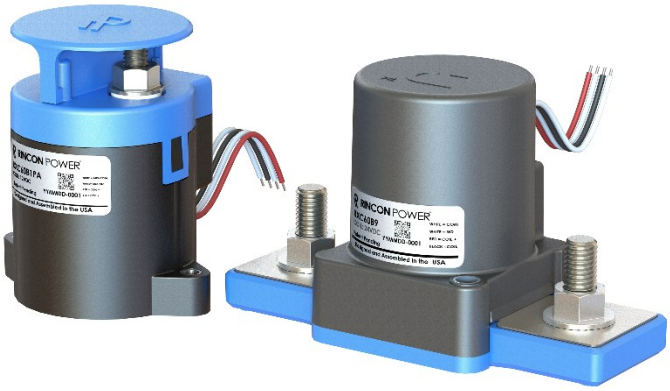
RINCONPOWER®
Products For An Electrified Future

RXC60 SERIES

High Voltage Contactors

600A CONTINUOUS DUTY

1000VDC SYSTEM VOLTAGE



DESCRIPTION

The RXC60 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 1000VDC, the RXC60 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-EMF[1]
- 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

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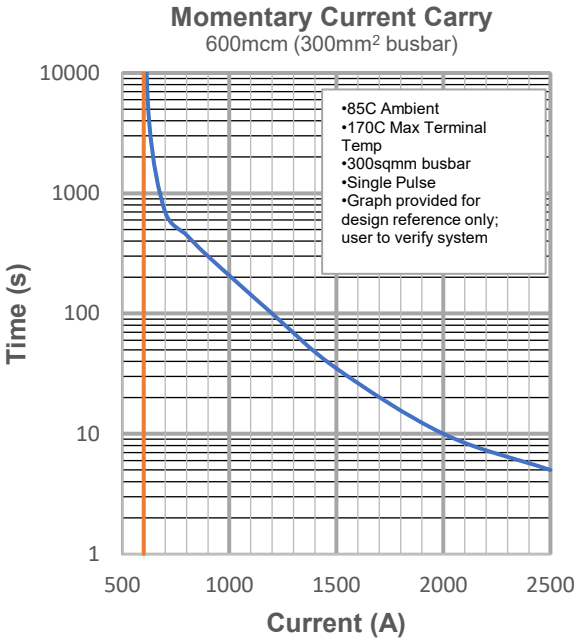
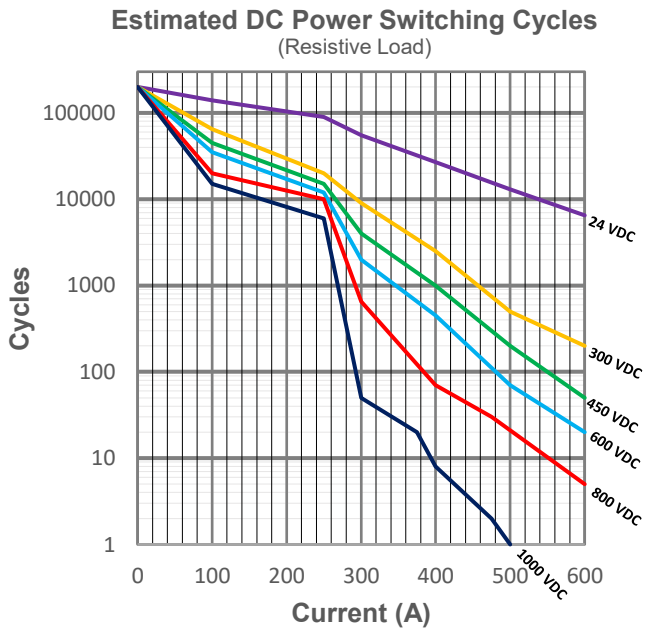
PERFORMANCE

TABLE 1. SPECIFICATIONS

CHARACTERISTIC	MEASURE		
Contact Arrangement	Form X, SPST- NO		
Max Switching Voltage[2]	1000 Vdc		
Dielectric Withstand Voltage (Leakage <1mA) Between Open Contacts	2200 VRMS (60 sec)		
Between Contacts and Coil	2200 VRMS (60 sec)		
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

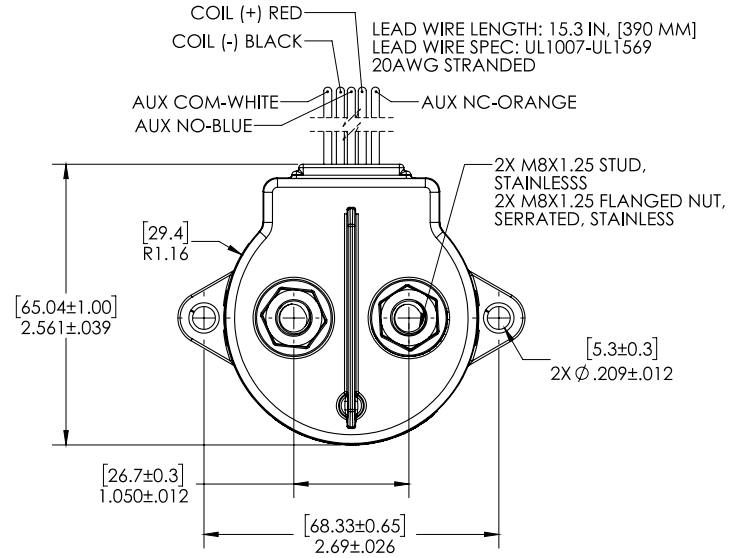
TABLE 2. PART NUMBER CONFIGURATION

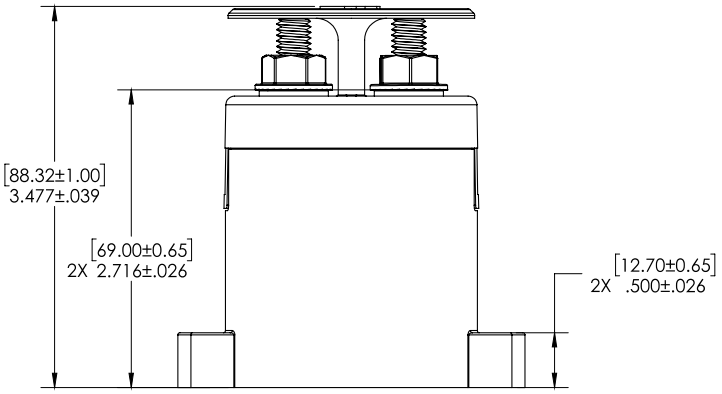
SERIES	CONTACT POLARITY	MOUNTING	COIL	AUXILIARY CONTACTS
RXC60	B Bi-directional	1 Bottom Mount	P 12V dual (economized)	A Form A, SPST, NO
		8 Chassis Mount, M12 Studs	Q 24V dual (economized)	B Form B, SPST, NC
		9 Chassis Mount, M10 Studs	R 48V dual (economized)	C Form C, SPDT, NO&NC
				X None

Available Part Numbers: RXC60B1PA, RXC60B1PB, RXC60B1PC, RXC60B1PX, RXC60B1QA, RXC60B1QB, RXC60B1QC, RXC60B1QX, RXC60B1RA, RXC60B1RB, RXC60B1RC, RXC60B1RX, RXC60B8PA, RXC60B8PB, RXC60B8PC, RXC60B8PX, RXC60B8QA, RXC60B8QB, RXC60B8QC, RXC60B8QX, RXC60B8RA, RXC60B8RB, RXC60B8RC, RXC60B8RX, RXC60B9PA, RXC60B9PB, RXC60B9PC, RXC60B9PX, RXC60B9QA, RXC60B9QB, RXC60B9QC, RXC60B9QX, RXC60B9RA, RXC60B9RB, RXC60B9RC, RXC60B9RX

PRODUCT DIMENSIONS [mm]

Bottom Mount (RXC60B1)



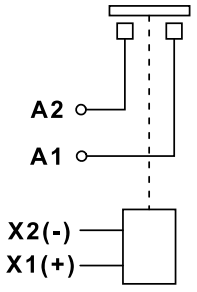


3D model available upon request

TABLE 3. DIMS AND INSTALL (RXC60B1)

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 (RXC60B8, RXC60B9)

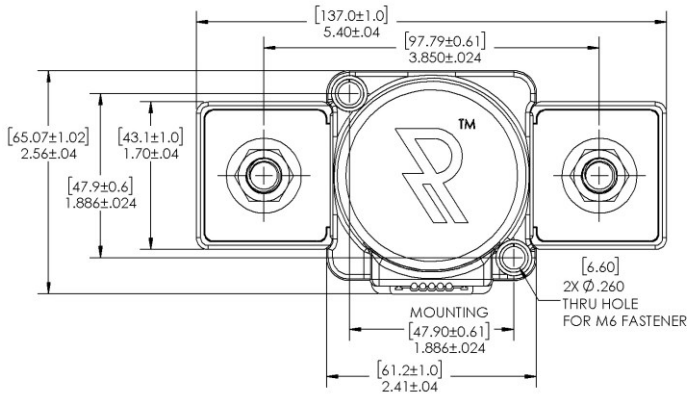
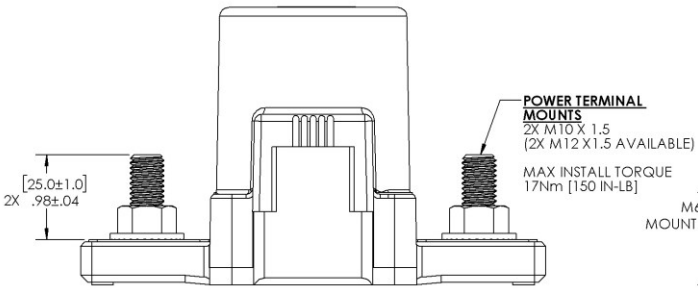
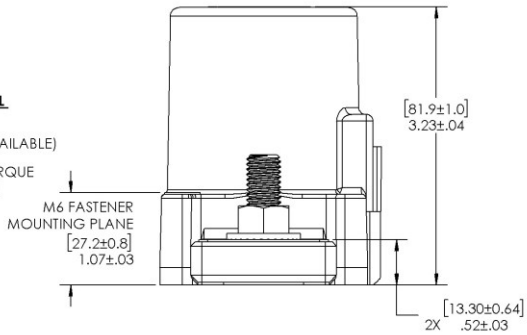
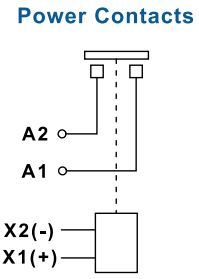


TABLE 4. DIMS AND INSTALL (RXC60B8, RXC60B9)			
CHARACTERISTIC	**MEASURE**		
Weight	1.8 lb, [830g]		
Mounting Position	Any / Not Position Sensitive		
Package Quantity	12 pcs		
Install Torque[5] 2x M10 Main Terminals 2x M12 Main Terminals	 125-150 in-lb, [14-17Nm] 150-175 in-lb, [17-20Nm]		
Mounting Install 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		







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.