

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

¹ 8.4mm² conductor. Current rating is affected by conductor size. Keep terminals below 150°C max. continuous.

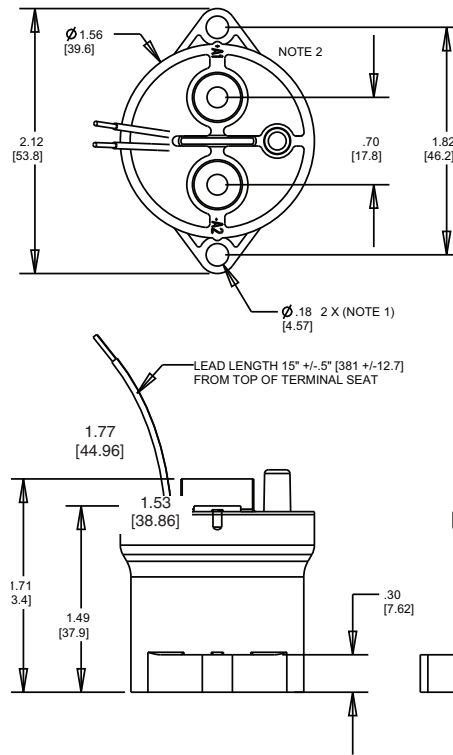
² 3 minutes at +40°C ambient, 1 minute at -80°C ambient with 8.4mm² (#8 AWG) conductor.

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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