



KILOVAC K1K HIGH-VOLTAGE CONTACTOR

HIGH PERFORMANCE IN A COMPACT, LIGHTWEIGHT,
HERMETICALLY SEALED CONTACTOR DESIGNED FOR UP TO
1000 V/1000 A IN HARSH ENVIRONMENTS

KILOVAC K1K High-Voltage Contactor



Compact, Lightweight, Hermetically Sealed Contactor



As one of the smallest, lowest cost, hermetically sealed 1000 A/1000 V switching devices in the industry, the K1K contactor from TE Connectivity (TE) operates reliably in harsh and explosive environments without oxidation or contamination of contacts, even after long periods of non-operation. The K1K is well suited for power switching at voltages as low as 5 VDC and as high as 1000 VDC. Typical applications include main disconnect contactor for large battery bank applications, for carry and interrupt battery fault currents and other high current applications, power/motor control circuit isolation, and circuit protection and safety.

CAPABLE

- Handles up to 1000 A/1000 V

HERMETICALLY SEALED

- Suitable for application in harsh and explosive environments
- No contact oxidation over periods of non-use

VERSATILE

- Bidirectional switching
- Main contacts not polarity sensitive
- Bottom or buss bar mount
- Available with SPST-NO Auxiliary Contact

EFFICIENT

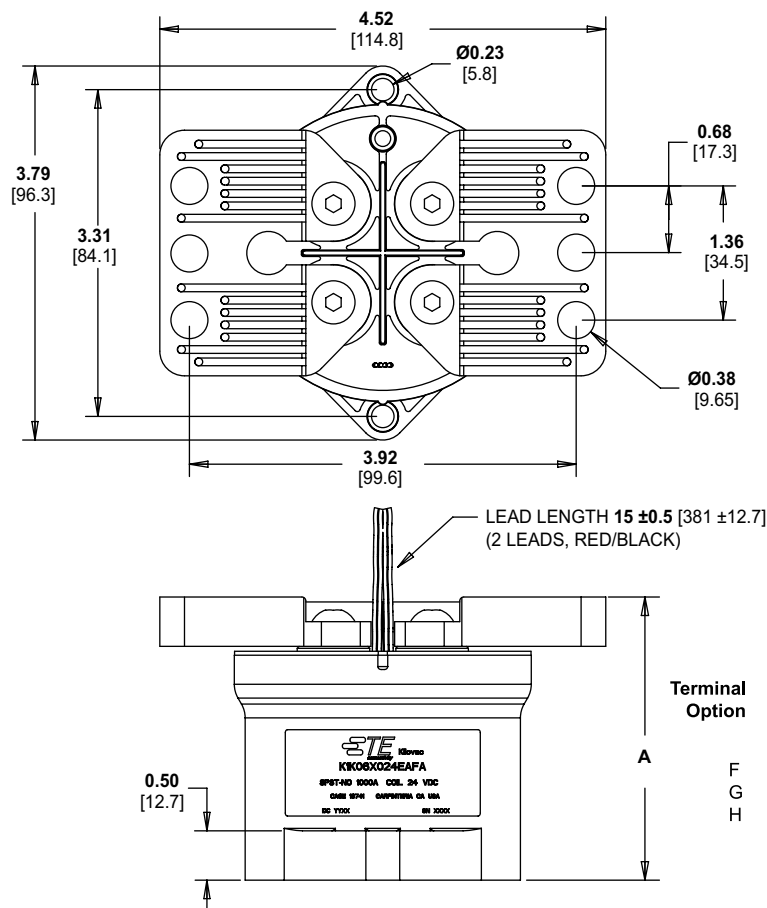
- Integrated dual-coil electronic “cut-throat” economizer with internal suppression

SPACE AND WEIGHT SAVINGS

- One of the smallest 1000 A/1000 V hermetically-sealed contactors in the industry

APPLICATIONS

- Energy Storage/Battery Storage
- Power Distribution
- Alternative Energy
- Electric Vehicles (Military and Commercial)
- Test Equipment



Specifications

ELECTRICAL

Main Contacts

- **Contact Arrangement:** SPST-NO (Form X)
- **Voltage Rating (Max.):** 1000 VDC
- **Current Rating, Continuous:** 1000 A (At 25°C ambient with four 4/0 conductors or equivalent)
- **Current Rating, Short Term:** 1200 A/180 sec
- **Contact Resistance:** 0.2 mΩ max. at rated current
- **Hot-Switching Performance, Resistive Load:**
 - 50 A/1000 VDC: 25,000 cycles
 - 130 A/1000 VDC: 10,000 cycles
 - 200 A/1000 VDC: 3500 cycles
 - 100 A/600 VDC: 10,000 cycles
 - 240 A/600 VDC: 2000 cycles
 - 1000 VDC/1200 A: 4 cycles (Break Only)
- **Maximum Pulse Through Closed Contacts:** 6000 A (half cycle, 60 Hz)
- **Dielectric Withstanding Voltage over Life:**
 - Between Open Contacts: 2800 V_{rms}
 - Contacts to Coil: 2800 V_{rms}/4000 VDC
 - End of Life Between Open Contacts: 2200 V_{rms}
- **Insulation Resistance over Life, Terminal to Terminal; Terminals to Coil:**
 - Beginning of Life: 100 MΩ min. @ 500 VDC
 - End of Life: 50 MΩ min. @ 500 VDC

Auxiliary Contact Rating 1 A / 30 Vdc

Switching Life at Maximum Rating 100K cycles
 Auxiliary Contact Resistance (maximum over life) 1 Ω
 Minimum Load 5 VDC / 5 mA

- **Mechanical Life:** 100,000 cycles minimum

ENVIRONMENTAL/MECHANICAL

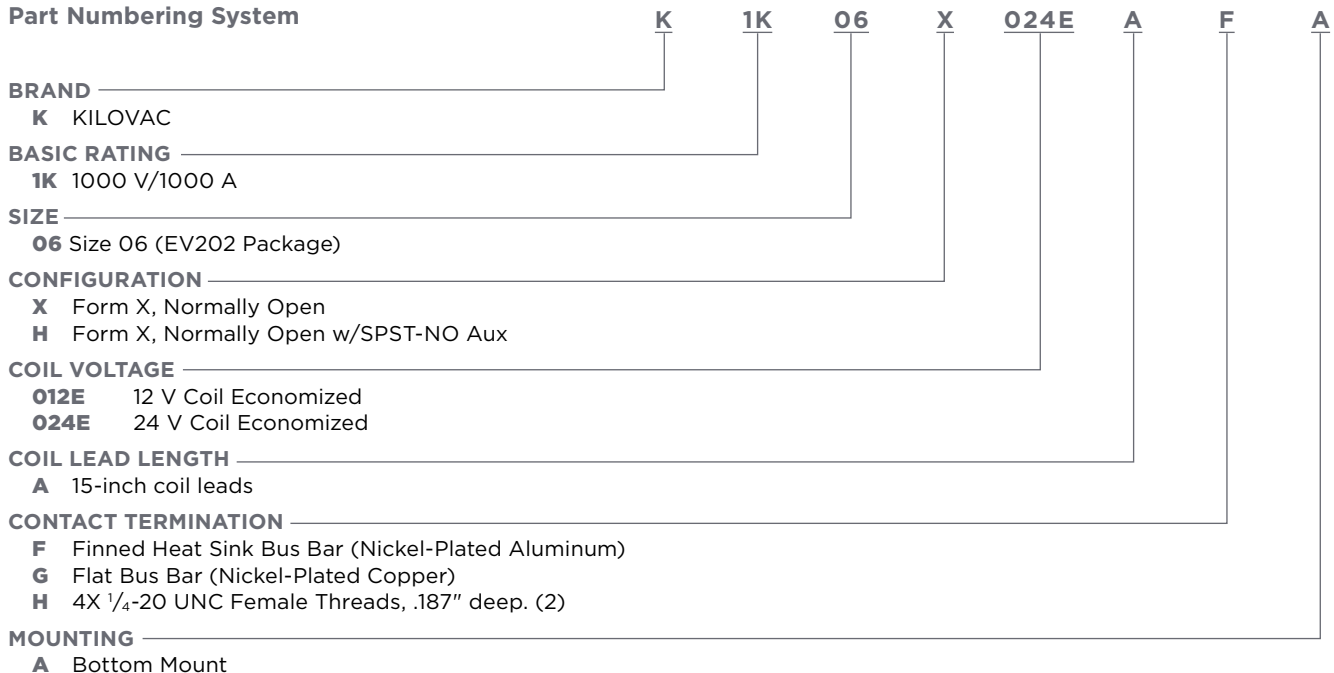
- **Shock:** 11 ms, 1/2 sine (operating), 20 g peak
- **Sine Vibration:** 20 gpeak (operating) 55 to 2000 Hz
- **Operating Temperature Range:** -40°C to +105°C
- **Weight, Nominal:** 1.02 kg
- **Sealing:** Hermetic

COIL DATA

Coil Data @ 20°C (Internal Two-Coil Economizer)

- **Coil Voltage Range:** 24 VDC nom./32 VDC max.
- **Maximum Pickup Current:** 5.5 A
- **Nominal Holding Current:** 0.33 A
- **Pickup Voltage:** 18 VDC
- **Dropout Voltage:** 10 VDC
- **Pickup Pulse (Max):** 75 ms
- **Coil Resistance ±5%:** 4.7 Ω Pickup/72 Ω Hold
- **Coil Holding Power:** 8 W
- **Main Contacts:**
 - Operate Time (Max): 50 ms
 - Operate Bounce (Typ.): 5 ms
 - Release (Typ.): 8 ms

Part Numbering System



(2) User furnished bus bar must be equivalent to 4X 4/0 conductor. Torque to 45-55 in-lbs. per connection (5.1 – 6.2 NM)

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