

## Product Facts

- Designed to be the lowest cost sealed contactor in the industry with its current rating (500+A carry, 2000A interrupt at 320Vdc).
- Available with bottom or side mounting -- not position sensitive.
- 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.
- Typical applications include battery switching and backup, DC voltage power control, circuit protection and safety.
- Versatile coil/power connections.
- Designed and built in accordance to AIAG QS9000.



For factory-direct application assistance, contact Earle Alldredge, product manager.  
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**RoHS**  
Ready

## Performance Data

| Parameter                                            | Units   | Value for LEV200 Series                                                                                       |
|------------------------------------------------------|---------|---------------------------------------------------------------------------------------------------------------|
| Contact Arrangement, power contacts                  |         | 1 Form X (SPST-NO-DM)                                                                                         |
| Rated Operating Voltage                              | Vdc     | 12 - 900                                                                                                      |
| Continuous (Carry) Current, Typical                  | A       | 500 @ 65°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  | 100,000                                                                                                       |
| 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      | 25                                                                                                            |
| 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, Typical                                      | lb.(kg) | 1.3 (.60)                                                                                                     |

<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

<sup>4/</sup> Contacts will operate with  $0.8V_{nom} < V_{coil} < 1.1V_{nom}$  over temperature range.

## Coil Data (valid over temperature range) <sup>4/</sup>

|                               | 12Vdc         | 24Vdc        | 48Vdc        |
|-------------------------------|---------------|--------------|--------------|
| Nominal Voltage               | 12Vdc         | 24Vdc        | 48Vdc        |
| Pickup Voltage (will operate) | 9.0Vdc        | 19.0Vdc      | 38.0Vdc      |
| Voltage (Max.)                | 15Vdc         | 30Vdc        | 60Vdc        |
| Dropout Voltage               | 0.75 - 2.0Vdc | 1.0 - 5.0Vdc | 2.0 - 7.0Vdc |
| Coil Resistance @ 25° (Typ.)  | 11 ohms       | 40 ohms      | 145 ohms     |

## Part Numbering System

|                             |                                                                                                                                                                                                            |   |   |   |   |   |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| Typical Part Number         | LEV200                                                                                                                                                                                                     | A | 4 | N | A | A |
| Series:                     | LEV200 = 500+ Amp, 12-900Vdc Contactor                                                                                                                                                                     |   |   |   |   |   |
| Contact Form:               | A = Normally Open                                                                                                                                                                                          |   |   |   |   |   |
|                             | H = Normally Open with Aux. Contacts. (Option "H" requires option "A" in Coil Wire Length and option "N" in Coil Terminal Connector.)                                                                      |   |   |   |   |   |
| Note:                       | Other auxiliary contact forms available. Consult factory.                                                                                                                                                  |   |   |   |   |   |
| Coil Voltage:               | 4 = 12Vdc      5 = 24Vdc      6 = 48Vdc      K = 72Vdc<br>8 = 96Vdc      L = 110Vdc      O = 115Vac      9 = 240Vac                                                                                        |   |   |   |   |   |
| Notes:                      | Consult factory for detailed specifications and availability of coils not listed in "Coil Data" table above.<br>In coil voltage codes, 115Vac is designated by the letter "O" rather than the numeral "0." |   |   |   |   |   |
| Coil Wire Length:           | A = 15.3 in (390 mm)      N = None (Requires option "A" in next step.)                                                                                                                                     |   |   |   |   |   |
| Coil Terminal Connector:    | N = None, stripped wires (Requires option "A" in previous step.)<br>A = Studs, #10-32 Threaded (Electrical connection is made to the tab at the base of the stud.)                                         |   |   |   |   |   |
| Note:                       | Specify option A, stripped wires, for coil voltages > 96Vdc                                                                                                                                                |   |   |   |   |   |
| Mounting & Power Terminals: | A = Bottom Mount & Male 10mm x M8 Threaded Terminals<br>F = Side Mount & Male 10mm x M8 Threaded Terminals                                                                                                 |   |   |   |   |   |

Consult factory regarding other available mountings and power terminals.

NOTE: All part numbers are RoHS compliant (and always have been).

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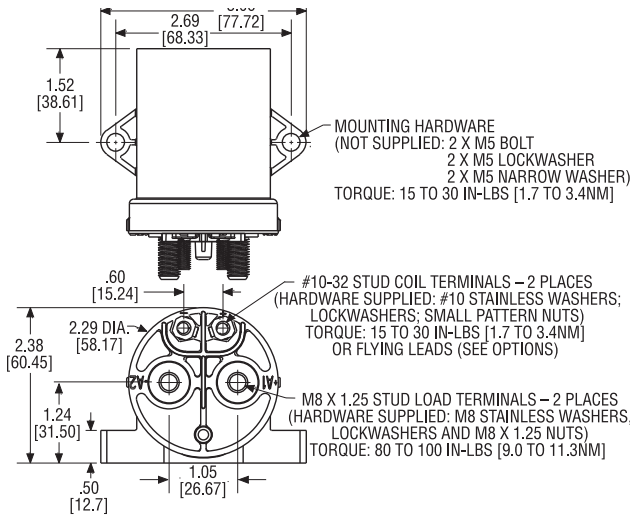
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## KILOVAC LEV200 Series (Continued)

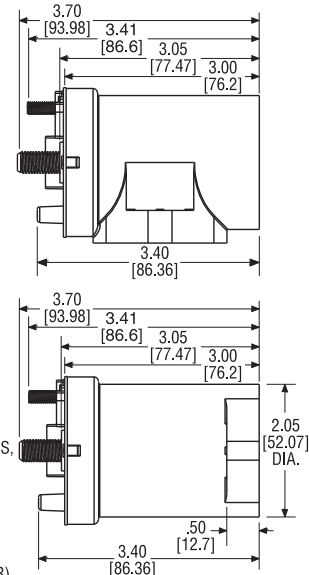
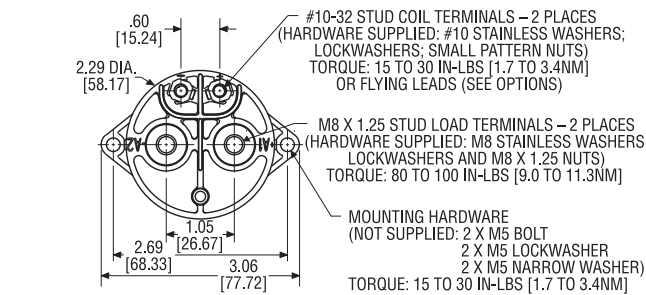
### Outline Dimensions

#### Side Mount Enclosure

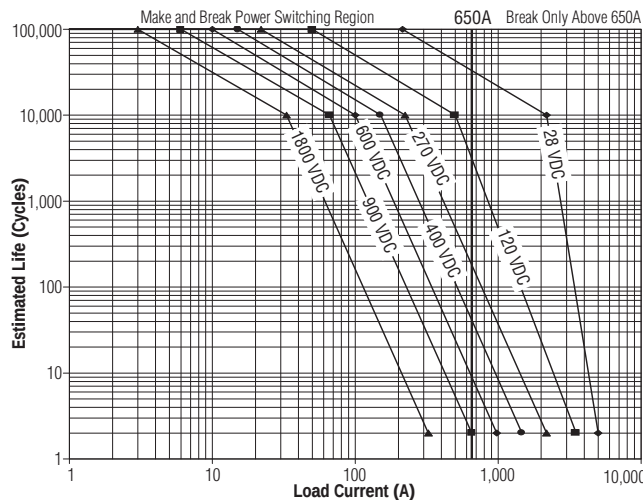


NOTE: When stud terminals are specified for coil connections, the electrical connection is made at the tab located at the base of the stud.

#### Bottom Mount Enclosure



### Estimated Make & Break Power Switching Ratings



#### NOTES:

- 1) For resistive loads with 300μH 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 LEV 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      |
| 2,000A (break only) (1)                                        | Cycles | 1*      |
| Mechanical Life                                                | Cycles | 100,000 |

- (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.

#### LEV200 Capacitive Make Test Curves for Pre-Charged Motor Controller

