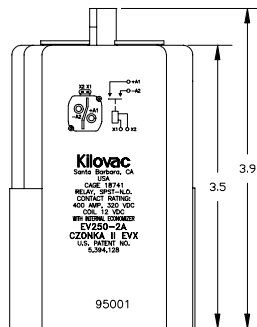
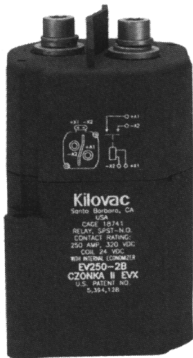


**Kilovac EV250-2A & 2B - 400 Amps ("Czonka II EVX")**

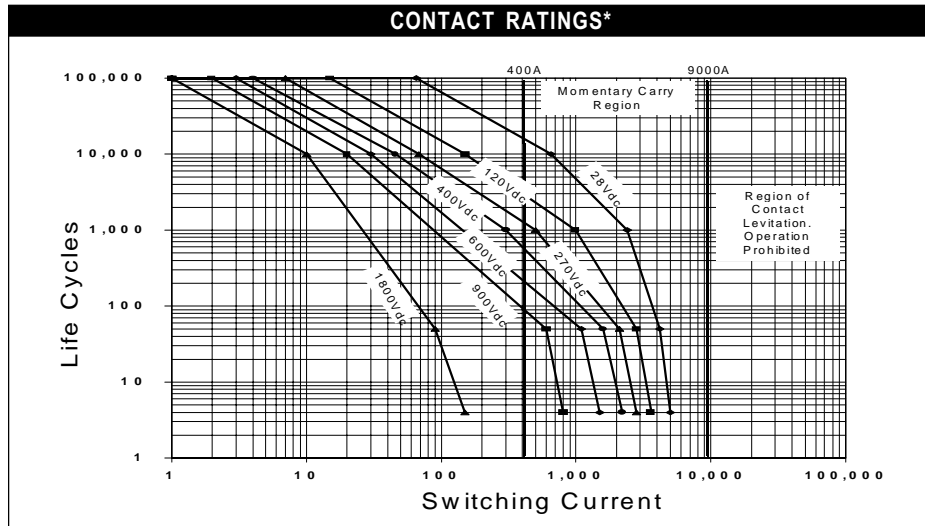
**Make & Break Load Switching**



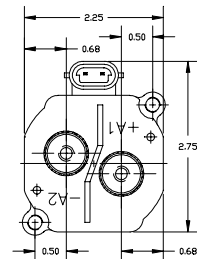
**Note:** Dimensions in inches. Multiply values by 25.4 for dimensions in mm.

**Features:**

- Hydrogen dielectric for power switching high current loads
- 400 A carry, 2,500 A interrupt @ 320 Vdc
- Ideal for circuit protection, control, battery switching, and main power safety disconnect
- Versatile power, voltage, and current operating range: 28-1800Vdc tested
- Internal coil economizer provides:
  - 4W typical hold power independent of temperature & voltage range
  - EMI spectrum tested and approved
  - Built-in coil suppression
- Patented "hammer effect" mechanism breaks light contact welds
- Patented hermetically "Super-sealed" environment chamber uniquely protects ALL moving parts
- Can operate in harsh environments
- Moving contact rotates to provide fresh contact surface for low contact resistance and low power consumption
- Sealed control connector. Mating connector with flying leads P/N 2005 available, see page 59
- Special versions available:
  - Economical (-8A/B) for light duty power switching (without arc blowout magnets)
  - 10 inch flying leads model (-7A)



\* For circuit conditions and actual data refer to the EV250 hot switch study. Since each application is unique, user is encouraged to verify rating in actual application.



**PRODUCT SPECIFICATIONS**

Part Number	UNIT	EV250-2A	EV250-2B
Contact Arrangement .....		SPST-NO	SPST-NO
Contact Form .....		X	X
Continuous Current Carry, Max. ....	A	400	400
6.5 Minutes .....	A	500	500
Break Current @ 320 Vdc .....	A	2,500	2,500
Contact Resistance, Max. ....	ohms	0.0003	0.0003
Contact Resistance, Typ. ....	ohms	0.0001 - 0.0002	0.0001 - 0.0002
Dielectric at Sea Level (leakage < 1mA) .....	Vrms	2,200	2,200
Shock, 11 ms 1/2 Sine (peak), operating .....	G's peak	30	30
Vibration, Sinusoidal (80-2000 Hz, peak) .....	G's	20	20
Operating Ambient Temperature Range .....	°C	-40 to +85	-40 to +85
Load Life, @ 320 Vdc, 95% Weibull* .....	cycles	See Page 19	See Page 19
Operate Time, 25° C .....			
Close (includes bounce) Typ. ....	ms	18	18
Bounce (after close only), Max. ....	ms	5	5
Release Time (includes arcing), Max. @ 2500A .....	ms	15	15
Insulation Resistance @ 500 Vdc, Min. ....	Mohm	100	100
Weight, Nominal .....	pound (kg)	1.76 (0.8)	1.76 (0.8)

\* Refer to sales drawing, qualification test plan for actual mix of precharge and break currents used on each cycle.

**COIL DATA\*\***

Parameter	EV250-2A	EV250-2B	Units
Voltage* (nominal )	12	24	Vdc
Pickup (close), max.	9	18	
Hold, Min.	7	14	
Dropout (open), min.	5	10	
Current (@VsNom/ 25°C)			A
Inrush	2.8	1.8	
Holding, standby,	0.34	0.11	A
Inrush Time, max.	200	200	ms

\* Other special coil voltages available upon request.  
\*\* Do not use a free wheeling diode or capacitor across the coil. Built in suppression limits back EMF to zero volts

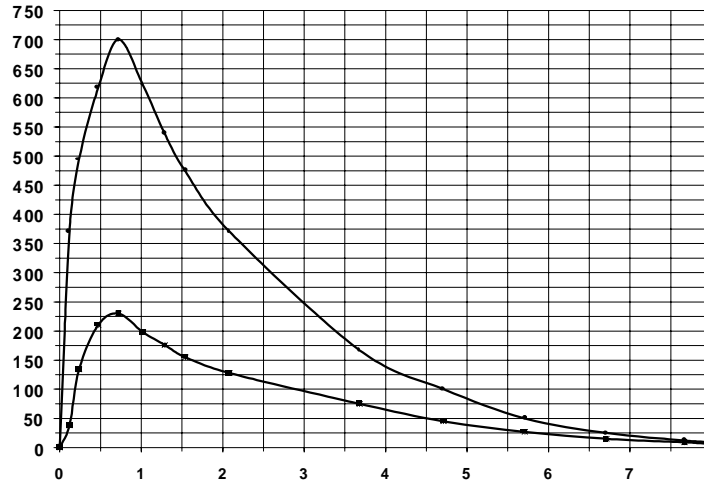
**PART NUMBER SELECTION**

Sample Part No. **EV250-2** **A**  
 Model \_\_\_\_\_  
 2 = with blowout magnets  
 8 = without blowout magnets  
 7 = 10" flying leads  
 (12 V, with magnets only)  
 Coil Voltage \_\_\_\_\_  
 A = 12 Vdc, Nominal  
 B = 24 Vdc, Nominal

**For detailed specifications and recommendations, refer to the EV250-2A & B or 7A sales drawings.**

## CURRENT vs TIME

CONTACTS CLOSED INTO 70% AND 90% CAPACITOR PRE CHARGE



LIFE RATINGS AND QUALIFICATION TEST PLAN				
	Normal Operations		Abnormal Operations	
Test #	1	2	3	4
Current	reference graph and test circuit diagram (sht. 8)		-250 A	2500 A
Voltage	reference graph and test circuit diagram (sht. 8)		320 V	320 V
Load Type	Capacitive	Capacitive	Resistive	Resistive
% Pre Charge	90%	70%	N/A	N/A
Switch Mode	make only	make only	make/ break	break only
Sequence				
1	10K cycles	10 cycles	2	2
2	10K	10	2	
3	10K	10	2	
4	10K	10	2	2
5	10K	10	2	
Etc.	Continue Cycling to Relay Failure			

The testing objective is to verify proper relay function for a given number of consecutive and cumulative cycles under both normal and abnormal conditions in a variety of load switching applications. The life rating of 40K cycles minimum was calculated with 95% Weibull reliability.

### Electrical Data (Over Temperature Range - Max. Terminal Temp. = 200°C)

Make/Break Life for Capacitive & Resistive Loads at 320 Vdc (1) (2)		
@ 90% capacitive pre-charge	Cycles	50,000
@ 70% capacitive pre-charge	Cycles	50
@ -250 A (2 consecutive, reverse polarity) (1)	Cycles	10
@ 3300 A (break only, 2 consecutive) (1)	Cycles	4
Mechanical Life	Cycles	100,000

(1) Resistive load includes inductance L = 25 uH. Load @ 2500 A tested @ 200 uH.

(2) Conductor: 2 each of Copper 54 mm<sup>2</sup> (AWG 0) required for > 250 A carry.

1 Copper (AWG 0) conductor recommended for ≤ 250 A

(3) Life based on projected Weibull Life with 95% Reliability



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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