form C)
- **Shock:** 11ms 1/2 sine (operating): 20 g peak
- **Sine Vibration:** 10 g peak: 55 to 2000 Hz
- **Random Vibration:** 14 g_{rms}:

Hz	15	100	300	900	2000
g ² /Hz	0.01	0.01	0.2	0.2	0.01
- **Operating Temperature Range:** -55°C to +85°C
- **Weight:** 0.79 kg (1.74 lb.)
- **Hermetically Sealed**
- **Safe for Harsh/Corrosive Environments**
- **Contact Oxidation:** None over periods of non-use
- **Number of SPDT Auxiliary Contacts per Contactor Type:**
 - CAP202AS: None
 - CAP202MS: Two
 - CAP202FS: Four

ELECTRICAL DATA

- **Contact Arrangement:** DPST-No (2 Form X)
- **Mechanical Life:** 100,000 cycles
- **Voltage Rating:**
 - Main Contacts: 12 to 900 VDC
 - Auxiliary Contacts: 30 VDC
- **Current Rating:**
 - Main Contacts, Continuous (Note 1): 350 A/pole
 - Auxiliary Contacts: 3 A
- **Contact Resistance:**
 - Main Contacts (Note 2): 100 mΩ max @ 1 A
 - 0.3 mΩ max. @ 200 A after 3 mins
 - Auxiliary Contacts: 200 mΩ max
- **Hot Switching Performance @ ±400 VDC (Note 3):**
 - 100 A make/break: 10,000 cycles
 - 250 A make/break: 2500 cycles
 - 700 A break only: 10 cycles
- **Hot Switching Performance @ ±270 VDC (Note 4):**
 - 100A make/break: 40,000 cycles
 - 250 A make/break: 7500 cycles
 - 2000 A break only @ ±370 VDC (Note 5): 2 cycles

- **Maximum Make Current:** 700 A
- **Dielectric Withstand Voltage over Life:**
 - Terminal to Terminal/Terminals to Coil: 1 mA max @ 2200 Vrms
- **Insulation Resistance over Life Terminal to Terminal/Terminals to Coil:** 50 mΩ min @ 500 VDC
- **Mechanical Life:** 100,000 cycles

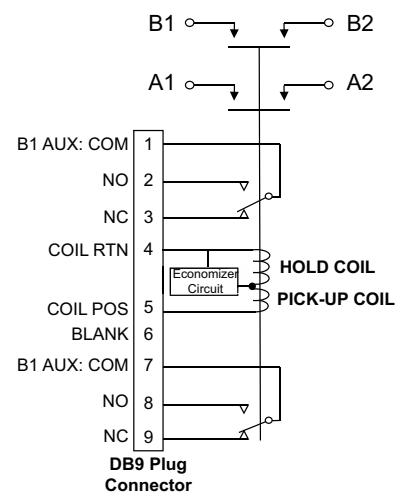
COIL DATA

(-40 to +85°C temp range unless otherwise noted)

- **Coil Voltage (nom./max):** 28/32 VDC
- **Pick Up (max):** 16 VDC
- **Dropout Voltage:** 3 to 8 VDC
- **Inrush Current (@ 28 VDC nom./@32 V max):** 3.4/6.0 A
- **Inrush Time (nom./max):** 75/150 ms
- **Hold Current (@28 V nom./@ 32 V max):** 0.27/0.48 A
- **Internal Coil Suppression (max.):** 60 VDC
- **Main Contacts:**
 - Operate Time (nom./max): 13/20 ms
 - Operate Bounce (nom./max): 3/10 ms
 - Release Time (nom./max): 7/12 ms
 - Release Time (maximum, including maximum arc time): 25 ms

Note:

1. 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 Part No. 3-1618396-7.
2. Operational contact resistance is measured by millivolt drop across contacts higher than 100 A current. Initial contact resistance may be higher than 0.3 Ω, but will drop below within 30 mins. max.
3. Voltage applied to each contact set separately.
4. Voltage applied across both contact sets in series.
5. May not pass 2200 Vrms dielectric testing after second interrupt cycle.



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Consult TE for the latest dimensions and design specifications.

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