

Commander II and Commander II+ Assembly Form

Customer:

Date:

Order Ref#



Quantity:

Project:

Output Voltage:

Modify DC Chassis ground to Isolated:

1. Select System

<input type="checkbox"/> Commander II	<input type="checkbox"/> Commander II+
	

2. Select number of modules and/or blanks

Module	Qty	Module	Qty
RM3048HE 3kW Rectifier		RM3048HE 3kW Rectifier	
Blanks		CM12-40* 48DC-12DC Converter	
		CM24-40* 48DC-24DC Converter	
		Blanks	

*Do not mix and match modules.

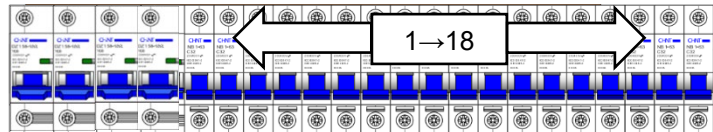
3. Select Configuration

Standard Configuration Go to step 4 and complete Table 1

Custom Configuration Go to step 5, for Commander II+ contact factory before completing form

Distribution
Circuit Breaker
Configuration

4x125A
Battery Breakers
Installed Standard



4. Select load breaker values and assign location

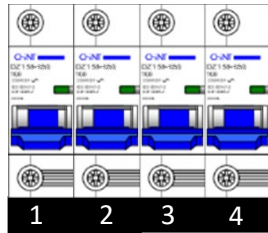
Table 1

CMDR II	CMDR II+	Position	Circuit Breaker Amperage									
			6	10	16	20	25	32	40	50	63	
Rectifier	Rectifiers	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	DC-DC Converters	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Total												

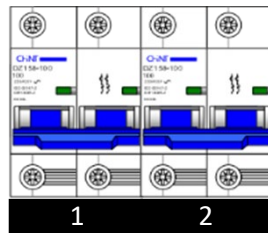
Commander II Custom Configuration and Accessories

Step 5: Select the Battery Circuit Breaker Configuration

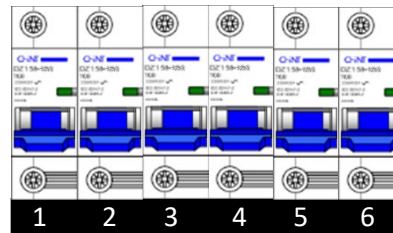
The Commander II series comes standard with 4 x 125A 1P (27mm) Battery Circuit Breakers but has the option to replace the standard configuration for either 2 x 250A 2P (54mm) Battery Circuit Breakers, 6x 125A 1P (27mm) Battery Circuit Breakers or a bulk battery connection with remote circuit breakers.



Standard



Option 1
2x 250A 2P CB
2x CM2PB
1x CM2B2P
Update software
Configuration



Option 2¹
6x 125A 1P CB
1x CM26CB1P
2x CM2BSW
Update software
Configuration



Up to 4 x 4/0 AWG

Bulk Landing²
Select One Option:
 1x CM2BBKL or
 1x CM2BBKS
Update software
Configuration

Step 6: Select the Load Circuit Breaker Configuration

The Commander II series comes standard with 18 x 6A to 63A 1P (18mm) Load Circuit Breaker positions but has the option to be configured with up to 12 x 100A or 125A 1P (27mm) circuit breakers, 6 x 200A 2P (54mm) circuit breakers or a combination of the three options. Each "block" represents 54mm of space and may be configured with up to 3 x 18mm, 2 x 27mm, or 1 x 54mm circuit breakers with the total space of the circuit breakers not to exceed 324mm. The maximum current carrying capacity of 700A for a Commander II remains the same and it is recommended that a safety margin of 20-50% of the individual load be factored into circuit breaker selection. If a 54mm circuit breaker is selected, Newmar recommends starting at the largest block number and working towards the smallest.

Table 2

II	Position			Circuit Breaker Amperage										
	18mm	27mm	54mm	18mm									27mm	54mm ³
Block 1	1	1	1	<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	<input type="checkbox"/> 160 <input type="checkbox"/> 200 <input type="checkbox"/> 250
	2			<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63		
	3	2		<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	
Block 2	4	3	2	<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	<input type="checkbox"/> 160 <input type="checkbox"/> 200 <input type="checkbox"/> 250
	5			<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63		
	6	4		<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	
Block 3	7	5	3	<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	<input type="checkbox"/> 160 <input type="checkbox"/> 200 <input type="checkbox"/> 250
	8			<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63		
	9	6		<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	
Block 4	10	7	4	<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	<input type="checkbox"/> 160 <input type="checkbox"/> 200 <input type="checkbox"/> 250
	11			<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63		
	12	8		<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	
Block 5	13	9	5	<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	<input type="checkbox"/> 160 <input type="checkbox"/> 200 <input type="checkbox"/> 250
	14			<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63		
	15	10		<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	
Block 6	16	11	6	<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	<input type="checkbox"/> 160 <input type="checkbox"/> 200 <input type="checkbox"/> 250
	17			<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63		
	18	12		<input type="checkbox"/> 6	<input type="checkbox"/> 10	<input type="checkbox"/> 16	<input type="checkbox"/> 20	<input type="checkbox"/> 25	<input type="checkbox"/> 32	<input type="checkbox"/> 40	<input type="checkbox"/> 50	<input type="checkbox"/> 63	<input type="checkbox"/> 100 <input type="checkbox"/> 125	
Total														

¹ - Removes Block 1 as an option for load circuit breakers. Requires the use of CM26CB1P

² - Requires the use of a Bulk Battery Kit

System Configuration Specified by: _____ Date: _____

Note: If you make changes after your system is configured to your specification, a rework charge may apply

Parts Required for Battery Circuit Breaker Configurations

□ Option 1

Part Number	Description	Fig	QTY
CM2TC	Commander II, Top Cover v2	2	1
CM2SC	Commander II, Safety Cover v2	1	1
CM2RBAS	Commander II, Return Bus Adapter, Short	5	1
CM2B2P	Commander II, Bus, Double Pole for 2P Circuit Breakers	7	1
CM2PB	Commander II, Paralleling Bar, 27mm, 2-hole, 3/8" thread, 1" on center for 2P CB	6	2
	Circuit Breaker, 250A 2P		2

□ Option 2

Part Number	Description	Fig	QTY
CM26CB1P	Commander II, Bus, Double Pole for 6x 1P Circuit Breakers		1
	Circuit Breaker, 125A 1P 27mm		6



□ Bulk Landing

Part Number	Description	Fig	QTY
Select One Option □ Long or □ Short			
CM2BBKL	Commander II, Bulk Battery Kit, Long		
CM2SC	Commander II, Safety Cover v2	1	1
CM2TC	Commander II, Top Cover v2	2	1
CM2BLB	Commander II, Bulk Landing Bar, 4 x 4/0 AWG. 2-hole, 3/8" thread, 1" on center	3	1
CM2RBAL	Commander II, Return Bus Adapter, long	4	1
or			
CM2BBKS	Commander II, Bulk Battery Kit, Short		
CM2SC	Commander II, Safety Cover v2	1	1
CM2TC	Commander II, Top Cover v2	2	1
CM2BLB	Commander II, Bulk Landing Bar, 4 x 4/0 AWG. 2-hole, 3/8" thread, 1" on center	3	1
CM2RBAS	Commander II, Return Bus Adapter, Short	5	1

Parts Required Load Circuit Breaker Configurations

□ 27mm 1P Load Circuit Breakers

Part Number	Description	Fig	QTY
CM2B2P	Commander II, Bus, Double Pole for 2P Circuit Breakers	7	
CM2B1P	Commander II, Bus, Single Pole for 1P Circuit Breakers and Connecting Bar	8	
	CM2B2P+ CM2B1P must =		6

□ 54mm 2P Load Circuit Breakers

Part Number	Description	Fig	QTY
CM2PB	Commander II, Paralleling Bar, 27mm, 2-hole, 3/8" thread, 1" on center for 2P CB	6	
CM2B2P	Commander II, Bus, Double Pole for 2P Circuit Breakers	7	
CM2B1P	Commander II, Bus, Single Pole for 1P CB and Connecting Bar	8	
	CM2B2P+ CM2B1P must =		6



Figure 1 CM2BLB

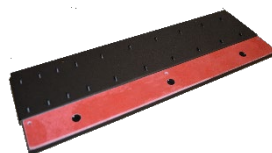


Figure 2 CM2TC



Figure 3 CM2SC



Figure 4 CM2RBAL



Figure 5 CM2RBAS



Figure 6 CM2PB



Figure 7 CM2B2P



Figure 8 CM2B1P

Software Configuration

<input type="checkbox"/>	Standard Configuration - 4x Battery Breakers, 1x 100Ah Battery String ¹ - EM4x_default_XXXXXX ²				
<input type="checkbox"/>	Preconfigured - Configuration File PN:				
<input type="checkbox"/>	Custom	# of Battery Breakers:			
		Battery Type	<input type="checkbox"/> Lead-Acid	<input type="checkbox"/> LiFePO ₄	<input type="checkbox"/> Newmar <input type="checkbox"/> Other ³
		Battery PN and Mfg.:			
		# of Battery Strings:			
		Total Amp/Hour Value:			
		I/O Connections or Custom Alarms			
	Provide a list of the connections or equipment that will be attached routed through the system. Identify the type of connection, SNMP communication, and alarm				
			GPIP / Relay	SNMP	Alarm
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>

Factory Provided ⁴	Configuration File PN:	
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¹- Most Common Request, 4x GS PYL12V100FS 12V 100Ah, update the system before deployment to reflect your battery backup requirements

²- XXXXXX = date code

³- Selecting a LiFePO₄ battery other than the Newmar model requires MODBUS information to be provided for accurate programming.

⁴- To be completed by Newmar, future orders using the same setup may use this as the Preconfigured Configuration PN

⁵- Select an Alarm Priority by number: 1- Critical, 2 - Major, 3 - Minor, 4 - Warning, 5 - Informational

