

## Product Facts

- Designed to be the smallest, lightest weight, lowest cost sealed contactor in the industry with its current rating (500+A carry, 2000A interrupt at 320VDC).
- Built-in coil economizer – only 1.7W hold power @ 12VDC and it limits back EMF to 0V. Models requiring external economizer also available.
- Optional auxiliary contact for easy monitoring of power contact position.
- Hermetically sealed – intrinsically safe, operates in explosive/harsh environments with no oxidation or contamination of coils or contacts, including long periods of non-operation.
- Versatile coil/power connections.
- CE marked for EC applications.
- AIAG QS9000 designed, built and approved



**File E208033**



**EV200 Series Contactor  
(CZONKA® Relay, Type III)**

Typical EV200 applications include battery switching and back-up, DC voltage power control, circuit protection and safety.

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

## Performance Data

| Parameter                                            | Units   | Value for EV200 Series                                                                                        |
|------------------------------------------------------|---------|---------------------------------------------------------------------------------------------------------------|
| Contact Arrangement, power contacts                  |         | 1 Form X (SPST-NO-DM)                                                                                         |
| Rated Operating Voltage                              | VDC     | 12 - 900                                                                                                      |
| Continuous (Carry) Current, Typical                  | A       | 500 @ 85°C, 400 mcm conductors<br><i>Consult Factory for required conductors for higher (500+ A) currents</i> |
| Make/Break Current at Various Voltages <sup>1/</sup> | A       | See next page                                                                                                 |
| Break Current at 320VDC <sup>1/</sup>                | A       | 2,000, 1 cycle <sup>3/</sup>                                                                                  |
| Contact Resistance, Typ. (@200A)                     | mohms   | 0.2                                                                                                           |
| Load Life                                            | Cycles  | See next page                                                                                                 |
| Mechanical Life                                      | Cycles  | 1 million                                                                                                     |
| Contact Arrangement, auxiliary contacts              |         | 1 Form A (SPST-NO)                                                                                            |
| Aux. Contact Current, Max.                           | A       | 2A @ 30VDC / 3A @ 125VAC                                                                                      |
| Aux. Contact Current, Min.                           | mA      | 100mA @ 8V                                                                                                    |
| Aux. Contact Resistance, Max.                        | ohms    | 0.417 @ 30VDC / .150 @ 125VAC                                                                                 |
| Operate Time @ 25°C                                  |         |                                                                                                               |
| Close (includes bounce), Typ.                        | ms      | 15                                                                                                            |
| Bounce (after close only), Max.                      | ms      | 7                                                                                                             |
| Release (includes arcing), Max @ 2000A               | ms      | 12                                                                                                            |
| Dielectric Withstanding Voltage                      | Vrms    | 2,200 @ sea level (leakage <1mA)                                                                              |
| Insulation Resistance @ 500VDC                       | megohms | 100 <sup>2/</sup>                                                                                             |
| Shock, 11ms 1/2 sine, peak, operating                | G       | 20                                                                                                            |
| Vibration, sine, 80-2000Hz., peak                    | G       | 20                                                                                                            |
| Operating Ambient Temperature                        | °C      | -40 to +85                                                                                                    |
| Weight, Nominal                                      | lb.(kg) | .95 (.43)                                                                                                     |

<sup>1/</sup> Main power contacts

<sup>2/</sup> 50 at end of life

<sup>3/</sup> Does not meet dielectric & IR after test, 1700 amp for unit with Aux. Contacts

## Coil Operating Voltage (valid over temperature range)

| Voltage (will operate)        | 9-36VDC              | 32-95VDC  | 48-95VDC  |
|-------------------------------|----------------------|-----------|-----------|
| Voltage (Max.)                | 36VDC                | 95VDC     | 95VDC     |
| Pickup (close) Voltage Max.   | 9VDC                 | 32VDC     | 48VDC     |
| Hold Voltage (Min.)           | 7.5VDC               | 22VDC     | 34VDC     |
| Dropout (open) Voltage (Min.) | 6VDC                 | 18VDC     | 27VDC     |
| Inrush Current (Max.)         | 3.8A                 | 1.3A      | 0.7A      |
| Holding Current (Avg.)        | 0.13A@12V, 0.07A@24V | 0.03A@48V | 0.02A@72V |
| Inrush Time (Max.)            | 130ms                | 130ms     | 130ms     |

## Part Numbering System

### Typical Part Number

**EV200 A A A N A**

### Series:

EV200 = 500+ Amp, 12-900VDC Contactor

### Contact Form:

A = Normally Open H = Normally Open with Aux. Contacts

### Coil Voltage:

A = 9-36VDC (1 = requires external coil economizer)  
D = 32-95VDC (2 = requires external coil economizer)  
J = 48-95VDC (3 = requires external coil economizer)  
R = 28VDC with Mechanical Economizer

### Coil Wire Length:

A = 15.3 in (390 mm) B = 6.0 in (152 mm)

### Coil Terminal Connector:

N = None

B = Yazaki 7282-5558-10 male, 7114-4102-02, 7158-3030-50  
+red is pin 2 (B length only)

C = Molex Mini-fit Jr, 2 Ckt, Female 18-24, P/N 39-01-2020 &  
39-00-0060 +red is pin 1 (A length only)

### Mounting & Power Terminals:

A = Bottom Mount & Male 10mm x M8 Terminals

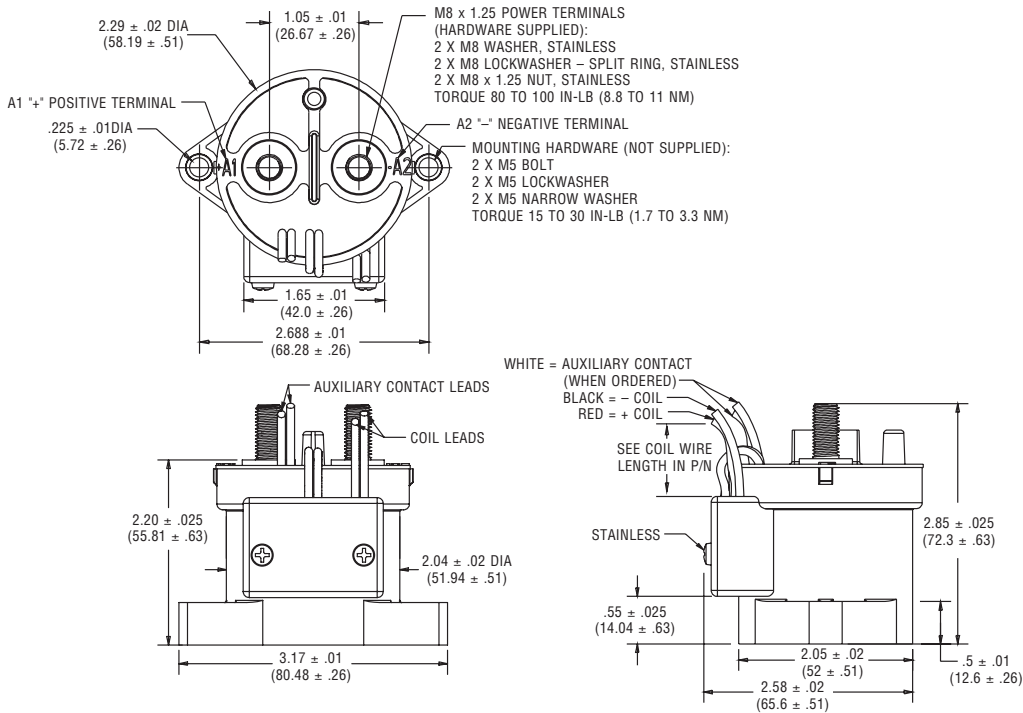
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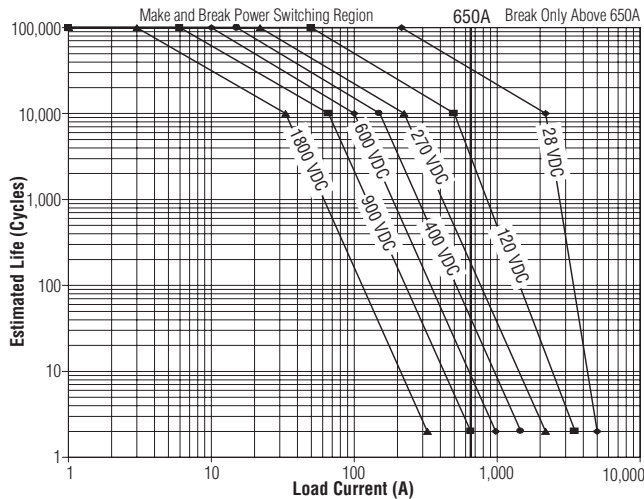
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## KILOVAC EV200 Series (CZONKA® Relay, Type III) (Continued)

### Outline Dimensions



### Estimated Make & Break Power Switching Ratings



#### NOTES:

- 1) For resistive loads with 300H maximum inductance. Consult factory for inductive loads.
- 2) Estimates based on extrapolated data. User is encouraged to confirm performance in application.
- 3) End of life when dielectric strength between terminals falls below 50 megohms @ 500VDC.
- 4) The maximum make current is 650A to avoid contact welding.

### Electrical Load Life Ratings for Typical EV Applications

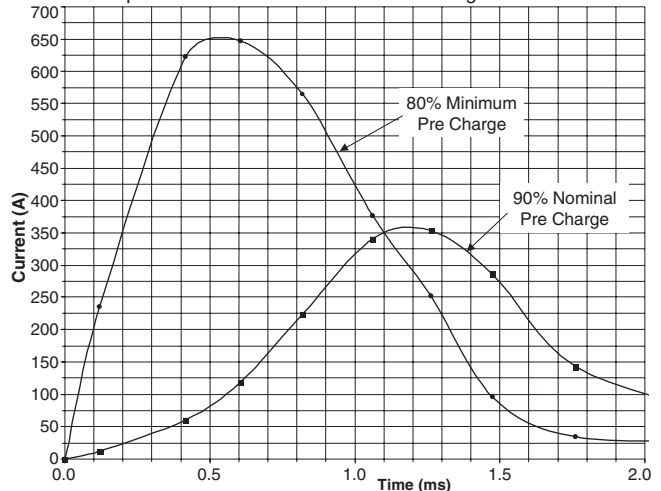
| Make/Break Life Capacitive & Resistive Loads at 320VDC (1) (2) |               |                  |
|----------------------------------------------------------------|---------------|------------------|
| @90% capacitive pre-charge (make only) see chart below         | Cycles        | 50,000           |
| @80% capacitive pre-charge (make only) see chart below         | Cycles        | 50               |
| @200A make/break (2 consecutive, reverse polarity) (1)         | Cycles        | 12               |
| 2,000A (break only) (1)                                        | Cycles        | 1*               |
| <b>Mechanical Life</b>                                         | <b>Cycles</b> | <b>1 million</b> |

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

(2) Life based on projected Weibull Life with 95% reliability.

\* Does not meet dielectric and IR after test.

#### EV200 Capacitive Make Test Curves for Pre-Charged Motor Controller





**Стандарт  
Электрон  
Связь**

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