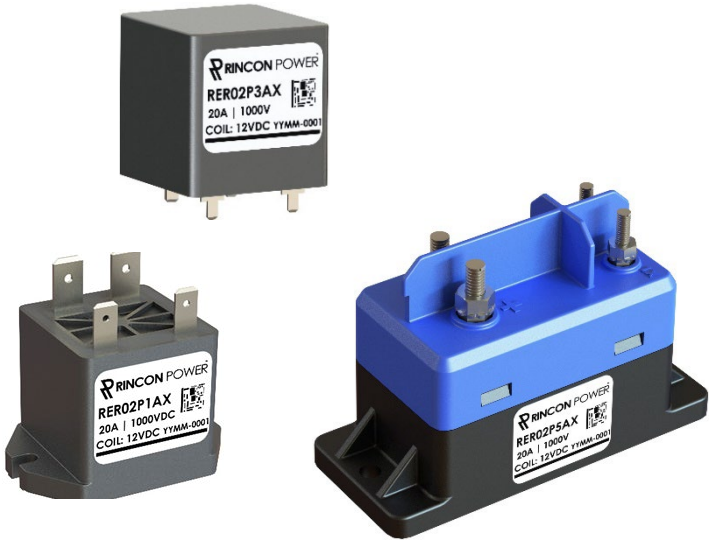
RER02 SERIES

High Voltage Contactors

40A CONTINUOUS DUTY

1000V SYSTEM VOLTAGE



FEATURES

SPST Normally Open High Voltage Contactors

- PCB Mountable (Optional)
- Low-Cost Pre-Charge Solution
- Meets RoHS 2011/65/EU
- REACH Compliant

PERFORMANCE

TABLE 1. SPECIFICATIONS		
CHARACTERISTIC	**MEASURE**	
Contact Arrangement	Form X, SPST NO	
Max Switching Voltage [1]	1000 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 (4mm² conductor)	20A	
(13mm² conductor)	40A	
Overload Current 30 seconds 1 hour	80A 30A	
Max Break – 30A @ 450V	5 cycles	
Max Short Circuit Current -0.5 second	200 A	
Min Insulation Resistance	1,000 Mohm @ 500VDC	
Contact Resistance (Max)	5.0 mOhm	
(Typical)	3.5 mOhm	
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	
Ingress Protection	IP67,	
Mechanical life	1,000,000 cycles	
AUXILIARY CONTACTS	**MEASURE**	
Contact Arrangement	Not available	
COIL (20° C) [2]	**MEASURE**	
Nominal Voltage	12 VDC	24 VDC
Pick-up Voltage (Max)	9 VDC	18 VDC
Drop-out Voltage (Min)	0.8 VDC	1.6 VDC
Coil Resistance	48Ω	192Ω
Coil Power at Nominal Voltage	3W	3W

Current Carry 20A / 4mm², 40A / 13mm² (85°C Ambient)

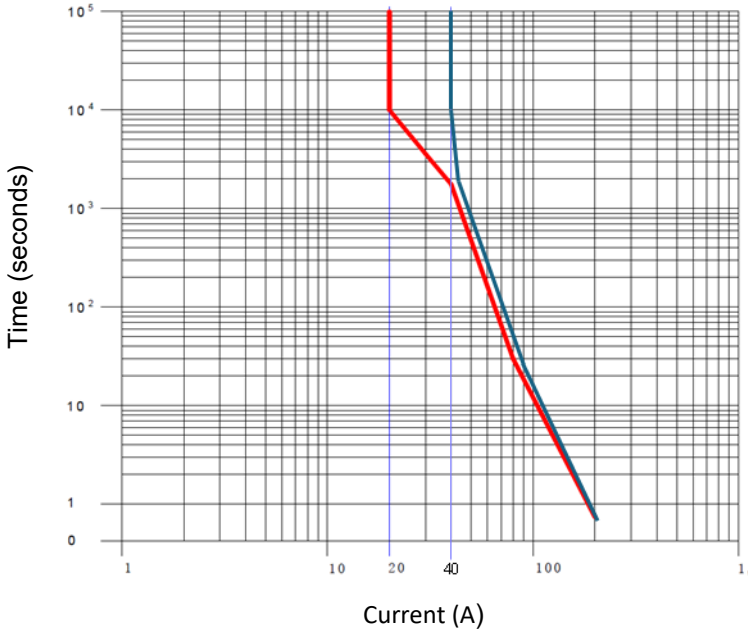


TABLE 2. RESISTIVE LOAD SWITCHING (MAKE / BREAK DATA)		
Polarity Sensitive		**CYCLES** (1 cycle = 1 make + 1 break)
VOLTAGE	**CURRENT**	
450V	20A	5,000
450V	10A	10,000
450V	20A	75,000 (MAKE only)
450V	30A	50,000 (MAKE only)
800V	15A	50,000 (MAKE only)
1000V	10A	30,000 (MAKE only)
1000V	10A	250 (BREAK only)

[1] Contactor can be used in systems with higher voltages, but should be limited to no current, or very low current breaking.
[2] Coil terminals are non-polar

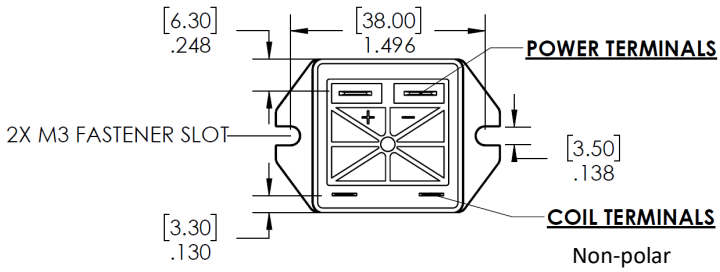
OPTIONS

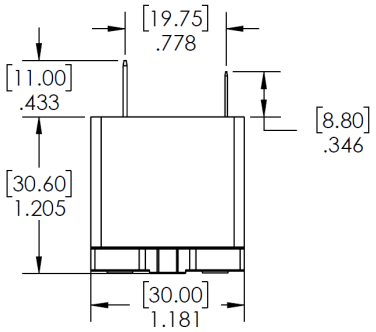
TABLE 3. PRODUCT NOMENCLATURE

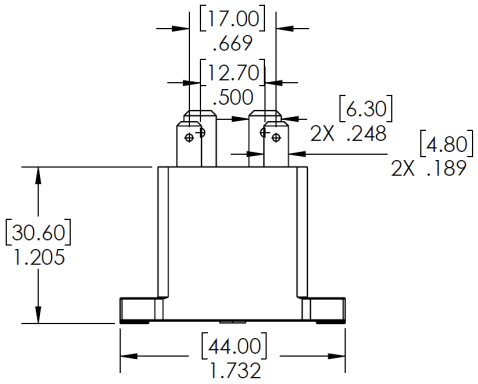
	CONTACT POLARITY	MOUNTING	COIL	AUXILIARY CONTACTS
RER02	**P** Polarity Sensitive	**1** Bottom Mount **3** PCB Mount **4** PCB Assembly with Studs **5** Stud Terminal Package	**A** 12V **B** 24V	**X** None

PRODUCT DIMENSIONS [mm]

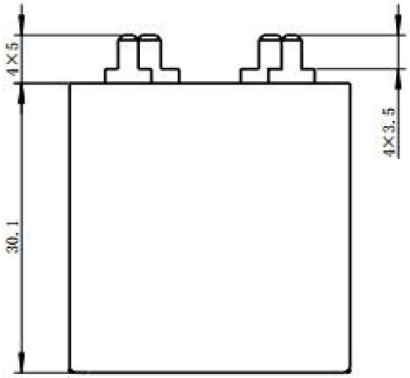
Bottom Mount

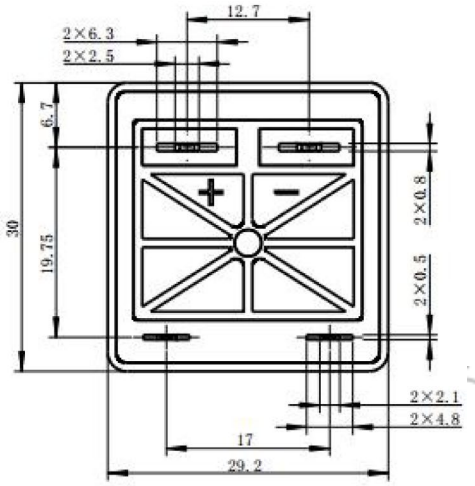






PCB Mount (Option 3)





COIL TERMINALS

Non-polar

PCB Assembly with Studs (Option 4)

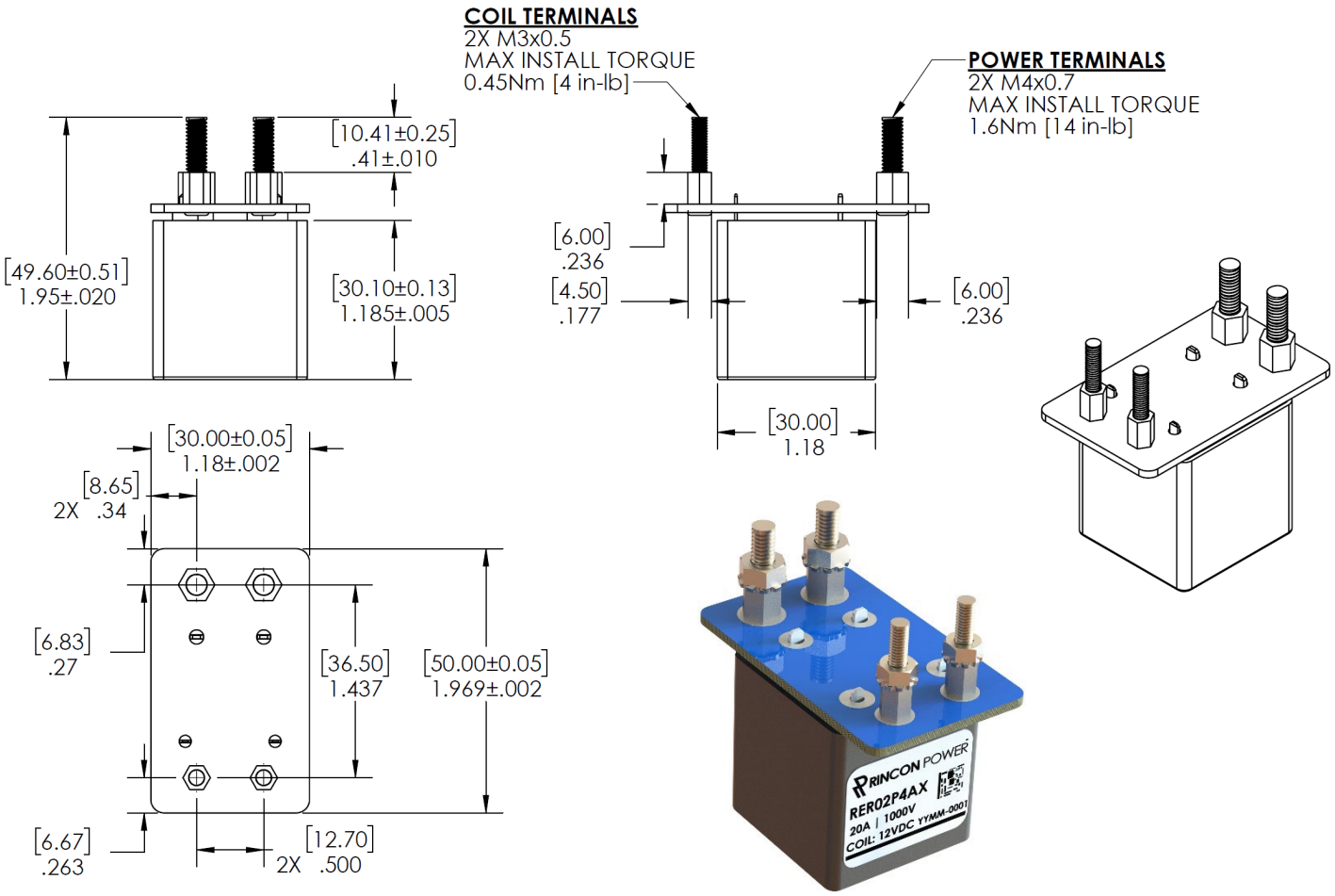
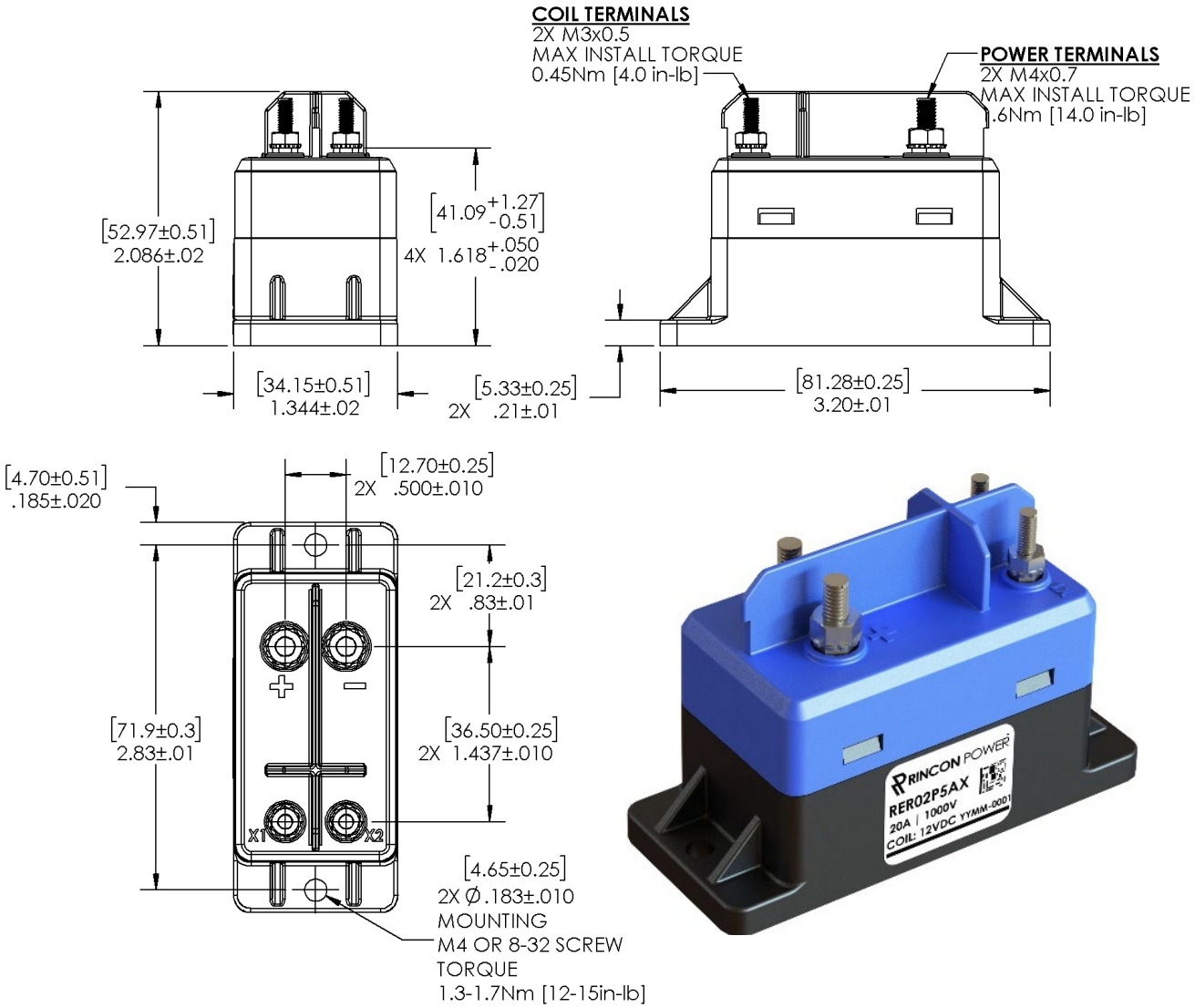


TABLE 4. DIMENSIONAL AND INSTALLATION	
CHARACTERISTIC	**MEASURE**
Weight	50g PCB Mount Version 65g PCB Assembly Version 105g Stud Terminal Version
Mounting Position	Any / Not Position Sensitive
Package Quantity	120 (Bottom and PCB-Mount)
(PCB) Welding Parameters	**Manual Welding**: (350±20℃), time 3s； **Wave Soldering**: (265±5℃), time (3～8)s.

Stud Terminal Package (Option 5)



NOTES

- Attach cables and busbars directly to the main terminal pad. Do not use washers or other materials between the contactor power terminals and the conductor.
- Continuous current tested with 85°C temperature rise at the power terminals. Terminal temperature should be limited to 150°C
- 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.
- 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.