

# RECNC46

High Voltage Contactors



**400A** CONTINUOUS DUTY

**1000V** SYSTEM VOLTAGE

## FEATURES

### SPST Normally Closed High Voltage Contactors

- Hermetic seal with gas fill
- Optional auxiliary contacts – for main position feedback
- Integrated coil economizer to reduce coil holding power
- Meets RoHS 2011/65/EU
- CE certified

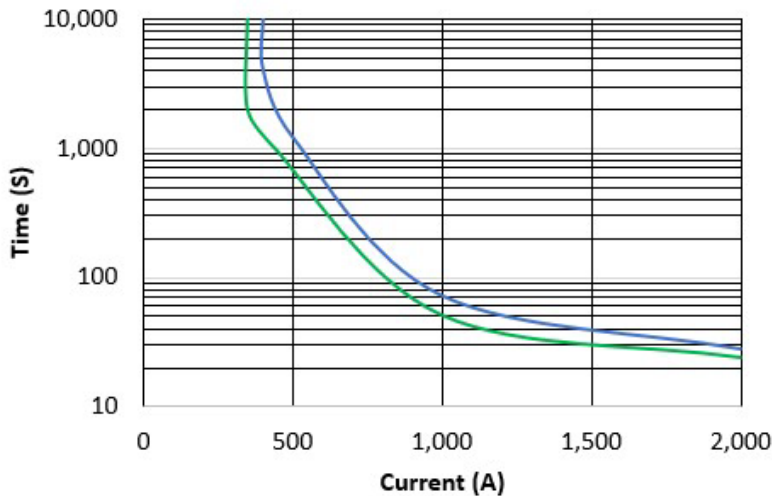


**PERFORMANCE**

TABLE 1. SPECIFICATIONS	
CHARACTERISTIC	MEASURE
Contact Arrangement	Form X, SPST NC
Max Switching Voltage	1000 VDC
Dielectric Withstand Voltage Contacts to Coil	2,200 VAC, 1 minute
Dielectric Withstand Voltage Across Open Contacts	4,000 VDC, 1 minute
Continuous Current (107mm <sup>2</sup> conductor)	400A
Overload Current	1,000A
1 minute	600A
5 Minutes	
Make and Break	See table
Max Short Circuit Current -1 second	2,000 A
Min Insulation Resistance	1,000 Mohm @ 1,000V
Contact Resistance at 300A (Max)	0.3mohm
Operate Time (Max, incl bounce)	30ms
Release Time (Max)	12ms
Shock - Functional, 1/2 Sine, 11ms	20G
Shock - Destructive, 1/2 Sine, 11ms	50G
Operating Temperature	-40°C to 85°C
Ingress Protection	Exceeds IP69, (Hermetically sealed)
Mechanical life	300,000
AUXILIARY CONTACTS	MEASURE
Contact Arrangement	SPST (NO and NC versions)
Continuous Current	2A
Minimum Current	1mA @ 12V
<b>COIL (all data at 20°C ambient)</b>	See coil table on page 4

**Current Carry vs Time**

400A Max (4/0) / 350A Max (2/0)



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

VOLTAGE	CURRENT	CYCLES 1 cycle = 1 make + 1 break
450V	250A	10,000
320V	2000A	1,000 BREAK only
1000V	50A	6,000

## OPTIONS

**TABLE 3. PRODUCT NOMENCLATURE**

	CONTACT POLARITY	MOUNTING	COIL	AUXILIARY CONTACTS
<b>RECNC46</b>	<b>B</b> Bi-directional <b>P</b> Polarity Sensitive	<b>1</b> bottom mount	<b>P</b> 12V dual coil economizer <b>Q</b> 24V dual coil economizer <b>R</b> 48V dual coil economizer	<b>X</b> None <b>A</b> Normally Open <b>B</b> Normally Closed

<sup>1</sup> Requires customer to provide PWM controls for the coil

## Coil Data

Coil Part Number	P	Q	R
Rated Voltage	12VDC	24VDC	48VDC
Coil Type	Dual	Dual	Dual
Coil Voltage, Max (V)	16VDC	32VDC	64VDC
Max. Pickup Voltage	8VDC	16VDC	40VDC
Min. Drop-out Voltage	0.5VDC	2VDC	4VDC
Pick-Up Current, Max (75 ms)	3.9A	1.6A	0.97A
Coil Current	0.23A	0.097A	0.042A
Coil Power	2.8W	2.3W	2W

## PRODUCT DIMENSIONS [mm]

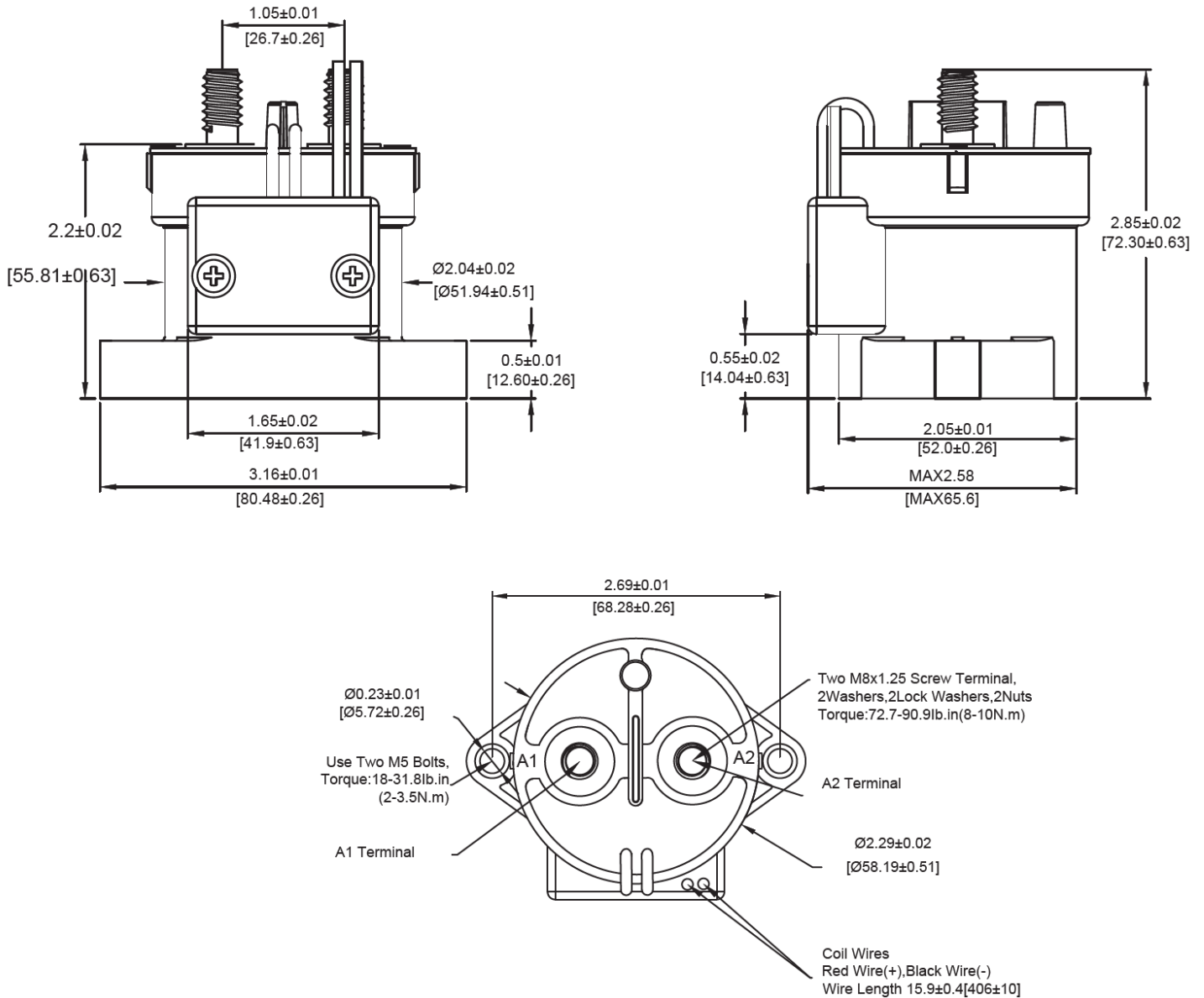


TABLE 4. DIMENSIONAL AND INSTALLATION	
CHARACTERISTIC	MEASURE
Weight	430g (0.95 lb)
Wire Size	22 AWG
Mounting Position	Any / Not Position Sensitive
Package Quantity	20 pieces
Install Torque M8 Main Terminals	8-10Nm (70-90 in-lb)

## NOTES

- Polarity Sensitive versions are marked +A1 and -A2 for the power terminals. For applications that require the contactor to open under load, please ensure current is flowing from the +A1 to the -A2 terminal. For Bi-Directional versions the direction of current does not matter when breaking under load.
- Contactor is 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.
- Attached cables and busbars directly to the main terminal pad using the recommended install torque. Do not use washers or other materials between the contactor and the conductor. This will ensure the lowest possible contact resistance.
- Avoid excessive coil voltages. Exceeding the ratings on the datasheet may result in high coil temperature and coil failure.
- Contactor 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.