

## KILOVAC EV100 Series Contactor With 1 Form X Contacts Rated 100 Amps Continuous, 600 Vdc

### Product Facts

- Hermetically sealed
- 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
- Coil economizer allows for operation between 9-36 VDC
- Designed and built in accordance with AS 9100



### Description

Low cost, 600 Vdc, 100 amp, hermetically sealed DC contactor

Economized coil for low power consumption between 9-36 VDC

Bottom mount, not position sensitive

One million cycle mechanical life

### Applications

Power/motor control circuit isolation, circuit protection and safety in industrial machinery

Automotive battery switching and backup

Solar inverter switching

Automotive pre-charge

Test Equipment

Power distribution

### Electrical

Contact arrangement: SPST-NO (Form X., Double Make)

Voltage rating:  
5-600 Vdc at 100 Amps

50K cycles Make/Break:  
50 Amps at 400 Vdc

25K cycles Make/Break:  
50 Amps at 600 Vdc

Holding current:  
0.15 Amps at 24 Vdc

Operate time: 30 ms max.

### Physical or Other Properties

Hermetically sealed

Safe for harsh/corrosive environments

No contact oxidation over periods of non-use

### Mechanical

Small size: 1.5" x 1.5" approximately

Weight: 130 grams

### Performance Data

#### Physical Data

**Contact Arrangement, Main Contacts** — SPST-NO (Form X)

**Dimensions** — See drawings on next page

**Weight** — 4.58 oz (130g)

#### Electrical Data

**Voltage Rating, Main Contacts Switching (Max)** — 750VDC

**Current Rating, Main Contacts Switching** —

Continuous 1 — 100A  
Short Term, 3 Minutes 2 — 200A

**Contact Voltage Drop, Main Contacts** — 0.05 max @ rated current

### Resistive Load Performance (polarity sensitive) —

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

50A make/break @ +600Vdc — 25,000 cycles

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

100A make/break @ +600Vdc — 5,000 cycles

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

100A make/break @ -600Vdc — 25 cycles

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

200A make/break @ +600Vdc — 200 cycles

1,000A break only @ +400Vdc — 5 cycles

600A break only @ +600Vdc — 5 cycles

600A make only — 10 cycles

**Maximum Short Circuit Current (1/2 cycle, 60 Hz)** — 1,250A (through closed contacts)

**Dielectric Withstand Voltage** —  
Between Open Contacts — 2,200Vrms  
Contacts to Coil — 1,500Vrms/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** — 106

### Operate & Release Time

**Operate Time Max.** — 30ms

**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** — -40°C to +85°C

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

### Notes

<sup>1</sup> 8.4mm<sup>2</sup> conductor. Current rating is affected by conductor size. Keep terminals below 150°C max. continuous.

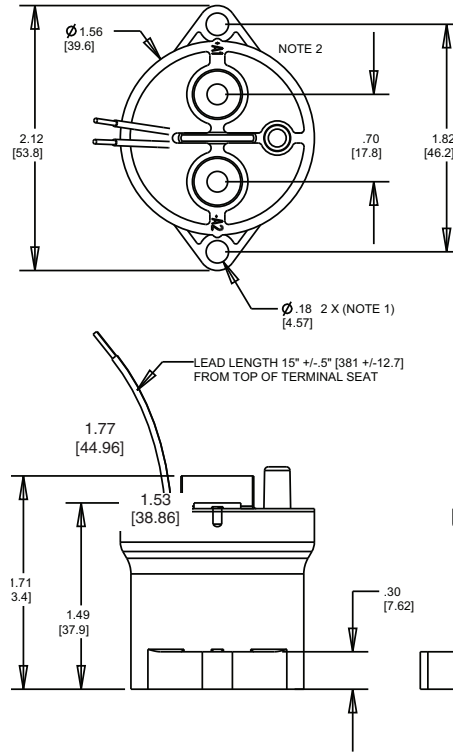
<sup>2</sup> 3 minutes at +40°C ambient, 1 minute at -80°C ambient with 8.4mm<sup>2</sup> (#8 AWG) conductor.

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

**KILOVAC EV100 Series** (Continued)

**Outline Dimensions**

**Bottom Mount**



NOTE 1. MOUNTING HARDWARE (NOT SUPPLIED)  
2 X M4 BOLT, LOCKWASHER AND WASHER  
TORQUE: 20 IN-LBS (2.3 NM) MAX

NOTE 2. LOAD TERMINALS-2 PLCS  
HARDWARE NOT SUPPLIED  
2 X M5 BOLT, LOCKWASHER AND WASHER  
TORQUE: 30-40 IN-LBS (3.4 TO 4.5 NM)  
DEPTH: 7 THREADS MAX

Coil Data (Internal Coil Economizer)	
Coil Voltage Range	9-32 Vdc
Maximum Pickup Current (20°C)	1.5A
Average Holding Current (20°C)	0.25A@12Vdc/0.15A@24Vdc
Pickup Voltage (20C)	≥ 9Vdc
Dropout Voltage	≤ 8Vdc
Pickup Pulse (max.)	100 ms
Coil Resistance +/-5% (20°C)	8.0 Ω
Coil Economizer Frequency	19.6 kHz
Coil Power Typ. (over temp range)	3-4W

**Ordering Information**

**Typical Part Number** ▶

**EV100 A A A N A**

**Series:** EV100 = 100A, 600 Vdc Contactor

**Contact Form:** A = Normally Open

**Coil Voltage:** 9-36 Vdc

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

**Coil Termination:** N = None – Stripped Wires

**Mounting:** A = Bottom Mount 2X #8, M5X10 Mains

Specifications are subject to change without notice.

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