

EG4 Battery Wiring Diagrams - with EG4 18kPV Inverter

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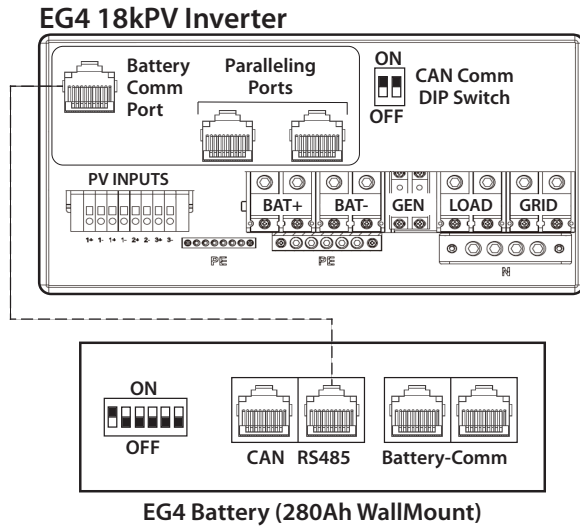
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Battery Wiring Diagrams - Power Cables

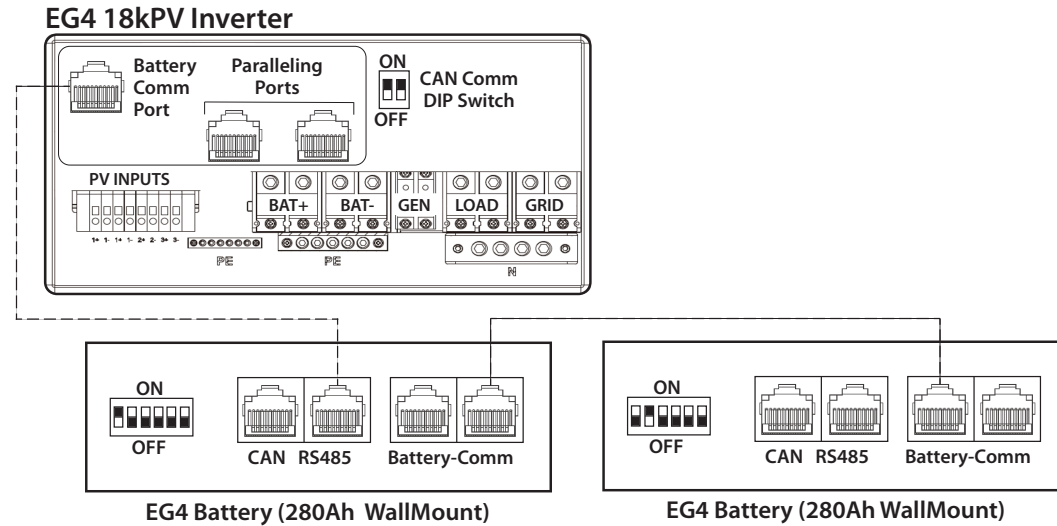
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1. Battery Paralleling -Comms: 18kPV and 280Ah WallMount Batteries, 1x1, 1x2, 1x3

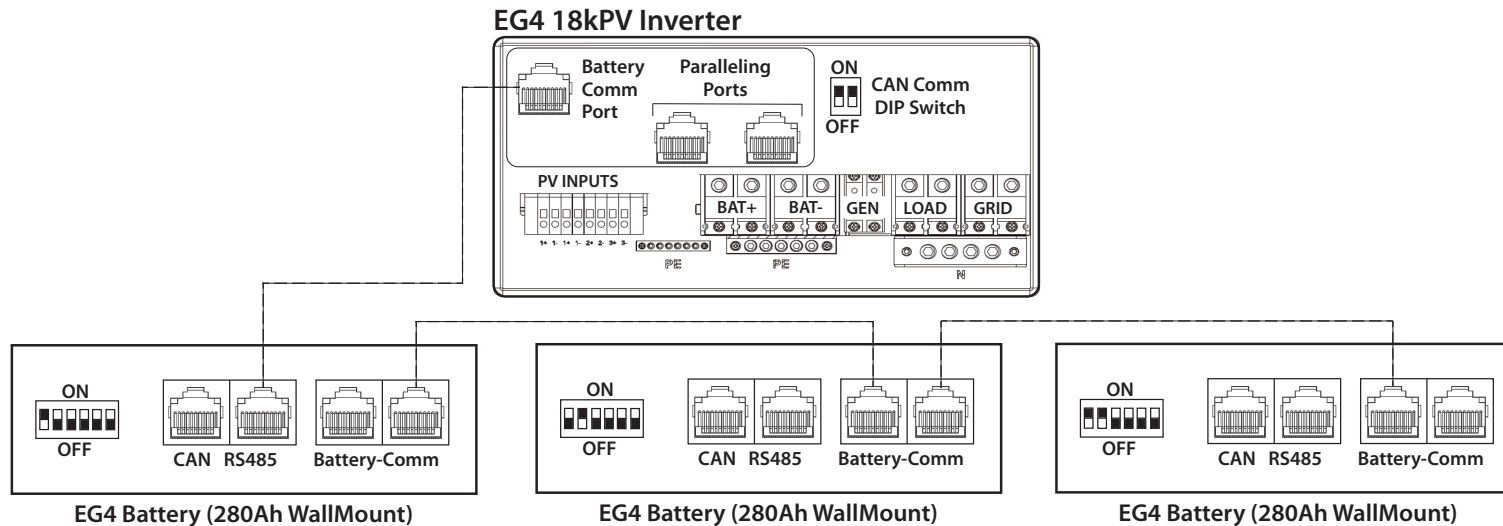
1 18kPV and 1 WM Battery



1 18kPV and 2 WM Batteries



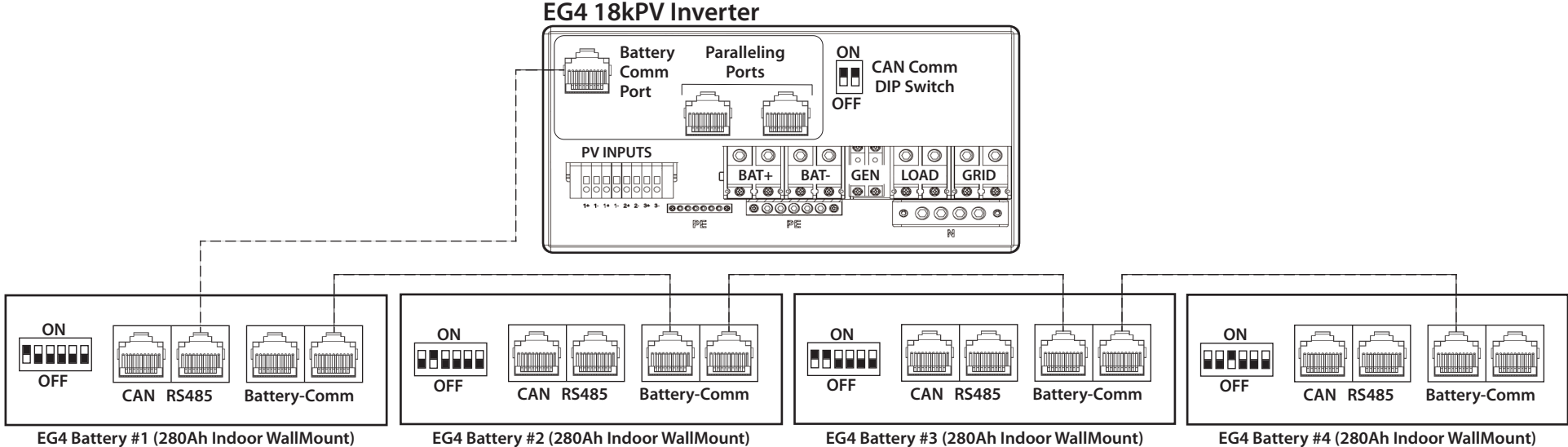
1 18kPV and 3 WM Batteries



The CAN communication DIP Switch should be ON for the first and the last inverter and OFF for inverters in between.
Both switches in the "ON" position translates to address 1. Both switches in the "OFF" position translates to address 0

2. Battery Paralleling - Comms: 18kPV and 280Ah WallMount, 1x4

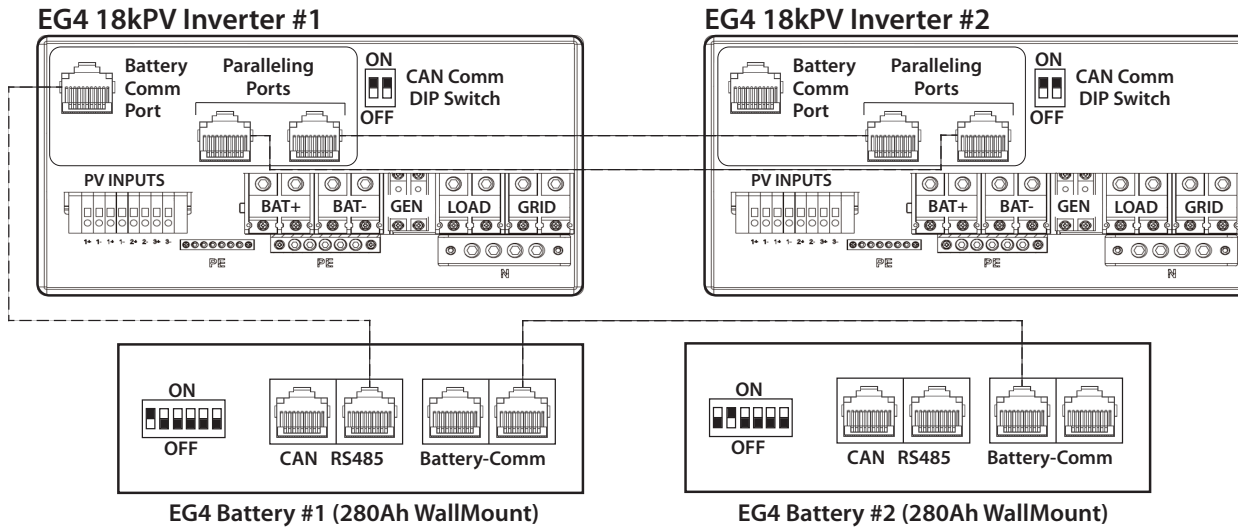
1 18kPV and 4 Batteries



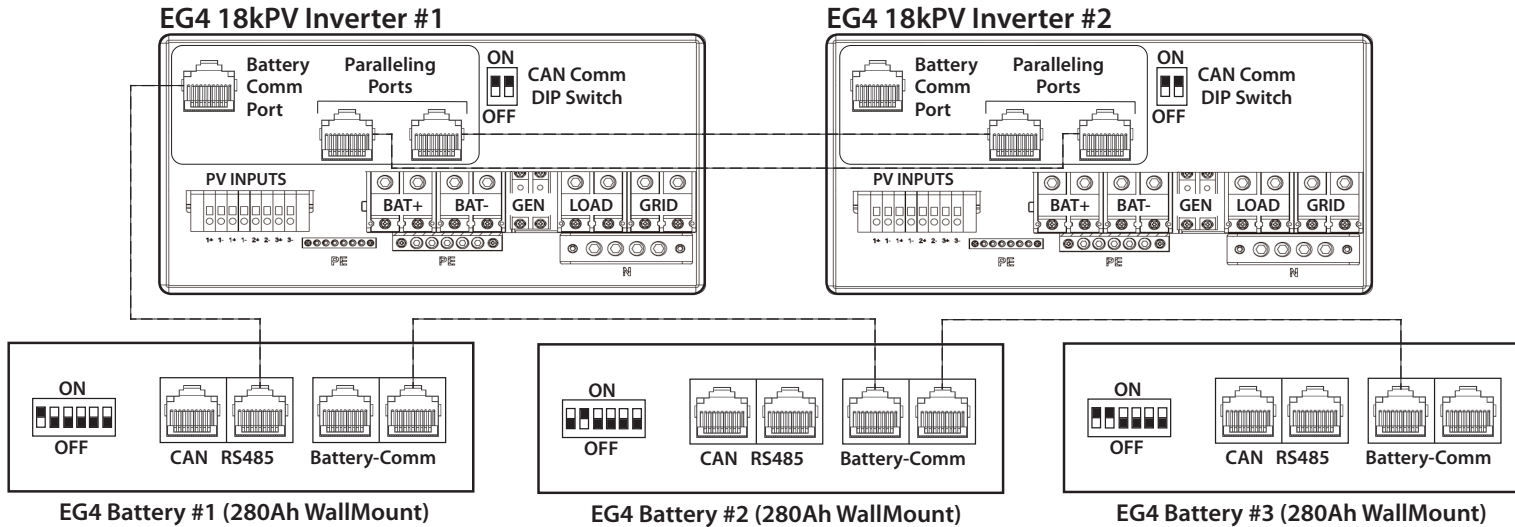
The CAN communication DIP Switch should be ON for the first and the last inverter and OFF for inverters in between. Both switches in the "ON" position translates to address 1. Both switches in the "OFF" position translates to address 0

3. EG4 Battery Paralleling - 18kPV and 280Ah WallMount

2 Inverters and 2 Batteries



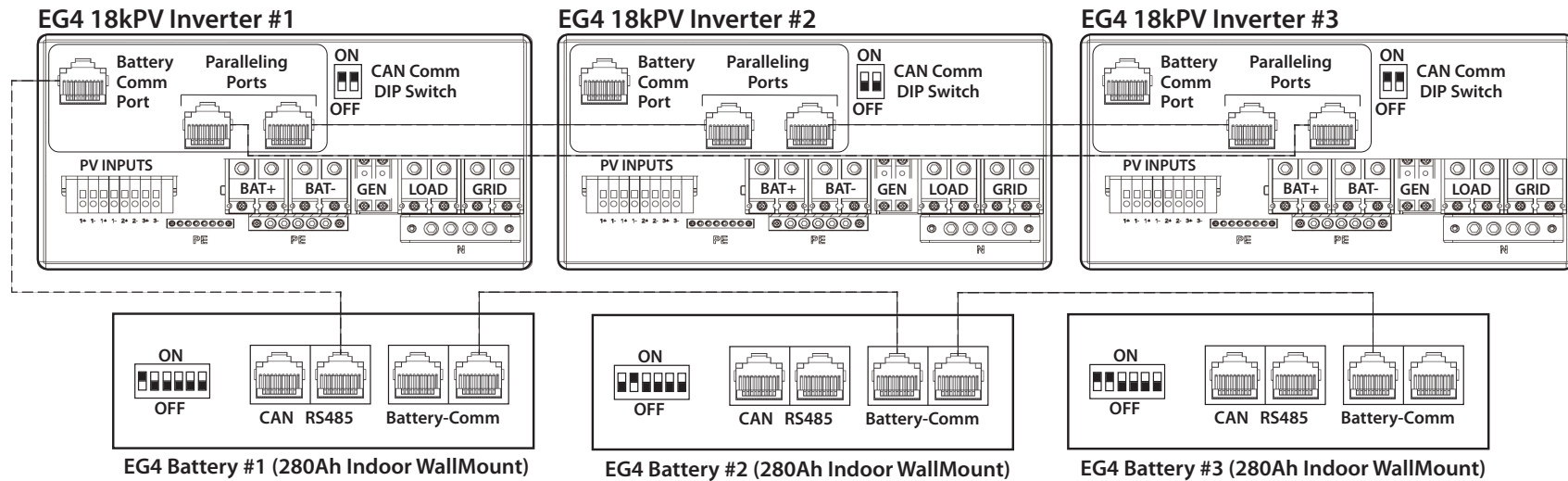
2 Inverters and 3 Batteries



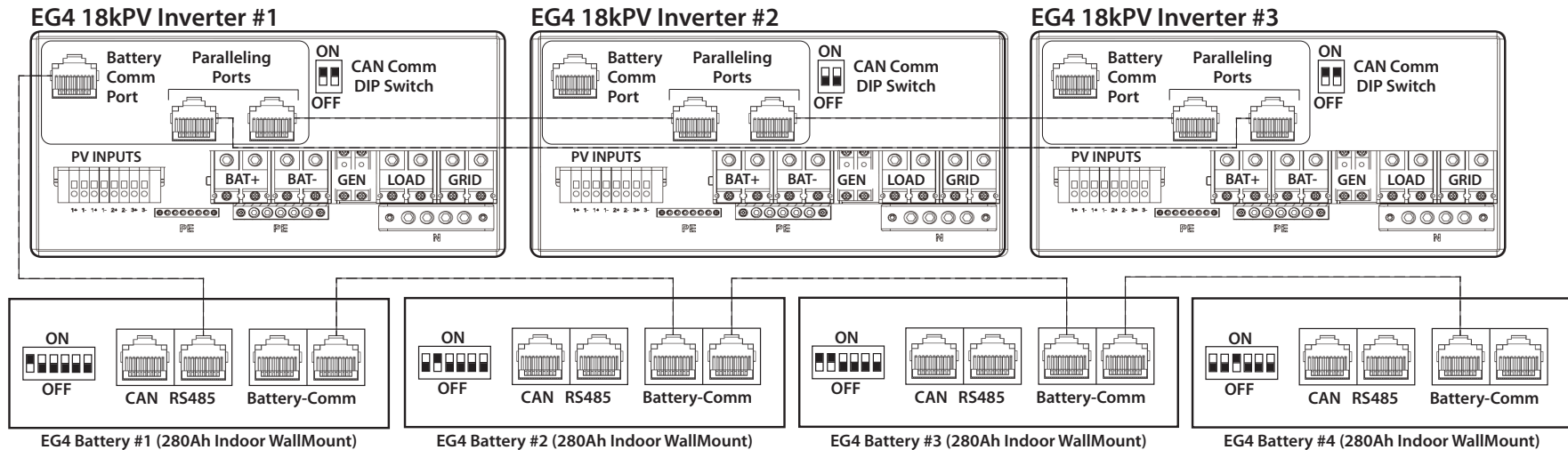
The CAN communication DIP Switch should be ON for the first and the last inverter and OFF for inverters in between.
Both switches in the "ON" position translates to address 1. Both switches in the "OFF" position translates to address 0

4 . EG4 Battery Paralleling - 18kPV and 280Ah Indoor WallMount

3 Inverters and 3 Batteries



3 Inverters and 4 Batteries

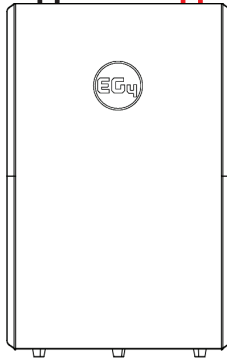
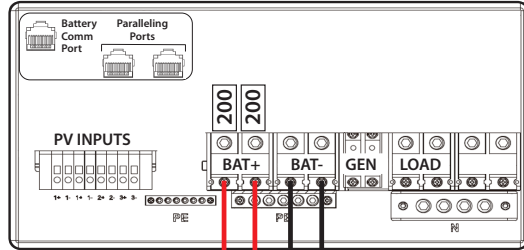


The CAN communication DIP Switch should be ON for the first and the last inverter and OFF for inverters in between. Both switches in the "ON" position translates to address 1. Both switches in the "OFF" position translates to address 0

5. EG4 Battery Paralleling - 18kPV and 280Ah Outdoor WallMount Batteries

1 Inverter and 1x280Ah WallMount Battery

EG4 18kPV Inverter

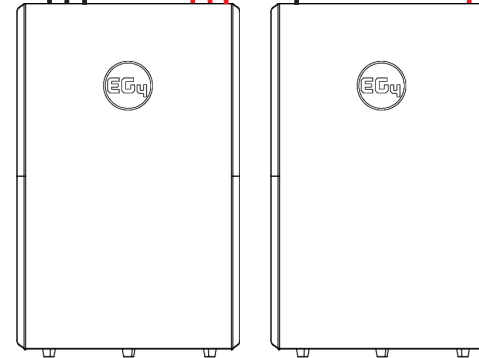
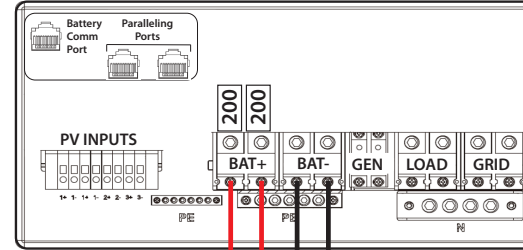


Protect all cable in metallic conduit or raceways. Exposed cables are unsafe and violate the NEC code.

EG4 280 AH WallMount Batteries have internal paralleling bus bars rated to 600 Amps and internal breakers rated to 200 Amps per battery. The EG4 18kPV inverter also has 2 200 Amp Battery Breakers per positive battery terminal. No additional overcurrent protection is needed when paralleling up to 3 batteries and up to 2 inverters. Use the 2/0 battery cables included with the battery or with the paralleling kits and simply plug the cables in as shown. Make sure to use 2 runs of cables to each of the positive and negative inverter terminals.

1 Inverter and 2x280Ah WallMount Batteries

EG4 18kPV Inverter



Battery Parallel Cabling Kit must be ordered separately for each additional battery.

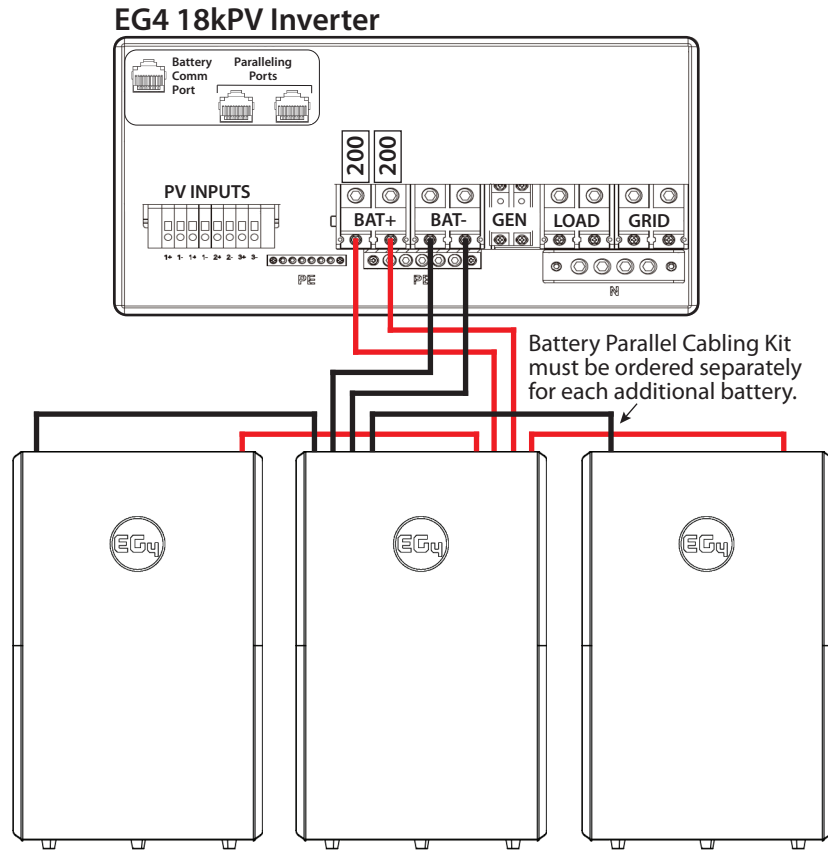
NOTE: The WallMount battery ships with one complete set of 4 cables (2 red, 2 black) for use between one battery and one inverter. For each additional battery, a paralleling kit must be purchased separately. For instances where the included cables are not sufficient length, custom cables can be ordered or made up using Degson connectors and crimp tools available at our suppliers. A maximum voltage drop of 2% is recommended for battery to battery and battery to inverter cabling.

IMPORTANT NOTE:

The recommended minimum ratio of 280 AH WallMount batteries to number of 18kPV inverters is 1.5 to 1. One battery - one inverter systems will work fine with the 18kPV inverter - performing close to - but not up to it's full rated capacity. The 18kPV can charge and discharge at a continuous 230 A rate whereas one 280AH WallMount battery can only accept or deliver 200 Amps max with a recommend continuous rating of 180 amps. With only one battery the 18kPV will have it's full 12,000 watts available for sell-back and to loads from PV and Battery combined but will be limited to 10,240 Watts max when using the battery only to power loads or sell back to the grid. When using one battery on one inverter we recommend setting the maximum charge and discharge settings to 180 Amps. Or strongly consider providing 2 batteries.

6. EG4 Battery Paralleling - 18kPV and 280Ah Outdoor WallMount Batteries

1 Inverter and 3x280Ah Outdoor WallMount Batteries



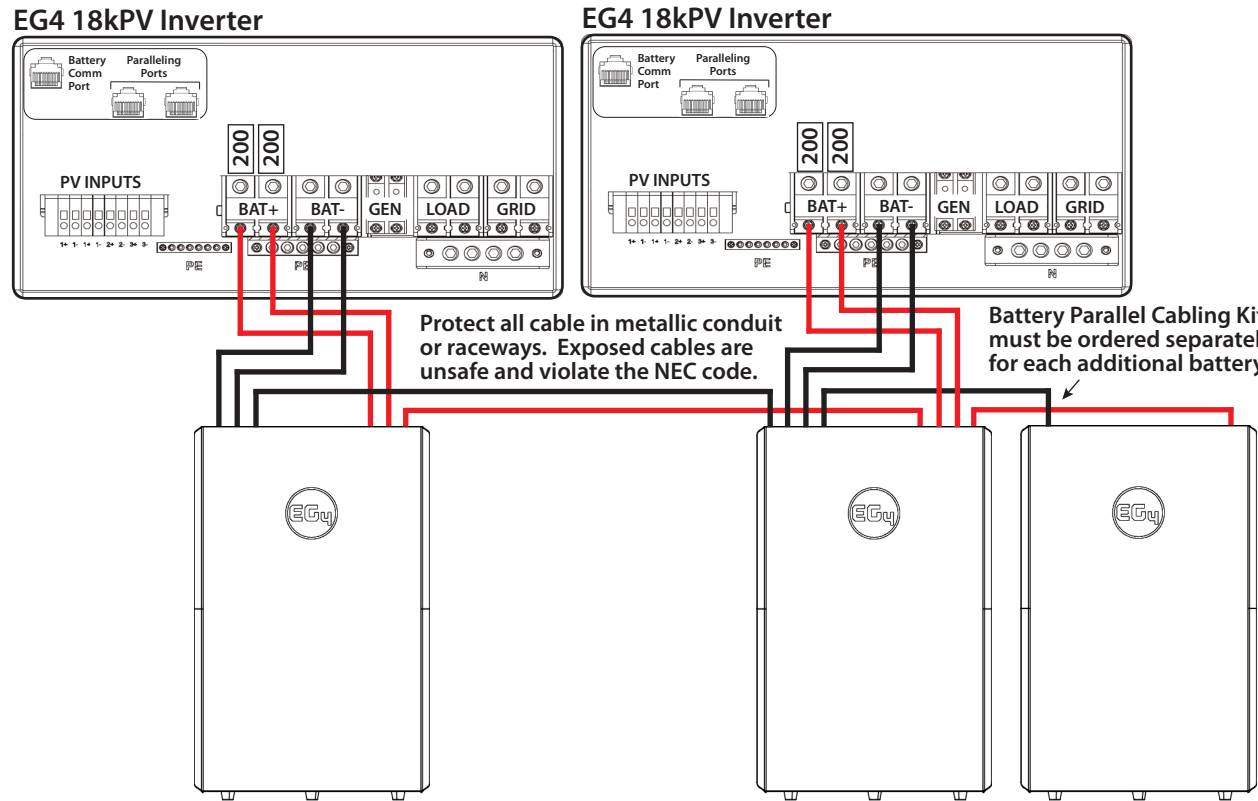
EG4 280 AH WallMount Batteries have internal paralleling bus bars rated to 600 Amps and internal breakers rated to 200 Amps per battery. The EG4 18kPV inverter also has 2 200 Amp Battery Breakers per positive battery terminal. No additional overcurrent protection is needed when paralleling up to 3 batteries and up to 2 inverters. Use the 2/0 battery cables included with the battery or with the paralleling kits and simply plug the cables in as shown. Make sure to use 2 runs of cables to each of the positive and negative inverter terminals.

Protect all cable in metallic conduit or raceways. Exposed cables are unsafe and violate the NEC code.

NOTE: The WallMount battery ships with one complete set of 4 cables (2 red, 2 black) for use between one battery and one inverter. For each battery more than one battery per inverter, a paralleling kit must be purchased separately. For instances where the included cables are not sufficient length custom cables can be ordered or made up using Degson connectors and crimp tools available at our suppliers. A maximum voltage drop of 2% is recommended for battery to battery and battery to inverter cabling.

7. EG4 Battery Paralleling - 18kPV and 280Ah Outdoor WallMount Batteries

2 Inverters and 3x280Ah Outdoor WallMount Batteries

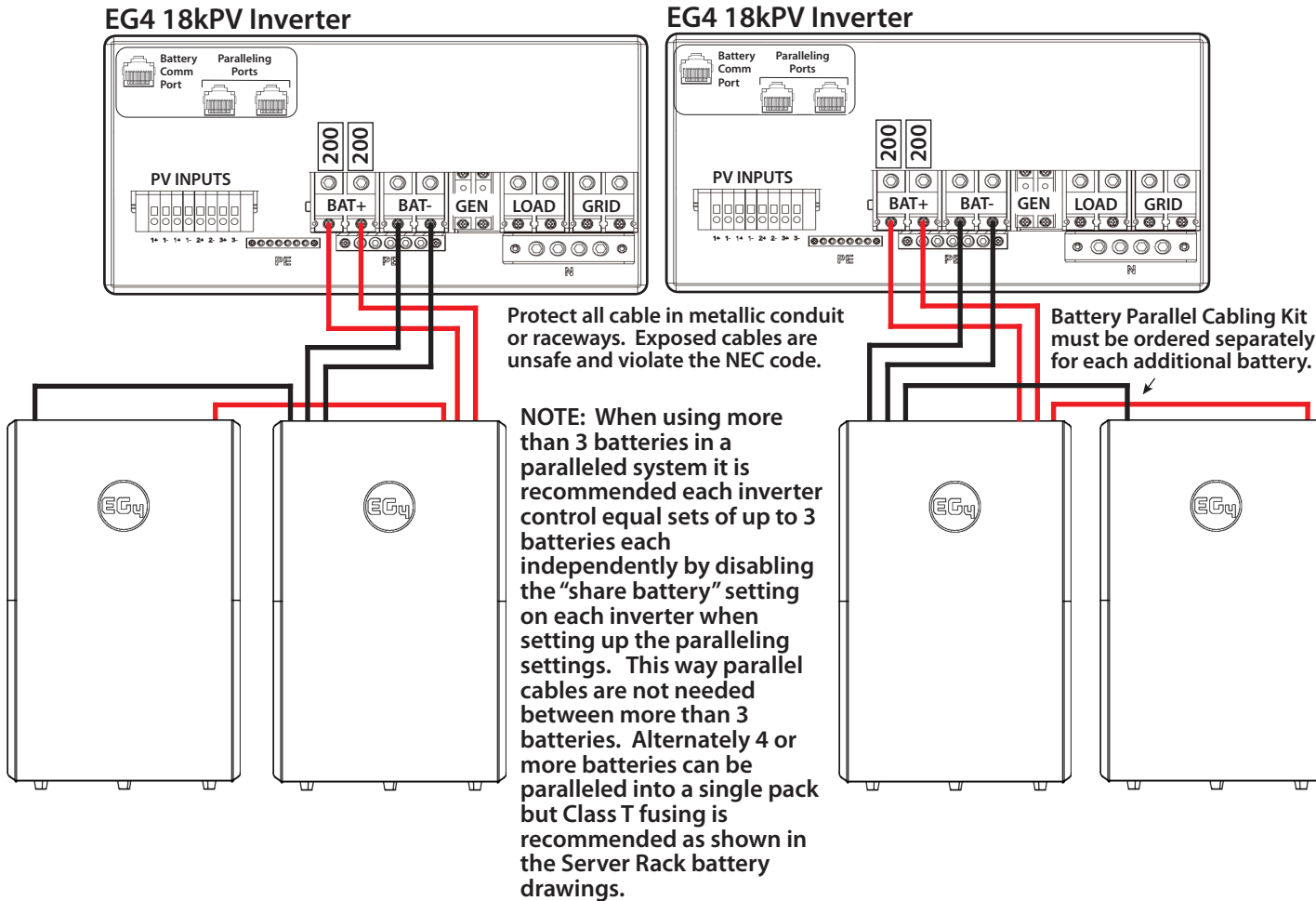


EG4 280 AH WallMount Batteries have internal paralleling bus bars rated to 600 Amps and internal breakers rated to 200 Amps per battery. The EG4 18kPV inverter also has 2 200 Amp Battery Breakers per positive battery terminal. No additional overcurrent protection is needed when paralleling up to 3 batteries and up to 2 inverters. Use the 2/0 battery cables included with the battery or with the paralleling kits and simply plug the cables in as shown. Make sure to use 2 runs of cables to each of the positive and negative inverter terminals.

NOTE: The WallMount battery ships with one complete set of 4 cables (2 red, 2 black) for use between one battery and one inverter. For each battery more than one battery per inverter, a paralleling kit must be purchased separately. For instances where the included cables are not sufficient length custom cables can be ordered or made up using Degson connectors and crimp tools available at our suppliers. A maximum voltage drop of 2% is recommended for battery to battery and battery to inverter cabling.

8. EG4 Battery Paralleling - 18kPV and 280Ah Outdoor WallMount Batteries

2 Inverters and 4x280Ah Outdoor WallMount Batteries



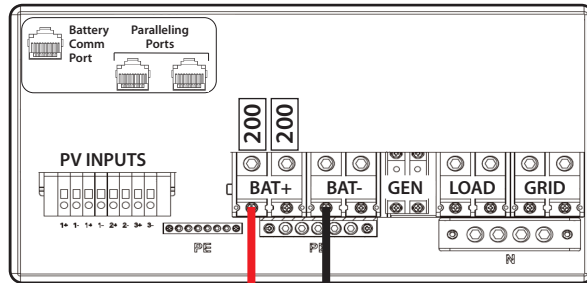
No additional overcurrent protection is needed when paralleling up to 3 batteries and up to 2 inverters. EG4 280 AH WallMount Batteries have internal paralleling bus bars rated to 600 Amps and internal breakers rated to 200 Amps per battery. The EG4 18kPV inverter also has 2 200 Amp Battery Breakers per positive battery terminal. Use the 2/0 battery cables included with the battery or with the paralleling kits and simply plug the cables in as shown. Make sure to use 2 runs of cables to each of the positive and negative inverter terminals.

NOTE: The WallMount battery ships with one complete set of 4 cables (2 red, 2 black) for use between one battery and one inverter. For each battery more than one battery per inverter, a paralleling kit must be purchased separately. For instances where the included cables are not sufficient length custom cables can be ordered or made up using Degson connectors and crimp tools available at our suppliers. A maximum voltage drop of 2% is recommended for battery to battery and battery to inverter cabling.

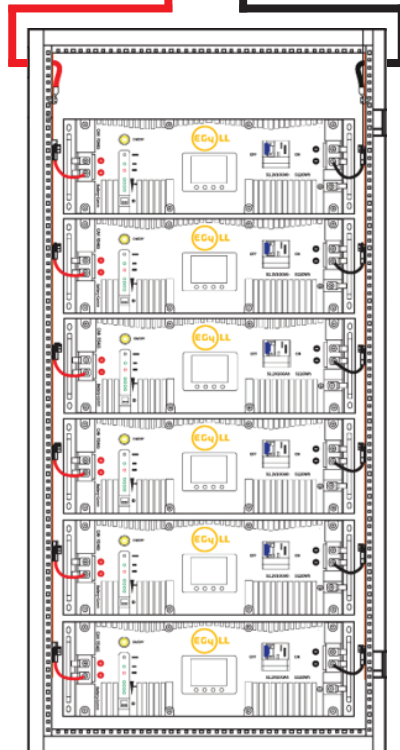
9. Battery Wiring Diagrams - Power Cables: 18kPV with Server Rack Batteries - 1x1,1x2

1 Inverter and 1 Battery Rack

EG4 18kPV Inverter



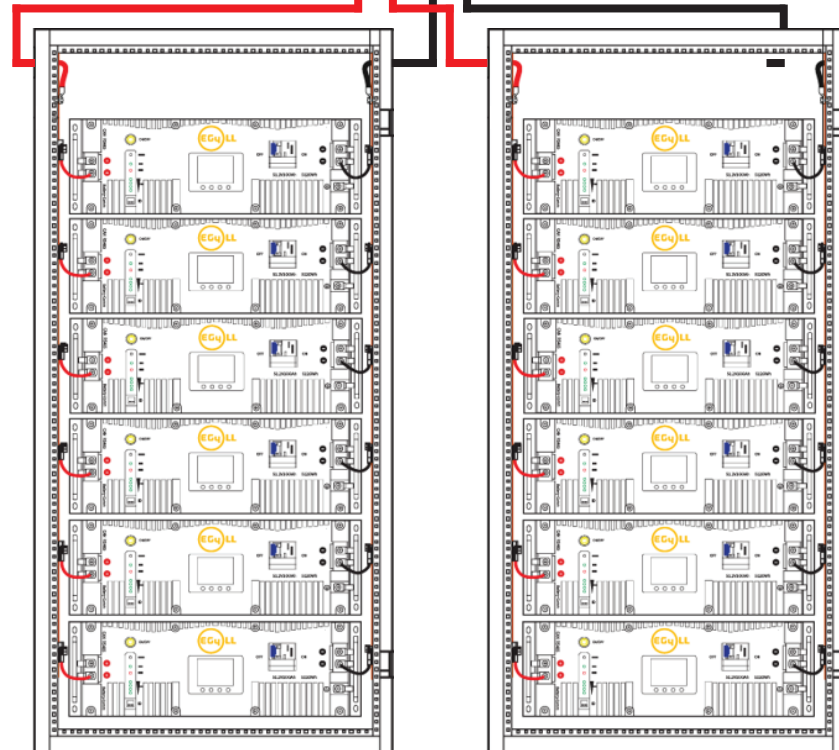
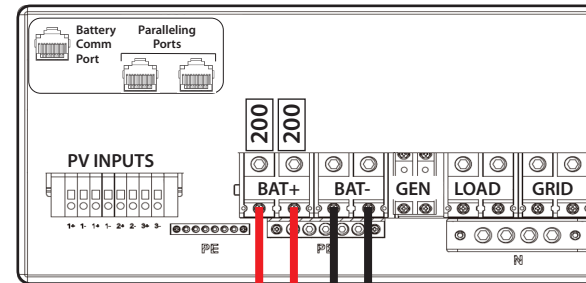
The 18kPV inverter has a max charge and discharge rate of 250 Amps and a continuous rating of 230 Amps. Therefore a minimum of 3 server rack, 100 AH batteries are recommended per 18KpV.



Built-in Battery and Inverter overcurrent protection coupled with battery BMS provides a good level of overcurrent protection for these two cases. The inverter has a two 200 Amp Battery Breakers - one on each positive terminal. Each Battery has a 100 Amp Breaker. Class T fuses can be added for full protection of the cable run from currents from both sides of the circuit. See 3-rack drawing. Consult with your AHJ for exact requirements. Each positive terminal needs a minimum of 2/0 cable. If using a single positive cable use 4/0 cable. Protect all cable in metallic conduit or raceways. Exposed cables are unsafe and violate the NEC code.

1 Inverter and 2 Battery Racks

EG4 18kPV Inverter

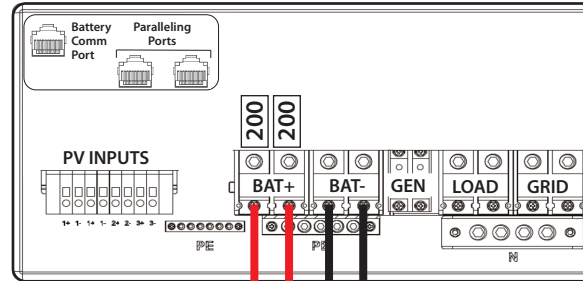


10. EG4 Battery Paralleling - 18kPV and Server Rack Batteries

1 Inverter and 3 Server Racks of LL Batteries

The 18kPV inverter has a max charge and discharge rate of 250 Amps and a continuous rating of 230 Amps. Fuse protection on a bus bar ensures overcurrent protection for possible shorts between racks and rack cabling. Class T fuse are required to protect battery cabling per NEC Code.

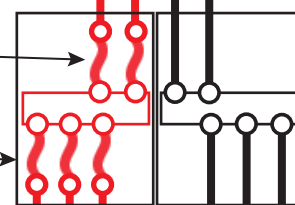
EG4 18kPV Inverter



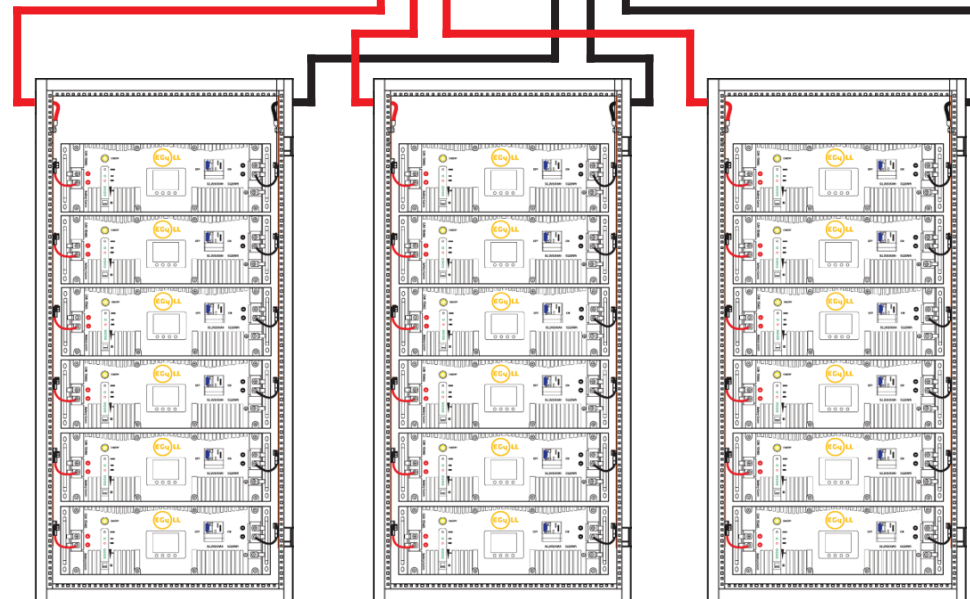
Protect all cable in metallic conduit or raceways. Exposed cables are unsafe and violate the NEC code.

Install Class T Fuse Blocks and Fuses. For 1 inverter and 3 server rack systems we recommend using 2 runs of 2/0 cable between bus bar and inverter with individual 200 Amp fuses per run.
(Blue Seas Systems 5007100 and Littelfuse JLLN200, or equivalent)

Install Class T Fuse Blocks and Fuses. For 1 inverter and 3 server rack systems we recommend 2/0 cable between rack bus bars and positive bus bars with 200 Amp fuses. This will prevent cascading nuisance tripping in the event that one fuse blows.



Use 600 Amp Rated Positive and Negative Bus Bars (Blue Seas Systems 2104 PowerBar, 600A, 4x3/8"-16 Studs, or equivalent).



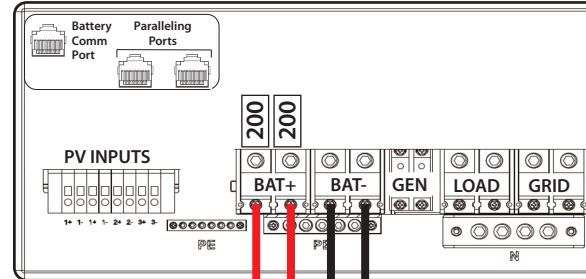
Each Battery is protected by a 100 A DC Breaker and a 100 Amp BMS that detects short circuits.

11. EG4 Battery Paralleling - 18kPV and Server Rack Batteries

1 Inverter and 4 Server Racks of LL Batteries

The 18kPV inverter has a max charge and discharge rate of 250 Amps and a continuous rating of 230 Amps. Fuse protection on a bus bar ensures overcurrent protection for possible shorts between racks and rack cabling. Class T fuse are required to protect battery cabling per NEC Code..

EG4 18kPV Inverter

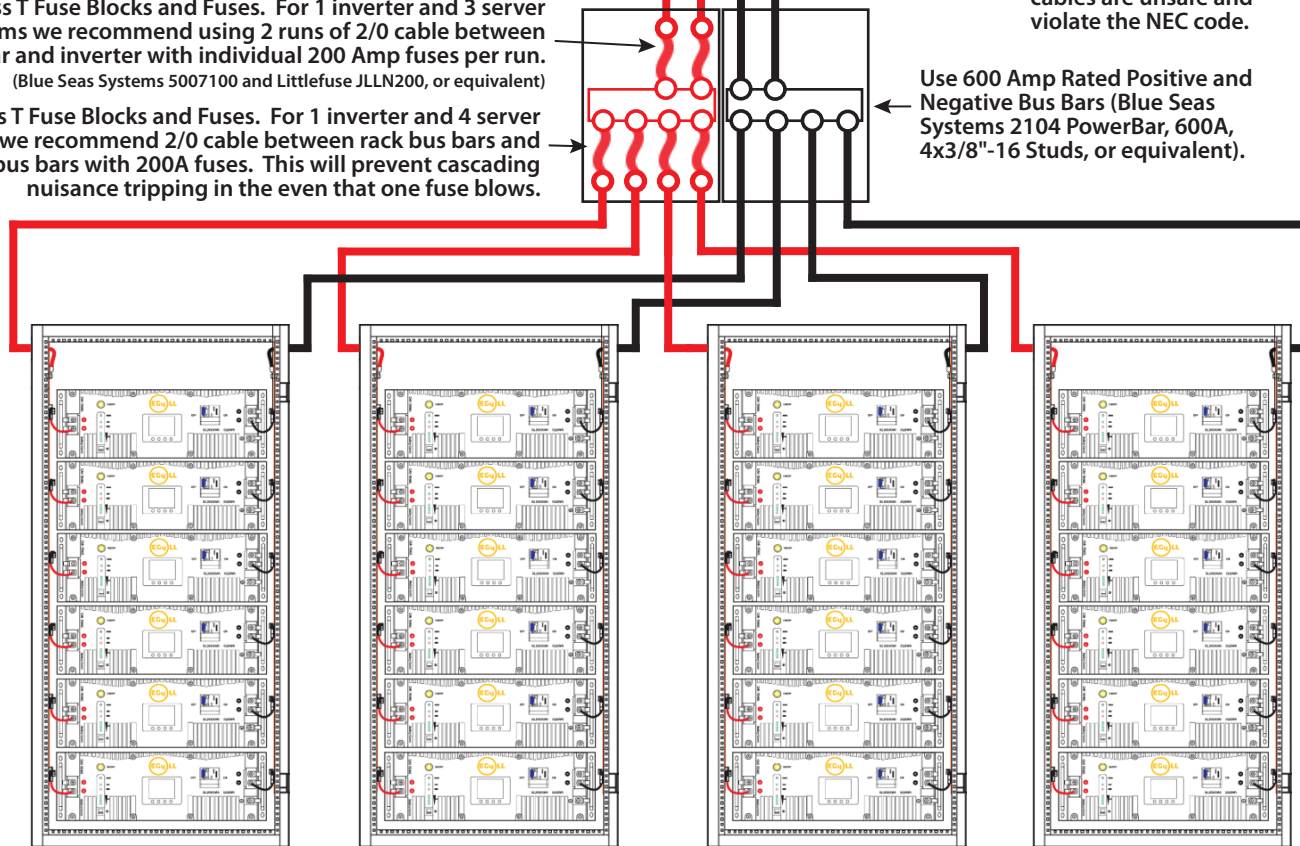


Protect all cable in metallic conduit or raceways. Exposed cables are unsafe and violate the NEC code.

Install Class T Fuse Blocks and Fuses. For 1 inverter and 3 server rack systems we recommend using 2 runs of 2/0 cable between bus bar and inverter with individual 200 Amp fuses per run.
(Blue Seas Systems 5007100 and Littlefuse JLLN200, or equivalent)

Install Class T Fuse Blocks and Fuses. For 1 inverter and 4 server rack systems we recommend 2/0 cable between rack bus bars and positive bus bars with 200A fuses. This will prevent cascading nuisance tripping in the even that one fuse blows.

Use 600 Amp Rated Positive and Negative Bus Bars (Blue Seas Systems 2104 PowerBar, 600A, 4x3/8"-16 Studs, or equivalent).



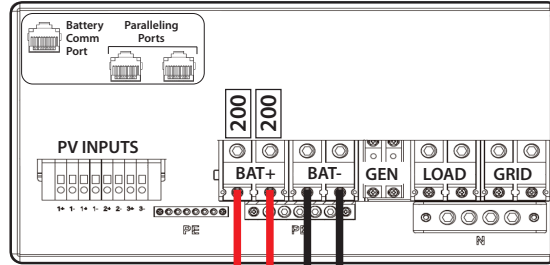
Each Battery is protected by a 100 A DC Breaker and a 100 Amp BMS that detects short circuits.

12. EG4 Battery Paralleling - 18kPV and Server Rack Batteries

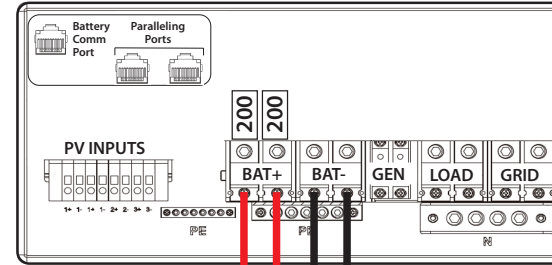
2 Inverters and 4 Server Racks of LL Batteries

Each 18kPV inverter has a max charge and discharge rate of 250 Amps and a continuous rating of 230 Amps. Fuse protection on a bus bar ensures overcurrent protection for possible shorts between racks and rack cabling. Class T fuse are required to protect battery cabling per NEC Code..

EG4 18kPV Inverter



EG4 18kPV Inverter

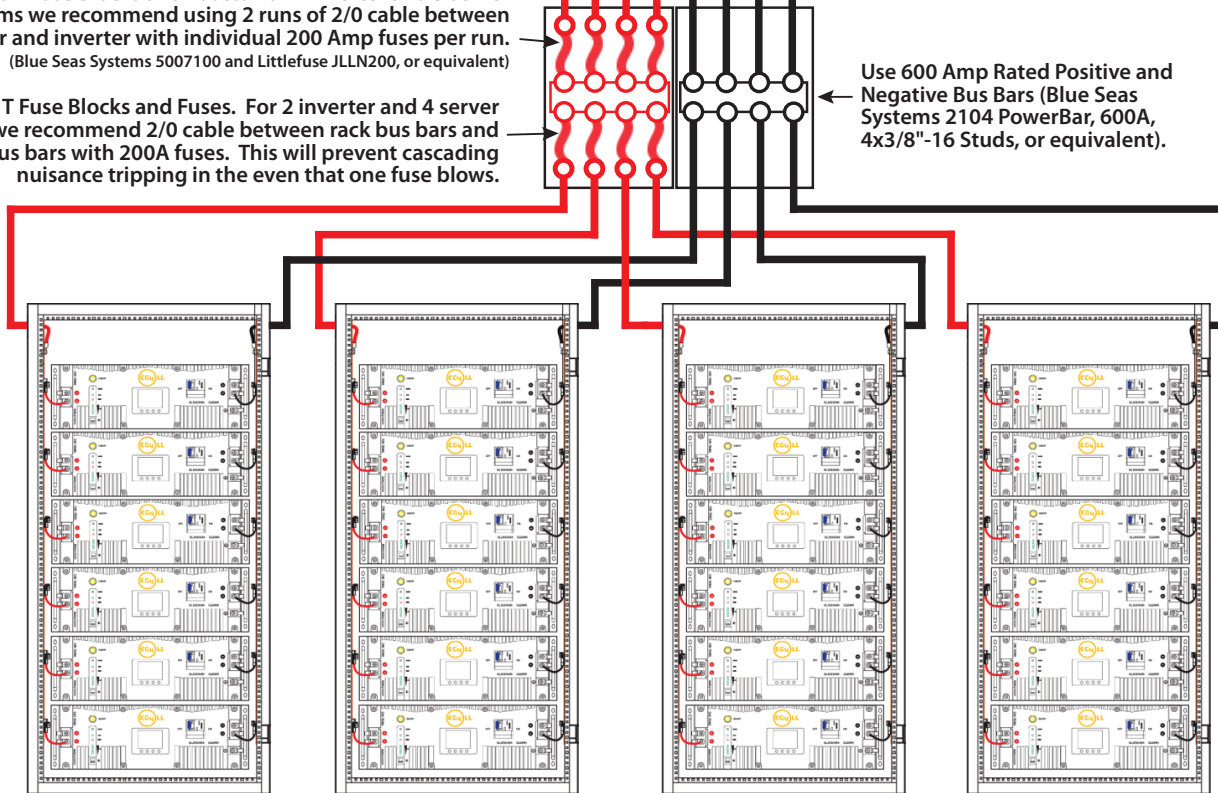


Protect all cable in metallic conduit or raceways. Exposed cables are unsafe and violate the NEC code.

Install Class T Fuse Blocks and Fuses. For 1 inverter and 3 server rack systems we recommend using 2 runs of 2/0 cable between bus bar and inverter with individual 200 Amp fuses per run. (Blue Seas Systems 5007100 and Littlefuse JLLN200, or equivalent)

Install Class T Fuse Blocks and Fuses. For 2 inverter and 4 server rack systems we recommend 2/0 cable between rack bus bars and positive bus bars with 200A fuses. This will prevent cascading nuisance tripping in the even that one fuse blows.

Use 600 Amp Rated Positive and Negative Bus Bars (Blue Seas Systems 2104 PowerBar, 600A, 4x3/8"-16 Studs, or equivalent).



Each Battery is protected by a 100 A DC Breaker and a 100 Amp BMS that detects short circuits.