KILOVAC EV202 High-Voltage Contactors
High Performance in a Compact, Lightweight Contactor
Designed for Harsh Environments
Hermetically sealed and designed for harsh environments and loads, KILOVAC EV202 high-voltage contactors from TE Connectivity (TE) offers exceptional performance in an extremely small and lightweight device.

Available with 12 or 24-V coils, the contactors are suited to 270 and 400-VDC power systems. They are available with two optional auxiliary contacts.

High break levels—2000 A at 270 VDC and 700 A at 400 VDC—help increase system flexibility and reliability.

EV202 contactors provide reliable and long-lasting performance in military and commercial electric ground vehicles, energy storage systems, and power distribution and motion control applications.
**HERMETICALLY SEALED**
- Suitable for application in harsh, explosive, and corrosive environments
- EMC compliant: no radiated coil emissions

**SPACE AND WEIGHT SAVINGS**
- Extremely small size
- Lightweight contactor: 0.77 kg

**VERSATILE**
- Bidirectional switching
- Main contacts not polarity sensitive
- Not position sensitive: mounts in any orientation

**EFFICIENT**
- Integrated dual-coil electronic economizer with coil suppression

**APPLICATIONS**
- Energy Storage/Battery Storage
- Power Distribution
- Power Motion Control
- High-Voltage DC Converter Systems
- Alternative Energy
- Military and Commercial Electric Vehicles
- Test Equipment

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**Product Dimensions (Inches)**

![Diagram showing product dimensions](image)

**Typical Schematic**
(Shown with Auxiliary Contacts)

![Typical schematic diagram](image)
Specifications

**ELECTRICAL DATA**

- **Configuration:** Double pole, single throw, normally open
- **Voltage Rating, Main Contacts:** 600 VDC, max.
- **Make Current:** 700 A, max.
- **DWV and Insulation Resistance over Life, Terminal to Terminal/Terminals to Coil**
  - Dielectric Withstand Voltage: 1 mA max @ 2200 Vrms
  - Insulation Resistance: 50 mΩ min. @ 500 VDC
- **Hot Switch Life:**
  - Make/Break Current @ Voltage | Hot Switch Life
  - 100 A | 270 VDC | 12/16 VDC
  - 100 A | 400 VDC | 24/32 VDC
  - 250 A | 270 VDC | 10,000
  - 250 A | 400 VDC | 10,000
  - 700 A Break Only | 400 VDC | 50
  - 2000 A Break Only | 270 VDC | 1

**COIL DATA** (over -40°C to +85°C unless noted)

- **Coil Voltage, nom./max.**
  - 12/16 VDC
  - 24/32 VDC
- **Pick up voltage, max.** (applied as step voltage only)
  - 8 VDC
  - 16 VDC
- **Dropout Voltage**
  - 2.5–4 VDC
  - 3–8 VDC
- **Coil Inrush Current @ V-nom., max.**
  - 5 A
  - 4.5 A
- **Coil Inrush Time, nom./max.**
  - 75/150 ms
  - 75/150 ms
- **Hold Current @ V-nom., max.**
  - 0.6 A
  - 0.2 A
- **Coil Suppression, max.**
  - 40 VDC
  - 60 VDC
- **Operate Times**
  - **Operate Time, nom./max.**
  - 13/20 ms
  - 13/20 ms
  - **Operate Bounce, nom./max.**
  - 3/10 ms
  - 3/10 ms
  - **Release Time, nom./max.**
  - 5 ms
  - 5 ms
- **Release Time, max.** (including max. arc time)
  - 25 ms
  - 25 ms

**OPTIONAL AUXILIARY CONTACTS**

- **Configuration:** Two SPDT switch outputs
- **Ratings:** 30 VDC/2A switching or 5 V/5 mA signal

**ENVIRONMENTAL**

- **Operating Temperature Range:** -55°C to + 85°C
- **Hermetically Sealed:** Safe for harsh/corrosive environments
- **Nonoxidizing:** No contact oxidation over periods of nonuse
- **RoHS Compliant**
- **Economizer:** Integrated electronically switched coil economizer with coil suppression
- **EMC Compliant:** No radiated coil emissions

**MECHANICAL**

- **Shock:** 11 ms 1/2 sine (operating): 20 g peak
- **Sine Vibration:** 10 g peak: 10 to 2000 Hz
- **Random Vibration:** 14 g rms:

<table>
<thead>
<tr>
<th>Hz</th>
<th>15</th>
<th>100</th>
<th>300</th>
<th>900</th>
<th>2000</th>
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<tr>
<td>g²/Hz</td>
<td>0.01</td>
<td>0.01</td>
<td>0.2</td>
<td>0.2</td>
<td>0.01</td>
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</tbody>
</table>

- **Bidirectional Switching:** Main contacts not polarity sensitive
- **Mounting:** Mounts in any orientation; not position sensitive
- **Mechanical Life:** 100,000 cycles
- **Weight:** 0.77 kg

**Part Numbers**

<table>
<thead>
<tr>
<th>Coil Voltage</th>
<th>Aux Contacts</th>
<th>Lead Length</th>
<th>Connector</th>
<th>Description</th>
<th>Part No.</th>
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<tbody>
<tr>
<td>24 VDC</td>
<td>2</td>
<td>6”</td>
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<td>EV202MSBFD</td>
<td>5-1618407-2</td>
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<tr>
<td>24 VDC</td>
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<td>5-1618407-3</td>
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<tr>
<td>24 VDC</td>
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<td>EV202ASAND</td>
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<tr>
<td>12 VDC</td>
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<td>9-1618406-9</td>
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### TE PART NUMBERING SYSTEM

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<tr>
<th>SERIES</th>
<th>EV202 = Two Form X, DPST-NO-DM Contactor</th>
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<tbody>
<tr>
<td>AUXILIARY CONTACT OUTPUTS (SPDT form C)</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>None</td>
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<tr>
<td>M</td>
<td>Two</td>
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<tr>
<td>COIL VOLTAGE</td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>24 V</td>
</tr>
<tr>
<td>V</td>
<td>12 V (With Built-In Dual Coil Economizer)</td>
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<tr>
<td>COIL AND AUX WIRE LENGTH (inches)</td>
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<tr>
<td>A</td>
<td>15.3</td>
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<tr>
<td>B</td>
<td>6</td>
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<tr>
<td>X</td>
<td>Customer-Specified Configuration</td>
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<td>COIL AND AUX CONNECTOR</td>
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<tr>
<td>N</td>
<td>None</td>
</tr>
<tr>
<td>F</td>
<td>D-Subminiature Plug on Flying Leads (May Affect Wire Length)</td>
</tr>
<tr>
<td>MOUNTING AND POWER TERMINALS</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Two M5 Bottom Mount with Four M6 X 1 Female thread terminals</td>
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