

## KILOVAC CAP100 Series 900 Vdc Contactor

### Product Facts

- Commercial aerospace product
- Hermetically sealed — intrinsically safe. Operates in explosive/harsh environments without oxidation or contamination of contacts, during long periods of non-operation
- 8kV isolation between open contacts permits use for high voltage isolation and carry, optional auxiliary contacts
- 12, 24 and 48 Vdc coils
- Solid copper contacts
- Designed and built in accordance to AIAG QS9000
- RoHS versions available



### Description

Lowest cost, 900 Vdc 100 amp, hermetically sealed DC contactor in the industry with coil suppression and 1 Form C Aux. contact

Compact package available in side- or bottom-mount reinforced configurations, not position sensitive

### Applications

Power/motor control circuit isolation, circuit protection and power distribution

Commercial Aerospace

### Mechanical

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

Robust integral mounting plate on either bottom or side of enclosure accepts two M4 screws

Inert gas filled contact chamber

Flying leads for coil connections

Load terminals threaded for M5 bolts (not included)

### Performance Data

#### Physical Data

#### Contact Arrangement, Main

**Contacts** — SPST-NO-DM (1 Form X)

**Dimensions** — See drawings on next page

**Weight** — 6.7 oz (190g)

#### Contact Data

#### Contact Arrangement, Main

**Contacts** — SPST-NO-DM (1 Form X)

#### Voltage Rating, Main Contacts

**Switching (Max)** — 900VDC

#### Current Rating, Main Contacts

**Switching** —

Continuous 1 — 100A

Short Term, 3 Minutes<sup>2</sup> — 200A

#### Hot Switching Performance

**(Polarity Sensitive)** —

50A make/break @ +400Vdc — 50,000 cycles

100A make/break @ +400Vdc — 6,000 cycles

100A make/break @ -400Vdc — 1,000 cycles

200A make/break @ +400Vdc — 500 cycles

1,000A break only @ +400Vdc — 10 cycles

600A make only — 25 cycles

#### Maximum Short Circuit Current

**(1/2 cycle, 60 Hz)** — 1,250A

(through closed contacts)

#### Dielectric Withstand Voltage<sup>3</sup> —

Between Open Contacts —

5,600Vrms/8,000Vdc

Contacts to Coil —

2,000Vrms/4,000Vdc

#### Insulation Resistance, Terminal to Terminal / Terminals to Coil —

When New — 100 megohms, min. @ 500Vdc

At End of Life — 50 megohms, min. @ 500Vdc

**Mechanical Life** — 1 million cycles

#### Operate & Release Time

**Operate Time Max.** — 25ms

**Operate Bounce Max.** — 5ms

**Release Time** — 10ms

#### Environmental Data

**Shock, 11ms 1/2 sine**

**(operating)** — 20G peak

**Sine Vibration, 20G peak** — 55-2,000 Hz.

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

**Noise Emission (at 100 mm distance)** — 70dB(a)

#### Notes

<sup>1</sup> 8.4 mm<sup>2</sup> conductor. Current rating depends upon conductor size. Keep terminals below 175°C max continuous.

<sup>2</sup> 3 minutes at +40°C ambient with 8.4 mm<sup>2</sup> (#8 AWG) conductor.

<sup>3</sup> 2,000Vrms minimum under all conditions, until end of life.

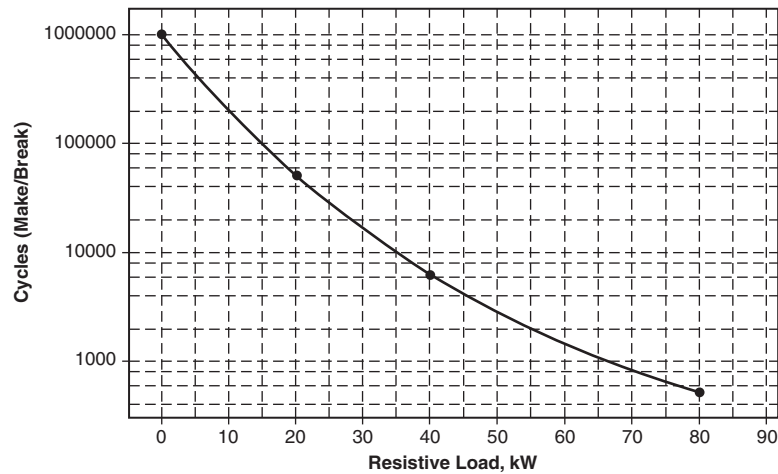
For factory-direct application assistance, dial 800-253-4560, ext. 2055, or 805-220-2055.

**KILOVAC CAP100 Series** (Continued)

Coil Operating Voltage (Valid Over Temperature Range)			
Nominal Voltage	12Vdc	24Vdc	48Vdc
Pick Up Voltage (20°C)	8Vdc	16Vdc	33Vdc
Drop Out Voltage (20°C)	1.2Vdc	2.4Vdc	4.8Vdc
Coil Current (Nominal at 20°C, 12vdc)	461mA	250mA	122mA
Coil Power <sup>1</sup>			
Nominal @ Vnom, +20°C	5.5W	6.0W	6.0W
Pickup (Close) Voltage Max. @85°C	9.6Vdc	19.2Vdc	38.4Vdc
Coil Resistance			
Nominal @ +20°C ± 5% (ohms)	26	96	392

<sup>1</sup> Do not exceed 8.0W coil power for extended periods

**Life Cycles vs Resistive Load up to 900Vdc**



**Ordering Information**

**Typical Part Number** ► **CAP100 A 4 A N G**

**Series:** \_\_\_\_\_  
 CAP100 = 100A Contactor

**Contact Arrangement:** \_\_\_\_\_  
 A = 1 Form X (SPST-NO-DM)  
 K = NO with 1 SPDT Aux.

**Coil Voltage:** \_\_\_\_\_  
 4 = 12VDC  
 5 = 24VDC  
 6 = 48VDC

**Coil Wire Length:** \_\_\_\_\_  
 A = 15 inches [.4M]

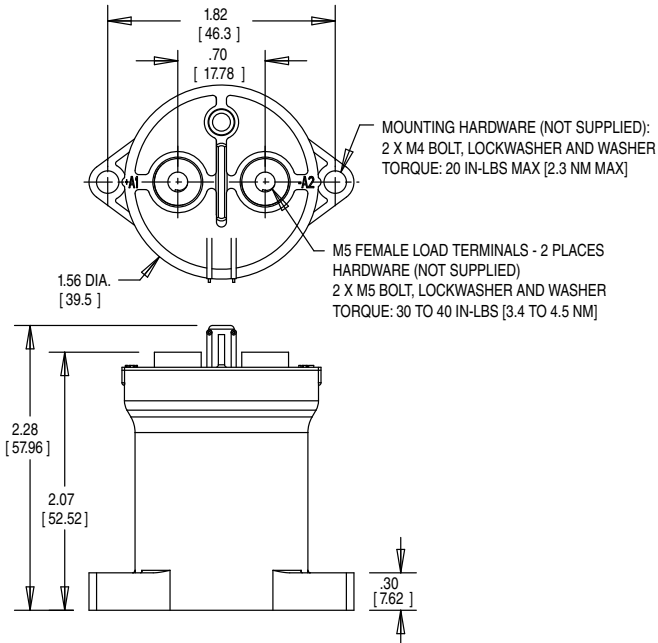
**Coil Termination:** \_\_\_\_\_  
 N = None – Stripped Wires  
 (Consult factory for connector options)

**Mounting and Power Terminals:** \_\_\_\_\_  
 G = Bottom Mount (2 x #8); M5 x 10  
 H = Side Mount (2 x #8); M5 x 10

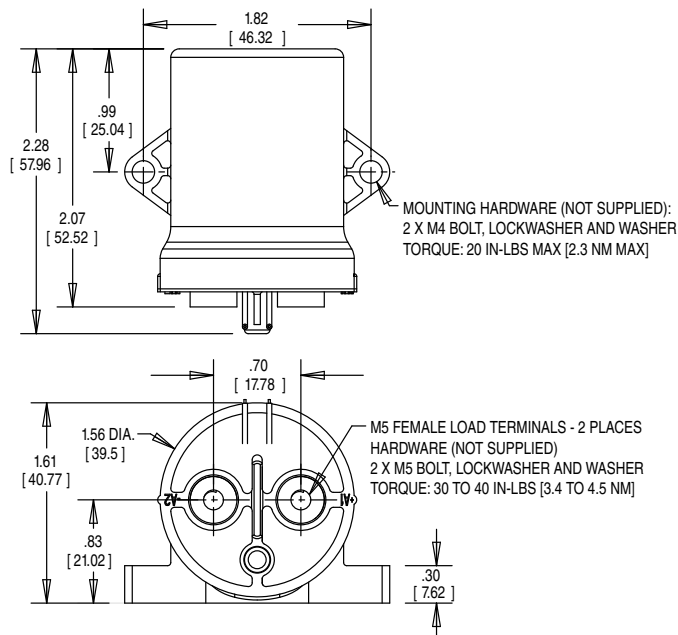
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**Bottom Mount**



**Side Mount**



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