

# RXR03 SERIES

High Voltage Contactors

**50A** CONTINUOUS DUTY

**1500V** SYSTEM VOLTAGE



## FEATURES

SPST Normally Open High Voltage Contactors

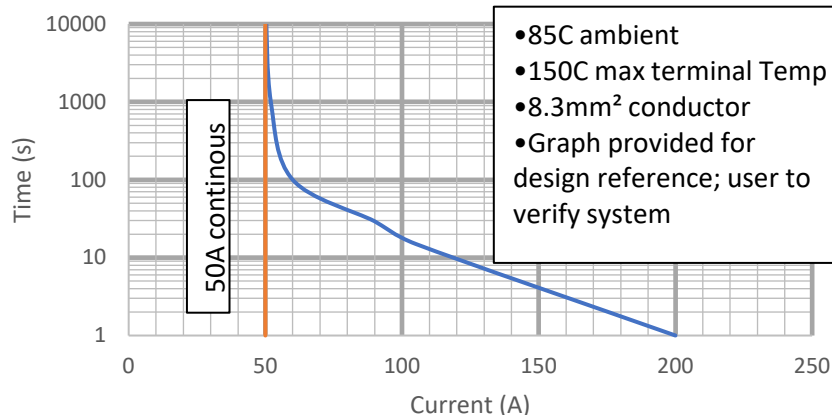
- Ceramic seal
- PCB Mountable (optional)
- Bi-directional power switching
- Meets RoHS 2011/65/EU
- REACH Compliant



## PERFORMANCE

**TABLE 1. SPECIFICATIONS**

CHARACTERISTIC	MEASURE
Contact Arrangement	Form X, SPST NO
Max Switching Voltage	1,500 VDC
Dielectric Withstand Voltage (Max Leakage Current: 1mA)	3,000 VAC, 1 minute contacts to coil 3,000 VAC, 1 minute across open contacts
Continuous Current (8.4mm <sup>2</sup> conductor)	50A
(5.3mm <sup>2</sup> conductor)	40A
Overload Current	10 seconds 120A 30 seconds 90A
Max Break – 200A @ 1000V	1 cycle
Max Short Circuit Current -1 second	200 A
Min Insulation Resistance	1,000 Mohm @ 500VDC
Contact Voltage Drop (Max)	50mV @ 10A
Operate Time (Max, incl bounce)	30ms
Release Time (Max)	10ms
Shock - Functional, 1/2 Sine, 11ms	20G
Shock – Destructive, 1/2 Sine, 11ms	50G
Operating Temperature	-40°C to 85°C
Vibration 10Hz-2,000Hz)	6 G
Ingress Protection	IP67
Mechanical life	500,000 cycles
AUXILIARY CONTACTS	MEASURE
Contact Arrangement	Not available
COIL (20° C)	MEASURE
Nominal Voltage	12 VDC 24 VDC
Pick-up Voltage (Max)	9 VDC 18 VDC
Max Voltage	16 VDC 32 VDC
Drop-out Voltage (Min)	0.9 VDC 1.8 VDC
Coil Resistance	51.4Ω 206Ω
Coil Power at Nominal Voltage	2.8W 2.8W

**Current Carry**

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

Polarity Sensitive		CYCLES (1 cycle = 1 make + 1 break)
VOLTAGE	CURRENT	
450V	20A	75,000
450V	30A	150,000 (MAKE only)
750V	20A	50,000
750V	30A	75,000 (MAKE only)
1000V	20A	30,000
1000V	30A	50,000 (MAKE only)
1500V	40A	15,000 (MAKE only)

## OPTIONS

**TABLE 3. PRODUCT NOMENCLATURE**

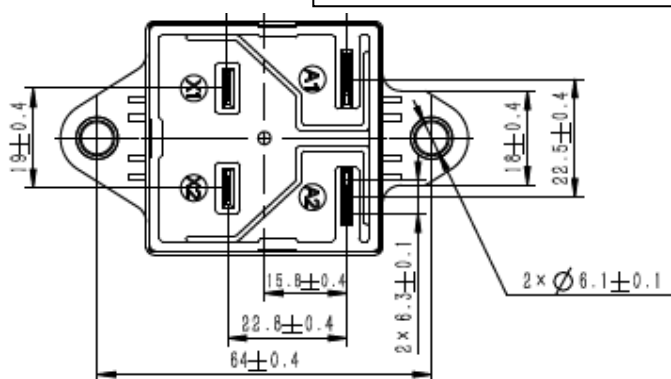
	CONTACT POLARITY	MOUNTING	COIL	AUXILIARY CONTACTS
<b>RXR03</b>	<b>B</b> Bi-Directional	<b>1</b> 4.8mm coil blades	<b>A</b> 12V	<b>X</b> None
		<b>3</b> 6.3mm coil blades	<b>B</b> 24V	

## PRODUCT DIMENSIONS [mm]

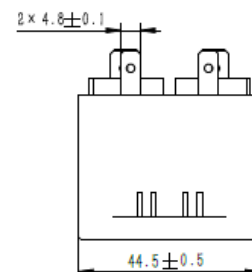
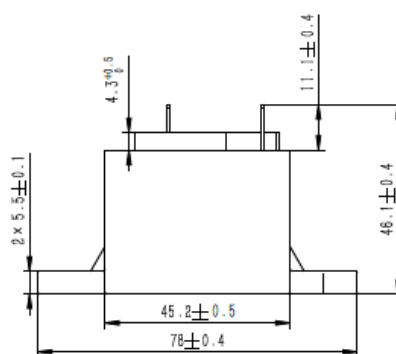
### 4.8mm coil blades

(Option 1)

Power Terminals - #250 insert terminals  
6.3mm / 0.8 thickness

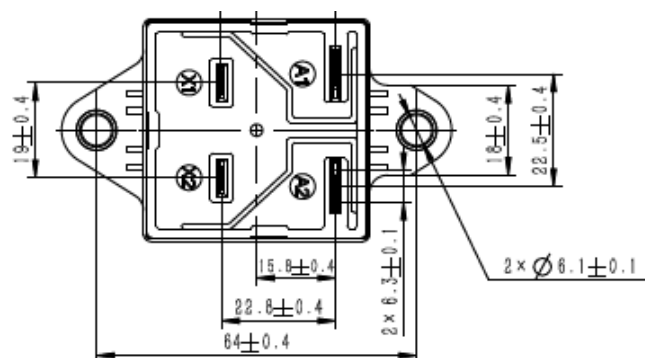


Coil Terminals - #187 insert terminals  
4.8mm / 0.8 thickness

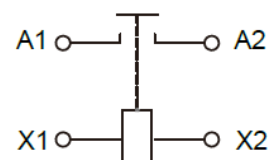
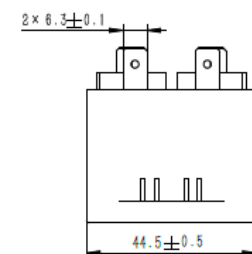
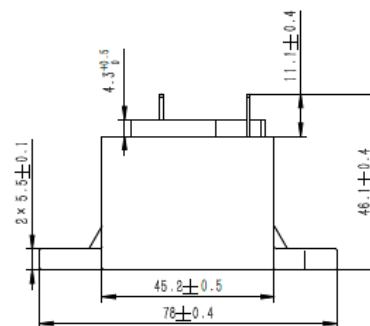


### 6.3mm coil blades (Option 3)

Power Terminals - #250 insert terminals  
6.3mm / 0.8 thickness



Coil Terminals - #250 insert terminals  
6.3mm / 0.8 thickness



**TABLE 4. DIMENSIONAL AND INSTALLATION**

CHARACTERISTIC	MEASURE
Weight	140g
Mounting Position	Any / Not Position Sensitive
Package Quantity	40 (bottom and PCB-mount)
(PCB) welding Parameters	<b>Manual welding:</b> (350±20°C), time 3s; <b>Wave soldering:</b> (265±5°C), time (3~8)s.

## NOTES

- Continuous current tested with 85°C temperature rise at the power terminals. Terminal temperature should be limited to 150°C
- Contactors are operated by a coil that changes resistance with temperature: Maximum coil voltage will be lower than indicated at temperatures above 25°C, and higher than indicated at temperatures below 25°C.
- Nominal Coil Voltage for Pick-up Current, Coil Current and Coil Power specifications, Current/Wattage will be lower than indicated at temperatures above 25°C and higher than indicated at temperatures below 25°C.
- Pick-up Voltage and Drop Out Voltage will be lower than indicated at temperatures below 25°C and higher than indicated at temperatures above 25°C.
- Contactors may be used above Max Switching Voltage if the application does not require significant load breaking. Please contact Rincon Power to discuss in more detail.

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