

RXC61 SERIES

High Voltage Contactors

600A CONTINUOUS DUTY

1500VDC SYSTEM VOLTAGE



DESCRIPTION

The RXC61 Series are hermetically sealed high voltage DC contactors designed for high-current power switching in demanding applications. Rated for continuous currents up to 600A and system voltages up to 1500VDC, the RXC61 Series features bi-directional switching, integrated coil economization, and mechanically linked auxiliary contacts for reliable position feedback. Designed and assembled in the USA, these contactors are ideal for energy storage systems, electric vehicle battery systems, charging infrastructure, AI data center backup power systems, humanoid robotics, AGV's, and industrial DC power control.

FEATURES

SPST Normally Open High Voltage DC Contactor

- Hermetic Ceramic Seal with gas fill for superior carry and switching performance
- Bi-Directional Power Switching
- Mechanically linked auxiliary contacts for accurate main position feedback
- Integrated coil economizer for optimized power consumption
- Integrated coil suppression with zero back-EMF¹
- Meets RoHS 2011/65/EU
- IEC60947-4-1 compliant
- Patent Pending
- **Designed and Assembled in the USA**

TYPICAL APPLICATIONS

- Battery Energy Storage Systems (BESS)
- Electric and off-highway vehicles
- DC fast charging infrastructure
- AI data center backup power systems
- Humanoid and industrial robotics platforms
- Solar DC power distribution and control
- Industrial machinery and equipment
- Heavy trucks, buses, mining and construction vehicles
- AGV Automated Guided Vehicles

For factory-direct technical support and application assistance:

Call +1 805 456 6424

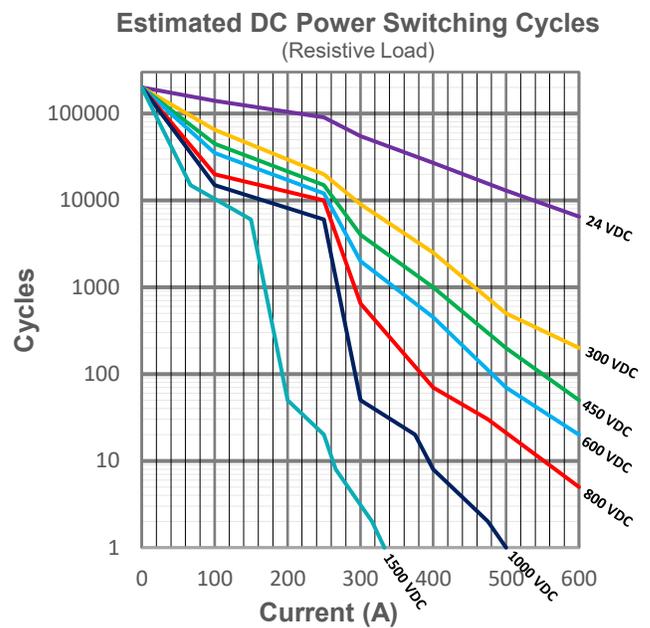
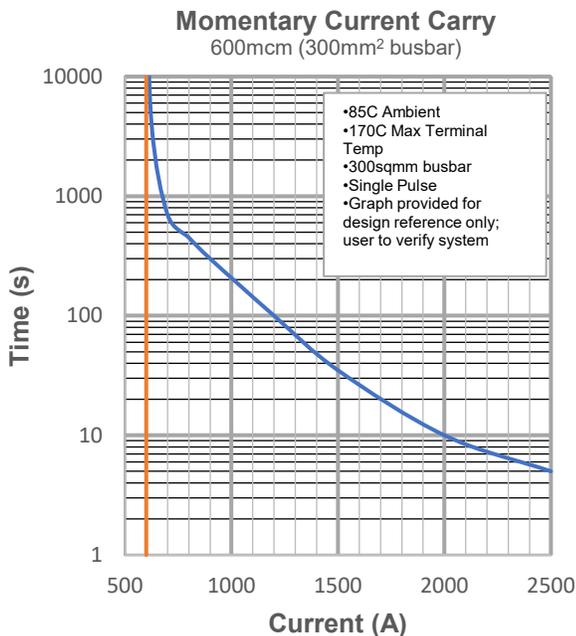
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Visit <https://www.rinconpower.com/contact-us>

PERFORMANCE

TABLE 1. SPECIFICATIONS

| CHARACTERISTIC | MEASURE |
|--|--|
| Contact Arrangement | Form X, SPST- NO |
| Max Switching Voltage ² | 1500 Vdc |
| Dielectric Withstand Voltage (Leakage <1mA) | Between Open Contacts |
| | Between Contacts and Coil |
| Mechanical Life | 300,000 cycles |
| Continuous Current (using 300mm ² conductor) ³ | 600A |
| Overload Current | See Momentary Current Carry graph |
| Max Current Withstand | 4000A, 20ms |
| Make and Break | See Estimated DC Power Switching Cycles graph |
| Min Insulation Resistance | 100 MΩ @ 1,000V (50 MΩ at end of life) |
| Contact Resistance (Max) measured at 200A | 0.3mΩ |
| (Typical) measured at 200A | 0.1- .15mΩ |
| Operate Time (Max, incl bounce) | 25ms |
| Release Time (Max) | 10ms |
| Shock - Functional, 1/2 Sine, 11ms | 20 G Peak |
| Shock - Destructive, 1/2 Sine, 11ms | 50 G Peak |
| Vibration, Sinusoidal (500-2000 Hz Peak) | 15G |
| Operating Temperature | -40°C to 85°C (170°C max terminal temperature) |
| Sealed Contacts | Exceeds IP69K (hermetically sealed) |
| Salt Fog | MIL-STD-810 |
| AUXILIARY CONTACTS | MEASURE |
| Contact Arrangement Options | Form A, SPST - Normally Open Form B, SPST - Normally Closed Form C, SPDT - Normally Open & Normally Closed |
| Continuous Current | 3A / 24 VDC |
| Minimum Current | 1 mA @ 5V |
| ECONOMIZED DUAL COIL (20°C) | MEASURE |
| Nominal Voltage | 12V 24V 48V |
| Max Voltage | 16V 32V 64V |
| Pick-up Voltage ⁴ | ≥9V ≥18V ≥36V |
| Drop-out Voltage | ≤6V ≤12V ≤24V |
| Inrush Current, Max (80 ms) | 3.8A 1.9A 0.9A |
| Coil Current | 0.65A 0.33A 0.16A |
| Coil Power | 7.8 W 7.8W 7.8W |



OPTIONS

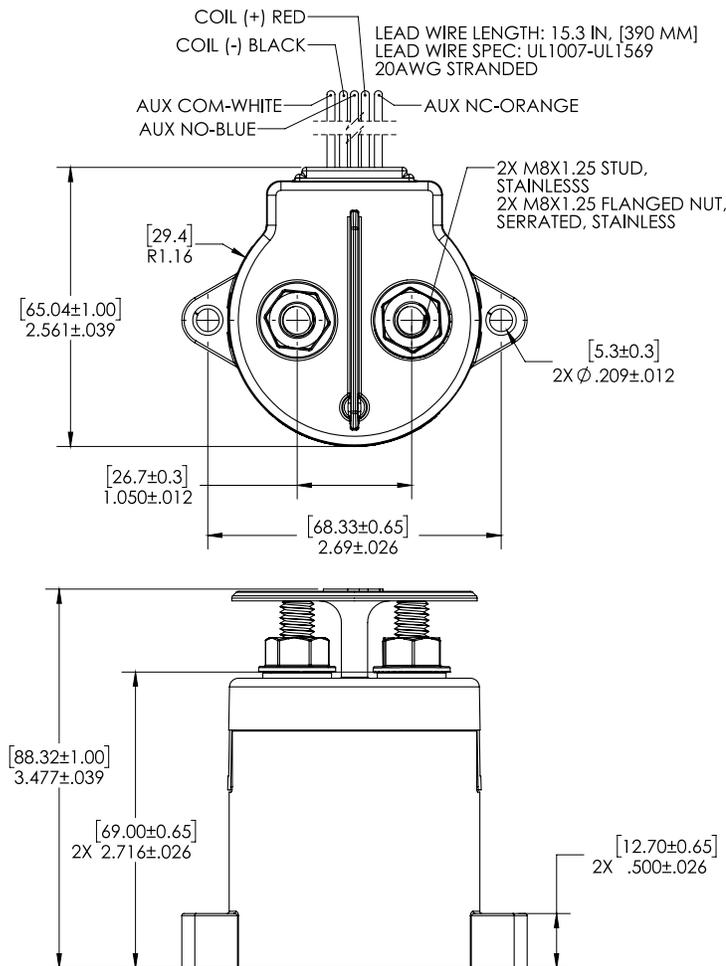
TABLE 2. PART NUMBER CONFIGURATION

| SERIES | CONTACT POLARITY | MOUNTING | COIL | AUXILIARY CONTACTS |
|--------|------------------|----------------------------|-------------------------|-----------------------|
| RXC61 | B Bi-directional | 1 Bottom Mount | P 12V dual (economized) | A Form A, SPST, NO |
| | | 8 Chassis Mount, M12 Studs | Q 24V dual (economized) | B Form B, SPST, NC |
| | | 9 Chassis Mount, M10 Studs | R 48V dual (economized) | C Form C, SPDT, NO&NC |
| | | | | X None |

Available Part Numbers: RXC61B1PA, RXC61B1PB, RXC61B1PC, RXC61B1PX, RXC61B1QA, RXC61B1QB, RXC61B1QC, RXC61B1QX, RXC61B1RA, RXC61B1RB, RXC61B1RC, RXC61B1RX, RXC61B8PA, RXC61B8PB, RXC61B8PC, RXC61B8PX, RXC61B8QA, RXC61B8QB, RXC61B8QC, RXC61B8QX, RXC61B8RA, RXC61B8RB, RXC61B8RC, RXC61B8RX, RXC61B9PA, RXC61B9PB, RXC61B9PC, RXC61B9PX, RXC61B9QA, RXC61B9QB, RXC61B9QC, RXC61B9QX, RXC61B9RA, RXC61B9RB, RXC61B9RC, RXC61B9RX

PRODUCT DIMENSIONS [mm]

Bottom Mount (RXC61B1)

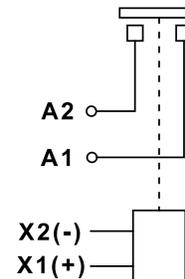


3D model available upon request

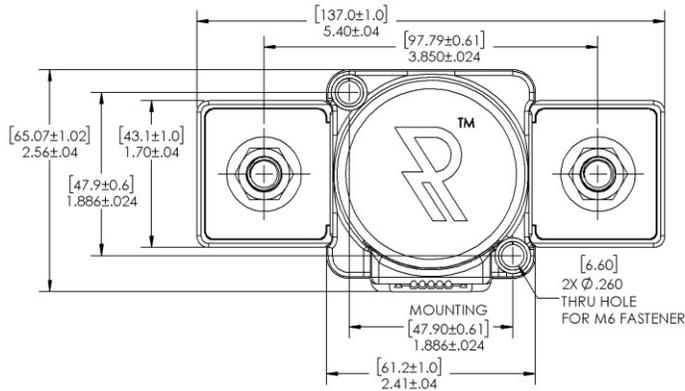
TABLE 3. DIMS AND INSTALL (RXC61B1)

| CHARACTERISTIC | MEASURE | | |
|--|-----------------------------------|--------|--------|
| Weight | 1.36 lb, [620g ±10g] | | |
| Mounting Position | Any / Not Position Sensitive | | |
| Package Quantity | 20 per box | | |
| Install Torque ⁵ | | | |
| 2X M8 Main Terminals | 80-88 in-lb, [9-10Nm] | | |
| Mounting Install Torque, 2X M5 or No. 10 Thru Hole | 18-35 in-lb, [2-4Nm] | | |
| COIL / AUX WIRE | Form A | Form B | Form C |
| Coil GND (-) | Black | Black | Black |
| Coil POS (+) | Red | Red | Red |
| Aux COM | White | White | White |
| AUX N.O. | White | N/A | Blue |
| AUX N.C. | N/A | White | Orange |
| Lead Wire Length | 19 in +/- 1 in, [48 cm +/-2.5 cm] | | |
| Lead Wire Size | 20AWG, Stranded | | |
| Lead Wire OD | 0.072 IN [1.82MM] | | |
| Jacket Material | PVC | | |
| UL Ratings | UL 1007, UL 1569 | | |

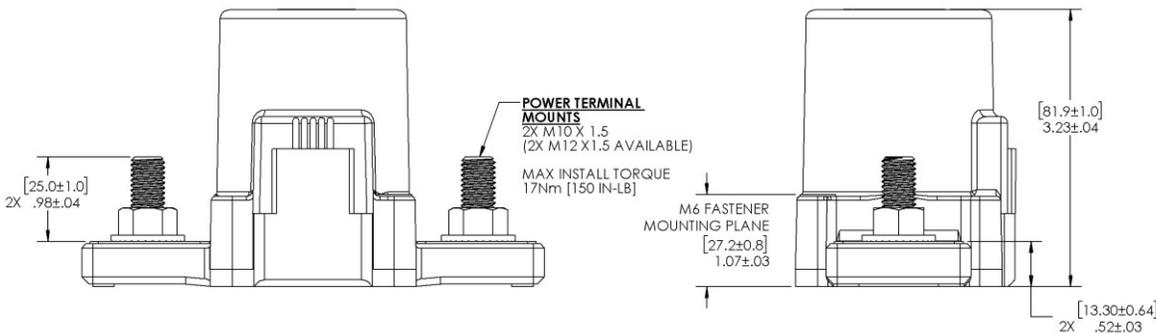
Power Contacts



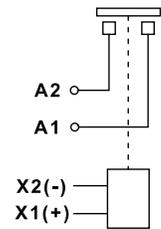
PRODUCT DIMENSIONS [mm]
Chassis Mount (RXC61B8, RXC61B9)



| TABLE 4. DIMS AND INSTALL (RXC61B8, RXC61B9) | | | |
|--|-----------------------------------|--------|--------|
| CHARACTERISTIC | MEASURE | | |
| Weight | 1.8 lb, [830g] | | |
| Mounting Position | Any / Not Position Sensitive | | |
| Package Quantity | 12 pcs | | |
| Install Torque ⁵ | | | |
| 2x M10 Main Terminals | 125-150 in-lb, [14-17Nm] | | |
| 2x M12 Main Terminals | 150-175 in-lb, [17-20Nm] | | |
| Mounting Install Torque, 2X M6 Thru Hole | 23-40 in-lb, [3-5Nm] | | |
| COIL / AUX WIRE | Form A | Form B | Form C |
| Coil GND (-) | Black | Black | Black |
| Coil POS (+) | Red | Red | Red |
| Aux COM | White | White | White |
| Aux N.O. | White | N/A | Blue |
| Aux N.C. | N/A | White | Orange |
| Lead Wire Length | 19 in +/- 1 in, [48 cm +/-2.5 cm] | | |
| Lead Wire Size | 20AWG, Stranded | | |
| Lead Wire OD | 0.072 IN [1.82MM] | | |
| Jacket Material | PVC | | |
| UL Ratings | UL 1007, UL 1569 | | |



Power Contacts



3D model available upon request

NOTES

1. Integrated coil suppression limits back-EMF to 0V. External diodes or suppressors do not affect operation.
2. Contactor may be used above Max Switching Voltage if the application does not require significant load breaking. Please contact Rincon Power for more details.
3. Attach cables and busbars directly to the main terminal pad using the recommended install torque. Do not use washers or other materials between the contactor power terminals and the conductor.
4. Dual coil economizer design: Pickup Voltage must be applied as a pulse. Do not ramp voltage.
5. Rigid busbar structures have the potential to induce stress into the device and can damage the hermetic seal. When using busbars, it is important to design compliance into the bus bar structure via the use of flexible laminated busbars and or by means of incorporating adjustability in adjacent bolted interfaces.

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