

# RXC35 SERIES

## High Voltage Contactors

**350A+ CONTINUOUS DUTY**

**1000Vdc SYSTEM VOLTAGE**



### FEATURES

#### SPST Normally Open High Voltage Contactors

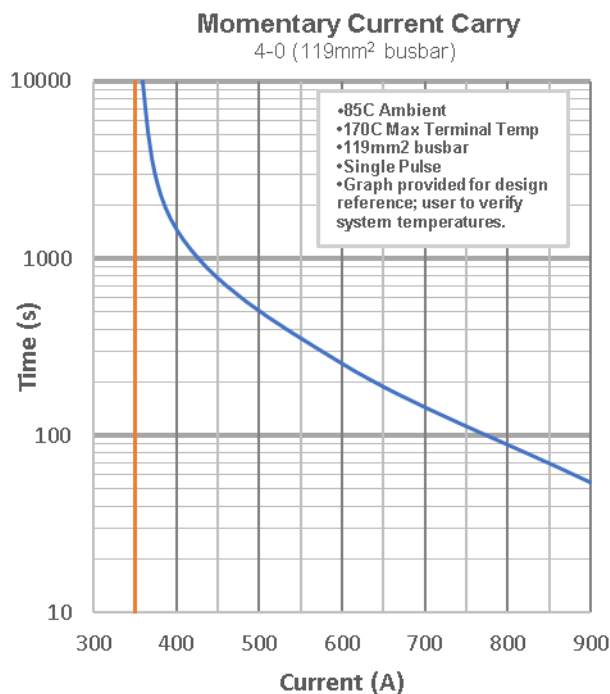
- Hermetic seal with gas fill
- Optional auxiliary contacts – for main position feedback
- High temperature performance
- Meets RoHS 2011/65/EU
- Designed and Assembled in US



## PERFORMANCE

**TABLE 1. SPECIFICATIONS**

| CHARACTERISTIC   | MEASURE   |
|--|---|
| Contact Arrangement  | Form X, SPST NO                                 |
| Max Switching Voltage <sup>2</sup>                             | 1,000 VDC                                       |
| Dielectric Withstand Voltage (Between Open Contacts and Coil)  | 2200 VRMS (60 sec)                              |
| (Between Contacts and Coil)                                    | 2200 VRMS (60 sec)                              |
| Continuous Current (107mm <sup>2</sup> conductor) <sup>5</sup> | 350A  |
| Overload Current 1 minute                                      | 850A  |
| 10 minutes   | 450A  |
| Make and Break   | See table                                       |
| Max Short Circuit Current - 20ms                               | 3500 A  |
| Min Insulation Resistance                                      | 100 MΩ @ 1,000V                                 |
| Contact Resistance (Max) measured at 200A                      | 0.3 mΩ  |
| (Typical) measured at 200A                                     | 0.15-.25 mΩ                                     |
| Operate Time (Max, incl bounce)                                | 25ms  |
| Release Time (Max)   | 10ms  |
| Shock - Functional, 1/2 Sine, 11ms                             | 20G   |
| Shock - Destructive, 1/2 Sine, 11ms                            | 50G   |
| Operating Temperature  | -45°C to 100°C (175°C Max Terminal Temperature) |
| Ingress Protection   | Exceeds IP69, (Hermetically Sealed)             |
| Mechanical life  | 300,000   |
| AUXILIARY CONTACTS   | MEASURE   |
| Contact Arrangement  | SPST  |
| Continuous Current   | 2A  |
| Minimum Current  | 5mA @ 8V  |
| ECONOMIZED DUAL COIL ( 20°C)                                   | MEASURE   |
| Nominal Voltage  | 12V 24V   |
| Max Voltage  | 16 VDC 32 VDC                                   |
| Pick-up Voltage (Max) <sup>3</sup>                             | 8.5 VDC 15.0 VDC                                |
| Drop-out Voltage (Min)   | 0.6 VDC 1.2 VDC                                 |
| Pull-in current (max 300ms)                                    | 4.3A 1.6A                                       |
| Holding Current  | 0.24A 0.09A                                     |
| Coil Power (pull-in)   | 46W 38W   |
| Coil Power (Holding)   | 2.9W 2.2W                                       |
| Coil Back EMF (V) via internal TVS                             | 150V 150V                                       |


**TABLE 2. RESISTIVE LOAD SWITCHING (MAKE / BREAK DATA)**

| POLARITY SENSITIVE VERSION |         | CYCLES<br>(1 cycle = 1 make + 1 break) |
|----------------------------|---------|--|
| VOLTAGE                    | CURRENT |  |
| 450V                       | 350A    | 2500                                   |
| 800V                       | 300A    | 1500<br>BREAK only                     |
| 750V                       | 400A    | 500                                    |
| 320V                       | -300A   | 12                                     |
| 750V                       | 50A     | 20,000                                 |
| 450V                       | 100A    | 50,000                                 |
| 1000V                      | 350A    | 300<br>(BREAK Only)                    |

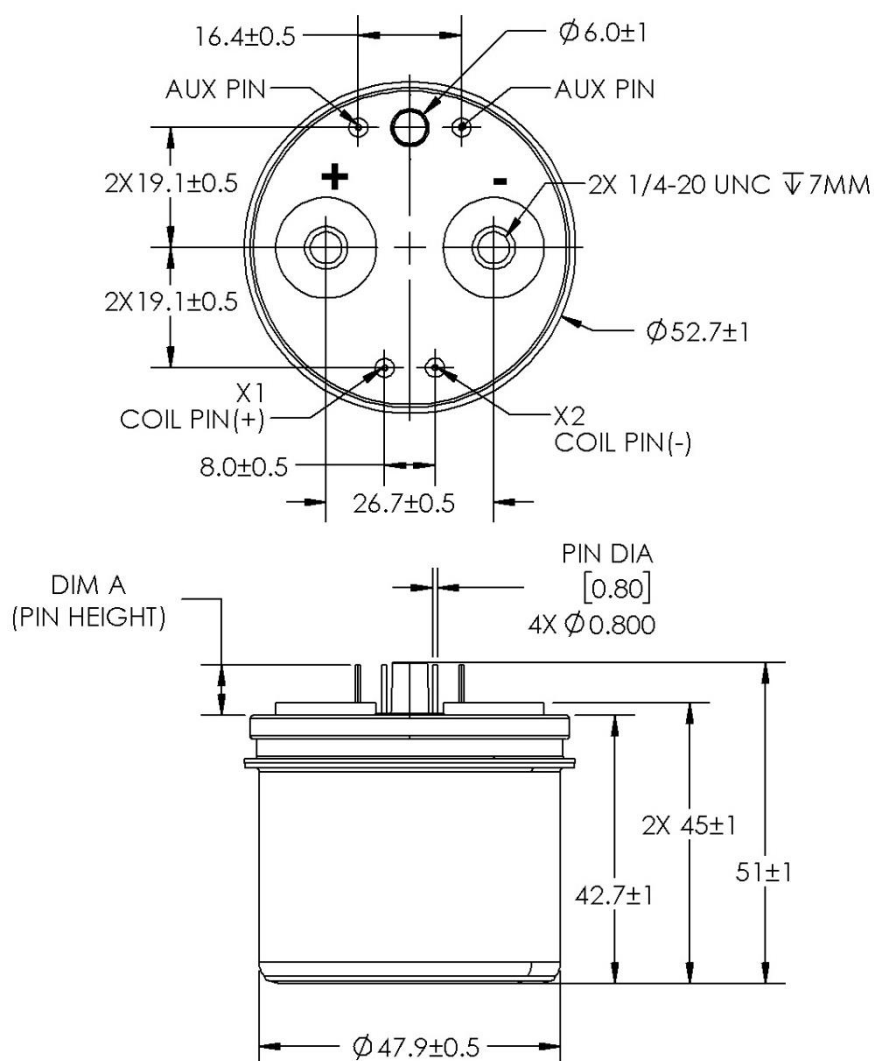
## OPTIONS

**TABLE 3. PRODUCT NOMENCLATURE**

|       | CONTACT POLARITY            | MOUNTING               | COIL                                | AUXILIARY CONTACTS       |
|-------|-----------------------------|------------------------|-------------------------------------|--------------------------|
| RXC35 | <b>P</b> Polarity Sensitive | <b>3</b> PCB Mount     | <b>P</b> 12V dual coil (economized) | <b>A</b> Normally Open   |
|       |                             | <b>9</b> Chassis Mount | <b>Q</b> 24V dual coil (economized) | <b>B</b> Normally Closed |
|       |                             |                        |                                     | <b>X</b> None            |

## PRODUCT DIMENSIONS [mm]

### Mounting Option 3 – PCB Mount

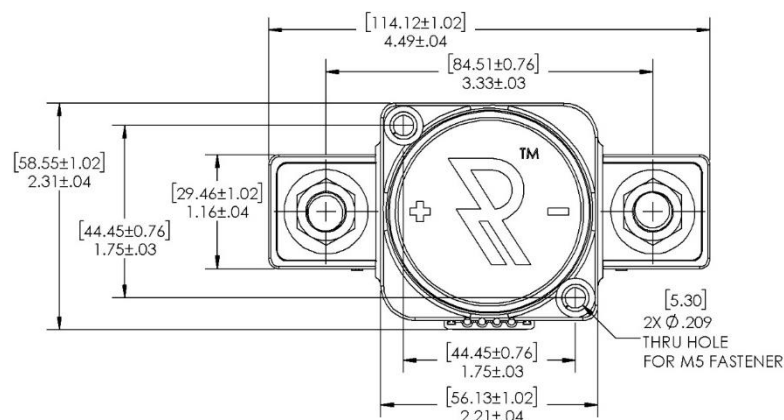

**TABLE 4. DIMENSIONAL AND INSTALLATION PCB Mount**

| CHARACTERISTIC    | MEASURE                      |
|-------------------|------------------------------|
| Weight            | 290g (0.64 lb)               |
| Coil Wire         | N/A                          |
| Mounting Inserts  | N/A                          |
| Mounting Position | Any / Not Position Sensitive |
| Package Quantity  | TBD                          |
| Install Torque    | 7 Nm                         |
| 1/4" – 20         | 7mm thread engagement        |
| Main Terminals    |                              |

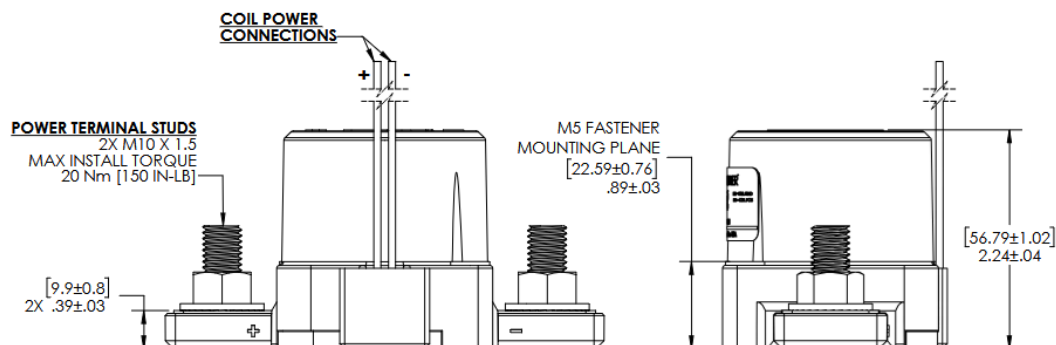


| DIM A (PIN HEIGHT)      | CONFIGURATION                                |
|-------------------------|--|
| 4X 8.5 mm $\pm 0.5$ mm  | WITH AUX CONTACTS ( <b>A</b> , OR <b>B</b> ) |
| 2X 11.2 mm $\pm 0.5$ mm | WITHOUT AUX CONTACTS ( <b>X</b> )            |

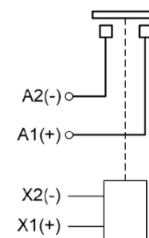
## Mounting Option 9 – Chassis Mount


**TABLE 5. DIMENSIONAL AND INSTALLATION**

| CHARACTERISTIC                             | MEASURE                      |
|--|------------------------------|
| Weight                                     | 490g (1.1 lb)                |
| Mounting Inserts                           | M5                           |
| Mounting Position                          | Any / Not Position Sensitive |
| Package Quantity                           | 20 pcs                       |
| Install Torque<br>M10 x 1.5 Main Terminals | 125-150 in-lb. [14-20Nm]     |
| COIL / AUX WIRE                            | FUNCTION                     |
| Black                                      | Coil GND (-)                 |
| Red  | Coil POS (+)                 |
| Grey                                       | Aux COM                      |
| Blue                                       | Aux N.O.                     |
| Orange                                     | Aux N.C.                     |
| Lead Wire Length                           | 15 in [38cm]                 |
| Lead Wire Size                             | 20AWG, Stranded              |
| Jacket Material                            | PVC                          |
| UL Ratings                                 | UL 1007, UL 1569             |



## Power Contacts



- 3D model available upon request

## NOTES

1. 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.
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. Dual coil economizer design: Pickup Voltage must be applied as a pulse. Do not ramp voltage.
4. Integrated coil suppression limits back EMF to 150V.
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.
6. Polarity Sensitive versions are marked + and - for the power terminals. For applications that require the contactor to switch under load, please ensure current is flowing from the + to the - terminal when breaking/opening under load. For Bi-Directional versions the direction of current does not matter when breaking under load.

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