

Outdoor Power Solutions

Ventev's Outdoor Power Solutions are engineered to enable the extension of wireless networks typically found in Utility, Oil & Gas and Railroad applications. These outdoor power systems protect sensitive wireless equipment and provide clean, reliable power whether AC mains are available or not. Ventev's line of Outdoor Power systems, UPS systems and Solar systems are engineered to easily integrate other components, completing a turnkey enclosure system. Don't let power be the weak link in your network.



Dependable Power:

Ventev's Outdoor Power Solutions are designed for Remote Monitoring and Control applications that require critical information in real-time such as Smart Grid, AMI/AMR, SCADA networks, well head monitoring, railroad communications, signaling and Positive Train Control, broadband networks, and security and surveillance systems.

Engineering, Support & Development:

Ventev, a division of TESSCO Technologies, is an engineering-driven business focused on design, configuration, and fabrication of outdoor power systems for wireless networks. Utilizing leading edge components from TESSCO's portfolio combined with Ventev's engineering expertise we collaborate with our customers to design a solution that enables the deployment of wireless networks quickly and reliably.



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Systems Overview & Core Components

Ventev's Outdoor Power Solutions are pre-configured solutions enabling engineers and technicians to easily deploy remote monitoring and control systems in the field. The Ventev engineers have selected components that are excellent for long, reliable operation. Systems are designed with common DIN rail and aluminum backplates making it easy to integrate other components. Each system comes wired for power with extra terminal blocks for connecting additional components.

Aluminum & Polycarbonate Enclosures

- NEMA 4X, gray polycarbonate or white powder coated aluminum
- Includes mounting flanges for bands or U-bolts
- Aluminum back plate and DIN rail for equipment installation
- Pad-lockable doors for security



Battery Charger with Low Voltage Disconnect

- Fast recharge - two stage battery charger providing 10 Amps of current @ 12V
- Broad input voltage of 90-264VAC and 120-370VDC
- Maximum output load current of 25Amps DC
- Low voltage disconnect to extend the battery life
- Constant current limiting, auto recover and power factor correction >0.94
- Temperature rated from -30 to +70C for outdoor conditions



Power Supplies with AC protection

- Ruggedized power supplies up to 1000w
- Broad operational temp ranges from -25C to +70C
- 12, 24 or 48 VDC output options with high efficiency
- Protections include: Overload, over voltage, over temp
- UL Listed
- Includes AC surge arrestor (APD type), UL Listed



Batteries

- Sealed lead acid or gelled electrolyte batteries
- Reliable, maintenance-free power designed for deep cycle applications typical for UPS and Solar systems
- Top terminal, valve regulated designs
- Battery brackets included with AC/UPS systems
- Batteries sold separately



Solar Chargers

- PWM type solar charge controller
- 12 or 24 VDC options
- Includes green charging LED and LVD



Terminal Blocks

- Accepts broad wire range of 24 to 12 AWG for both solid and stranded wire
- Unique cage clamp connections and integrated ground contact
- Includes knife blade switch in each assembly for easy maintenance.
- Modular solutions allow for color coding via multi-colored terminal slices



Solar Modules & Mounts

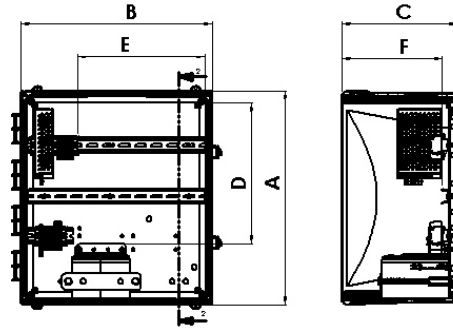
- Broad range of Small Area Modules up to 130 watt panels
- Ideally suited for battery-charging applications such as remote monitoring, oil and gas, smart grid and railroad
- A portfolio of mounts for a variety of module array installations



Enclosure Specifications

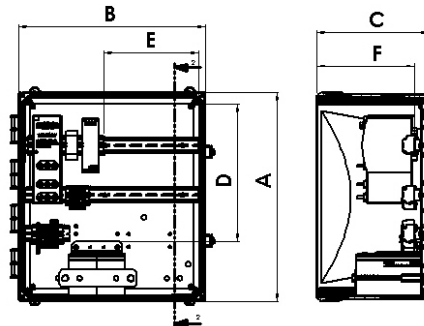
Ventev's Outdoor Power Solutions utilize various enclosure options allowing system designers to configure a solution that meets their exact need. The NEMA 4X enclosures are made of either gray polycarbonate, powder-coated steel or powder-coated aluminum. The enclosures include mounting flanges for stainless steel bands or U-bolts. Each enclosure includes an aluminum back plate and DIN rail for equipment installation. The enclosures are secure solutions for outdoor environments with pad-lockable doors.

VL 100 Series UPS Power System



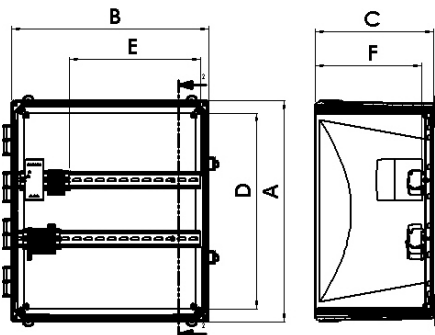
| Enclosure Material | External Dims | Battery Reference # | Internal Dims | | |
|--------------------|---------------|---------------------|---------------|------|-------|
| | A x B x C | | D | E | F |
| Polycarbonate | 12 x 10 x 6 | B1, B3, B13 | 6.5 | 4.5 | 4.62 |
| | 14 x 12 x 6 | B1, B3, B13 | 8.38 | 6.38 | |
| | 18 x 16 x 10 | 18 x 16 x 10 | B4 | 5.88 | 11.25 |
| B1, B13 | | | 12.5 | | |
| B14, B21 | | | 9.75 | | |
| Aluminum | 18 x 16 x 12 | B4, B5, B15 | 9.75 | 10.5 | 9 |
| | | B1, B13 | 17 | | |
| | | B5, B7 | 10.75 | | |
| | | B15, B22 | 13.75 | | |
| Steel | 12 x 10 x 6 | B1, B2 | 6.25 | 3.62 | 4 |
| | 14 x 12 x 6 | B1, B2 | 7.5 | 5.75 | |

VL 500 Series UPS Power System



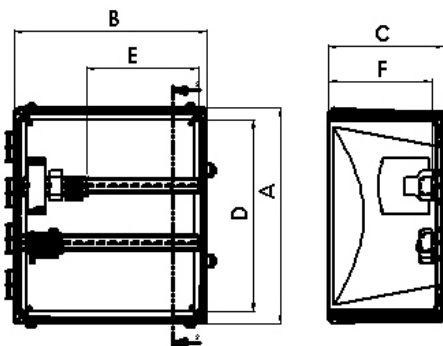
| Enclosure Material | External Dims | Battery Reference # | Internal Dims | | |
|--------------------|---------------|------------------------|---------------|------|------|
| | A x B x C | | D | E | F |
| Polycarbonate | 18 x 16 x 10 | B5, B15 | 9.75 | 8.5 | 8.62 |
| | | B21 | 12.5 | | |
| Aluminum | 18 x 16 x 12 | B5, B15 | 10.75 | 6 | 9 |
| | | B21 | 13.5 | | |
| | | B7, B16, B22 | 10.5 | | |
| Aluminum | 26 x 16 x 12 | B5 | 18 | 8.12 | 9 |
| | | B6 | 16 | | |
| | | B7, B15, B16, B22 | 18.5 | | |
| | | B21 | 21 | | |
| Aluminum | 26 x 27 x 12 | B5, B15, B17, B22, B23 | 18 | 19 | 9 |
| | | B8, B11, B19 | 15.5 | | |

VA 100 Series AC Power System



| Enclosure Material | External Dims | Internal Dims | | |
|--------------------|---------------|---------------|-------|------|
| | A x B x C | D | E | F |
| Polycarbonate | 12 x 10 x 6 | 10.75 | 4.75 | 4.62 |
| | 14 x 12 x 6 | 12.75 | 6.75 | 4.62 |
| | 18 x 16 x 10 | 16.75 | 11.25 | 8.62 |
| Steel | 12 x 10 x 6 | 10 | 4 | 4 |
| | 14 x 12 x 6 | 12 | 6 | 4 |
| Aluminum | 18 x 16 x 12 | 17 | 10.5 | 9 |

VA 500 Series AC Power System



| Enclosure Material | External Dims | Internal Dims | | |
|--------------------|---------------|---------------|------|------|
| | A x B x C | D | E | F |
| Polycarbonate | 18 x 16 x 10 | 16.75 | 9.75 | 8.62 |
| Aluminum | 18 x 16 x 12 | 17 | 9 | 9 |
| Aluminum | 26 x 16 x 12 | 25 | 9.5 | 9 |
| Aluminum | 26 x 27 x 12 | 25 | 20 | 9 |

Note:

- Batt Ref #'s can be found on page 6.
- All dimensions are in inches.
- Enclosure diagrams are for reference only. Please consult sku datasheets on TESSCO.com for exact placement.

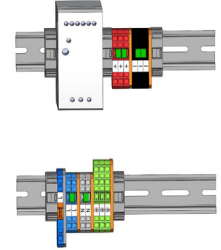
AC Power Rail Assembly Specifications & Ordering Guide

VA 100 Series AC Power Rail

The VA 100 Series rail assemblies are an economical, lower power (55W) solution for basic AC power conversion. The rail assembly includes a 55W power supply, DIN rail, knife switch AC disconnect, and AC & DC terminal blocks.

VA 100 Series Power Supply

| Input | Nominal Voltage | 115 VAC @ 60Hz | Output | Power Supplies | 12 VDC | 24 VDC | 48 VDC |
|-------------------------|-----------------|----------------|--------|----------------|-----------|-----------|-----------|
| | Current | 1.8 A | | Output Current | 5.0 A | 2.5 A | 1.25 A |
| | Voltage Range | 85 to 264 VAC | | Ripple & Noise | 120 mVp-p | 150 mVp-p | 200 mVp-p |
| Temp Range -20 to + 70C | | | | | | | |

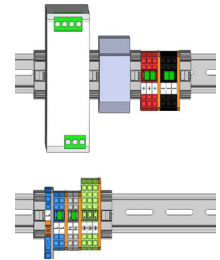


VA 500 Series AC Power Rail

These rail assemblies offer greater power capability (120W) and include AC surge protection for a more robust design. Each power rail includes 120W power supply, AC surge protector, DIN rail, knife switch AC disconnect, and AC & DC terminal blocks.

VA 500 Series Power Supply

| Input | Nominal Voltage | 115 VAC @ 60Hz | Output | Power Supplies | 12 VDC | 24 VDC | 48 VDC |
|-------------------------|-----------------|----------------|--------|----------------|-----------|-----------|-----------|
| | Current | 1.4 A | | Output Current | 10.0 A | 5 A | 2.5 A |
| | Voltage Range | 88 to 264 VAC | | Ripple & Noise | 100 mVp-p | 100 mVp-p | 120 mVp-p |
| Temp Range -25 to + 70C | | | | | | | |



Ordering AC Power Systems

From the tables below, select the sku at the intersection of the enclosure and power rail you desire.

VA 100 Series AC Power Systems

| Material | Ext Dimensions (inches) | 12V , 55W | 24V, 55W | 48V, 55W |
|---------------|-------------------------|------------|------------|------------|
| Polycarbonate | 12x10x6 | VA01120055 | VA01240055 | VA01480055 |
| | 14x12x6 | VA08120055 | VA08240055 | VA08480055 |
| | 18x16x10 | VA09120055 | VA09240055 | VA09480055 |
| Steel | 12x10x6 | VA13120055 | VA13240055 | VA13480055 |
| | 14x12x6 | VA12120055 | VA12240055 | VA12480055 |
| | 18x16x12 | VA03120055 | VA03240055 | VA03480055 |

VA 500 Series AC Power Systems

| Material | Ext Dimensions (inches) | 12V, 120W | 24V, 120W | 48V, 120W |
|---------------|-------------------------|------------|------------|------------|
| Polycarbonate | 18x16x10 | VA09120120 | VA09240120 | VA09480120 |
| Aluminum | 18x16x12 | VA03120120 | VA03240120 | VA03480120 |
| | 26X16X12 | VA04120120 | VA04240120 | VA04480120 |
| | 26X27X12 | VA05120120 | VA05240120 | VA05480120 |

Note: Power Rails with output of 240W, 360W, and 480W are available. Please contact Ventev for a quote.

AC/UPS Power Rail Assembly Specifications

VL 100 Series AC/UPS Power Rail

The VL 100 Series AC/UPS power rail assemblies are an economical, low-power (55W) solution providing AC-to-DC power conversion. This series includes a battery charger for keeping the battery bank charged, when AC power fails. The rail assemblies include a 55W power supply & battery charger unit, DIN rail, knife switch AC disconnect, and AC & DC terminal blocks

VL 100 Series Power Supply

| Input | Nominal Voltage | 115 VAC @ 60Hz | Output | Power Supplies | 12 VDC | 24 VDC | 48 VDC |
|-------|----------------------|----------------|--------|----------------|-----------|-----------|-----------|
| | Current: 12 & 24 VDC | 1.6 A | | Output Current | 3.5 A | 1.8 A | 2.7 A |
| | Current: 48 VDC | 2.5 A | | Ripple & Noise | 100 mVp-p | 100 mVp-p | 240 mVp-p |

Voltage Range 88 to 264 VAC

Temp Range -10 to + 60C

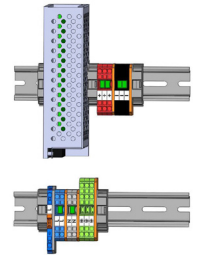
VL 100 Series Battery Charger

| Input | Nominal Voltage | 115 VAC @ 60Hz | Output | Charger | 13.4 VDC | 26.5 VDC | 53.5 VDC |
|-------|----------------------|----------------|--------|-----------------|------------------|----------|----------|
| | Current: 12 & 24 VDC | 1.6 A | | Output Current | 0.23 A | 0.16 A | 0.5 A |
| | Current: 48 VDC | 2.5 A | | 1 Stage Charger | Constant Voltage | | |

Voltage Range 88 to 264 VAC

Transfer Time 20 to 25 μ sec @ 12 & 24 VDC / 5 to 10 μ sec @ 48 VDC

Temp Range -10 to + 60C



VL 500 Series AC/UPS Power Rail

The VL 500 Series AC/UPS rail assemblies are an excellent power solution for outdoor communications applications. With broader power handling capability (120W), these systems include a two-stage battery charger with integrated low voltage disconnect that is independent from the power supply providing fast and scalable battery charging. Each power rail includes 120W power supply, battery charger w/ LVD, AC surge protector, DIN rail, knife switch AC disconnect, and AC & DC terminal blocks

VL 500 Series Power Supply

| Input | Nominal Voltage | 115 VAC @ 60Hz | Output | Power Supplies | 12 VDC | 24 VDC | 48 VDC |
|-------|-----------------|----------------|--------|----------------|-----------|-----------|-----------|
| | Current | 1.4 A | | Output Current | 10.0 A | 5.0A | 2.5 A |
| | Voltage Range | 90 to 264 VAC | | Ripple & Noise | 100 mVp-p | 100 mVp-p | 120 mVp-p |

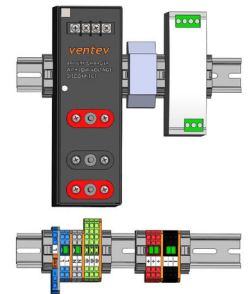
Temp Range -25 to + 70C

VL 500 Series Charger

| Input | Nominal Voltage | 115 VAC @ 60Hz | Output | Power Supplies | 13.6 VDC | 27.2 VDC | 54.4 VDC |
|-------|-----------------|----------------|-------------------|--|----------|----------|----------|
| | Current | 1.85 A | | Output Current | 10.0 A | 5.89 A | 2.95 A |
| | Voltage Range | 90 to 264 VAC | | LVD Disconnect | 10.5 VDC | 22.5 VDC | 45 VDC |
| | | | LVD Reconnect | 12.5 VDC | 25 VDC | 50 VDC | |
| | | | Two-Stage Charger | Stage 1: Const. Current, Stage 2: Const. Voltage | | | |

Transfer Time ~ 0.1 μ sec

Temp Range -10 to + 60C



Note: Power Rails with output of 240W, 360W, and 480W are available. Please contact Ventev for a quote.

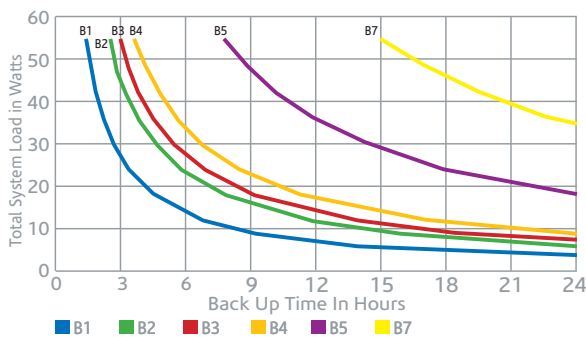
AC/UPS Battery Selection Charts

Because applications and requirements for battery back up time vary greatly, Ventev has developed the charts below to enable you to select the battery bank that will meet your needs. These sizing charts are intended to provide you with an estimated battery backup time based upon the System DC voltage (12, 24, or 48) and the power rail (100 or 500 series).

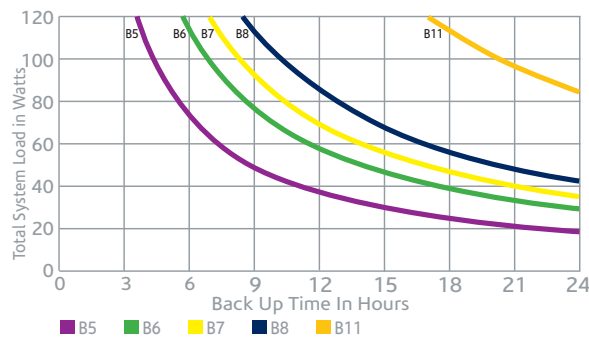
To determine the best battery bank for your application:

- Step 1: Identify the system voltage (12V, 24V, 48V)
- Step 2: Determine system power requirements using the charts y-axis
- Step 3: Determine the backup time required using the charts x-axis
- Step 4: Identify the corresponding battery curve and note the Battery Ref #
- Step 5: Use the Battery Ref # to select the final product sku on page 7.

12VDC , VL 100 Series Power Rail



12VDC , VL 500 Series Power Rail

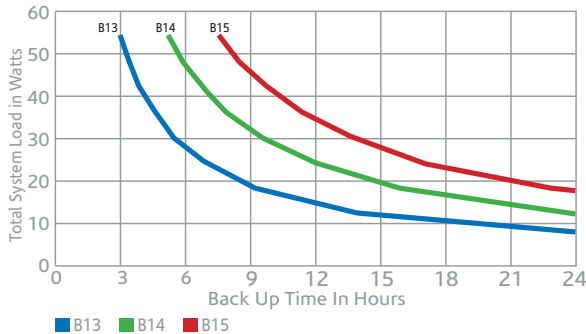


12V Battery Reference Table

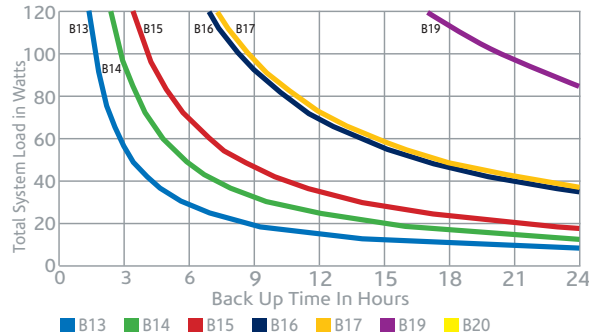
| Ref. # | Tot. Ahr | # of Batteries |
|--------|----------|----------------|
| B1 | 7 | 1 x 7Ahr |
| B2 | 12 | 1 x 12 Ahr |
| B3 | 14 | 2 x 7 Ahr |
| B4 | 17.2 | 1 x 17.2 Ahr |
| B5 | 36 | 1 x 36 Ahr |
| B6 | 57 | 1 x 57 Ahr |
| B7 | 68.8 | 4 x 17.2 Ahr |
| B8 | 84 | 1 x 84 Ahr |
| B11 | 168 | 2 x 84 Ahr |

1 battery string required per enclosure

24VDC , VL 100 Series Power Rail



24VDC , VL 500 Series Power Rail

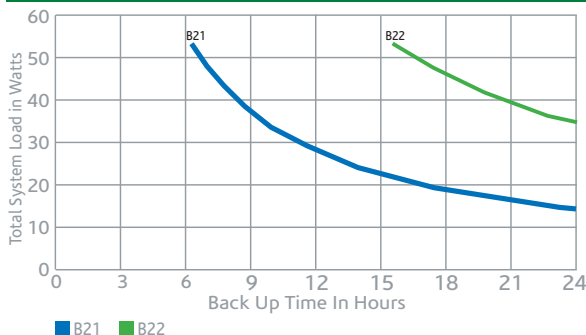


24V Battery Reference Table

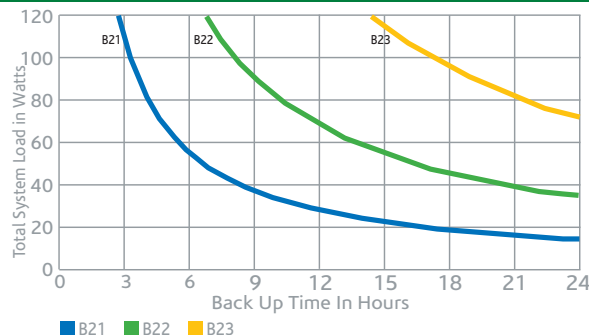
| Ref. # | Tot. Ahr | # of Batteries |
|--------|----------|----------------|
| B13 | 7 | 2 X 7 Ahr |
| B14 | 12 | 2 X 12 Ahr |
| B15 | 17.2 | 2 X 17.2 Ahr |
| B16 | 34.4 | 4 X 17.2 Ahr |
| B17 | 36 | 2 X 36 Ahr |
| B19 | 84 | 2 x 84 Ahr |

2 battery strings required per enclosure

48VDC , VL 100 Series Power Rail



48VDC , VL 500 Series Power Rail



48V Battery Reference Table

| Ref. # | Tot. Ahr | # of Batteries |
|--------|----------|----------------|
| B21 | 7 | 4 X 7 Ahr |
| B22 | 17.2 | 4 X 17.2 Ahr |
| B23 | 36 | 4 X 36 Ahr |

4 battery strings required per enclosure

These backup battery charts help you cross reference the optimum battery, power rail and enclosure combination. Please consult Ventev if you require a configuration not listed in these charts. Ventev UPS systems can be designed with higher power levels (typically up to 1,000W) and greater backup battery time. It is typical for sealed lead acid batteries to vary their capacity with temperature and

degrade over time. The backup battery chart capacity calculations are based upon the typical, warranted battery temperature at 25C. It is important that battery health is monitored over their life cycle of the system and Ventev recommends a battery maintenance schedule is employed to ensure battery capacity is available when needed.

Ordering AC/UPS Power Systems

Enclosure Options: See Pg 3
Battery Ref #: See Pg 6

1. From the battery selection charts on page 6, identify the battery ref # you desire.
2. From the tables below, select the sku at the intersection of the enclosure and battery ref # previously identified.

| 12VDC, VL 100 Series Power Rail (55W) | | | | | | | |
|---------------------------------------|----------|---------------|---------------|---------------|---------------|---------------|---------------|
| Battery Ref (Ahr) | | B1 (7Ahr) | B2 (12Ahr) | B3 (14Ahr) | B4 (17.2Ahr) | B5 (36Ahr) | B7 (68.8Ahr) |
| Polycarbonate | 12x10x6 | VL01120055007 | - | VL01120055014 | - | - | - |
| | 14x12x6 | VL08120055007 | - | VL08120055014 | VL08120055017 | - | - |
| | 18x16x10 | VL09120055007 | - | - | VL09120055017 | VL09120055036 | - |
| Steel | 12x10x6 | VL13120055007 | VL13120055012 | - | - | - | - |
| | 14x12x6 | VL12120055007 | VL12120055012 | - | - | - | - |
| Aluminum | 18x16x12 | VL03120055007 | - | - | - | VL03120055036 | VL03120055069 |

| 12VDC, VL 500 Series Power Rail (120W) | | | | | | |
|--|----------|---------------|---------------|---------------|---------------|---------------|
| Battery Ref (Ahr) | | B5 (36Ahr) | B6 (57Ahr) | B7 (68.8Ahr) | B8 (84Ahr) | B11 (168Ahr) |
| Polycarbonate | 18X16X10 | VL09120120036 | - | - | - | - |
| Aluminum | 18X16X12 | VL03120120036 | - | VL03120120069 | - | - |
| | 26X16X12 | VL04120120036 | VL04120120057 | VL04120120069 | - | - |
| | 26X27X12 | VL05120120036 | - | - | VL05120120084 | VL05120120168 |

| 24VDC, VL 100 Series Power Rail (55W) | | | | |
|---------------------------------------|----------|---------------|---------------|---------------|
| Battery Ref (Ahr) | | B13 (7Ahr) | B14 (12Ahr) | B15 (17.2Ahr) |
| Polycarbonate | 12X10X6 | VL01240055007 | - | - |
| | 14x12X6 | VL08240055007 | - | - |
| | 18X16X10 | VL09240055007 | VL09240055012 | VL09240055017 |
| Aluminum | 18X16X12 | VL03240055007 | VL03240055012 | VL03240055017 |

| 24VDC, VL 500 Series Power Rail (120W) | | | | | |
|--|----------|---------------|---------------|---------------|---------------|
| Battery Ref (Ahr) | | B15 (17.2Ahr) | B16 (34.4Ahr) | B17 (36Ahr) | B19 (84Ahr) |
| Polycarbonate | 18X16X10 | VL09240120017 | - | - | - |
| Aluminum | 18X16X12 | VL03240120017 | VL03240120034 | - | - |
| | 26X16X12 | VL04240120017 | VL04240120034 | - | - |
| | 26X27X12 | VL05240120017 | - | VL05240120036 | VL05240120084 |

| 48VDC, VL 100 Series Power Rail (55W) | | | |
|---------------------------------------|----------|---------------|----------------|
| Battery Ref (Ahr) | | B21 (7Ahr) | B22 (17.2 Ahr) |
| Polycarbonate | 18X16X10 | VL09480055007 | - |
| Aluminum | 18X16X12 | VL03480055007 | VL03480055017 |

| 48VDC, VL 500 Series Power Rail (120W) | | | | |
|--|----------|---------------|----------------|---------------|
| Battery Ref (Ahr) | | B21 (7Ahr) | B22 (17.2 Ahr) | B23 (36Ahr) |
| Polycarbonate | 18X16X10 | VL09480120007 | - | - |
| Aluminum | 18X16X12 | VL03480120007 | VL03480120017 | - |
| | 26X16X12 | VL04480120007 | VL04480120017 | - |
| | 26X27X12 | - | VL05480120017 | VL05480120036 |

Solar Power System Sizing

Ventev solar power systems are designed using the same basic building blocks as Ventev's other AC and UPS products. If solar power systems are the only power generation source for your application, it is critical that system sizing is done properly. This requires a balance of the total system load with the charge capacity provided by the battery bank and the capability of the solar modules to replace the power depleted by the load. Primary power comes from the battery bank. The system's autonomy (the # of days the battery bank can support the load without being recharged) must be considerate to the region of the country where the system is deployed. Typically, northern regions of the country have colder temperatures, less direct sunlight, and environmental conditions that require more autonomy. Our simple system sizing calculation helps you select a system that considers the final deployment location.

System Sizing Steps

Step 1. Calculate System Load

A total system load (TSL) of 1.25 Amp continuous (24 hours/day) at 12 Volts DC requires a solar system that can deliver 30 amp-hours per day (Ah/day) @ 12VDC. All TSL's must be normalized to a common 12VDC reference because the batteries employed with systems are 12V base components. Many radios transmit at their high power specification but remain in standby mode for the majority of the day, drawing much less current than during transmit periods. The greater the accuracy of the duty cycle of all equipment, the easier it is to select a solar power system that is appropriate for the load and environment.

Step 1

| | | |
|----------------------------|-----------|----------------------|
| DC Voltage | 12VDC | 24 x 1.25 |
| Toal System Load (in Amps) | 1.25 Amps | |
| Duty Cycle | 24 Hours | 30 Amp Hours Per Day |

Step 2. Select Deployment Zone

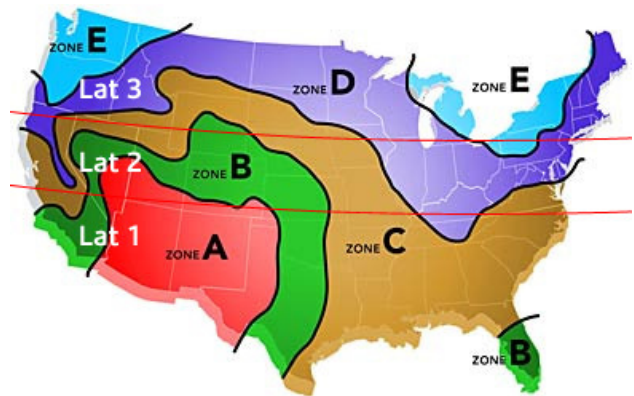
Reference the solar sizing zone map to the right to determine in which zone of the country your system(s) will be deployed.

Step 3. Find Solar Module Output

Reference the solar sizing table on the next page to select the column corresponding to your deployment zone and find a sku which is equal to or greater than the calculated TSL calculated in step 1. This value represents the solar module array that will provide enough amp-hrs per day to replace your battery bank depleted by your system load.

Step 4. Check Battery Bank Capacity

By referencing the map in Step 2, identify the Latitude Range (1, 2 or 3) that corresponds to the location of your deployment. Verify that the sku found in Step 3 has a battery bank capacity that is equal to or greater than your system load. If it does not, or if you wish to be more conservative, select a sku with a higher battery bank capacity.



Steps 2 - 5

Assuming that the equipment list that yielded 30 Amp-hrs/day in Step 1 is to be deployed in Zone C, then the correctly sized system is sku 337214 which will provide 38.4 Amp-hrs/day of capacity. This system will have a battery bank in latitude range 2 of 59.2 Amp-Hrs/day.

Note about Sizing Calculations:

Ventev utilizes common industry databases for solar insolation. To ensure systems remain operational, our sizing calculations conservatively utilize the average low insolation values in the winter months. Additionally, our solar modules are factored for temperature impacts and typical system losses. For the battery bank, we conservatively size to incorporate the recommended days of autonomy and cold temperature impacts on battery capacity.

Solar Power Rail Assembly Specifications

VS 100 Series Solar Power Rail

Include: solar charger, low voltage disconnect, DIN rail, fuses and DC terminal blocks (currently available in 100 series only)

VS 100 Series Power Rail

| | | |
|-----------------------------------|----------------------------------|---------|
| System Voltage | 12 Volt | 24 Volt |
| Rated Solar Input | 6.5/10/20A | |
| Rated Load | 6/10/20A | |
| 25% Current Overload | 5 min. | |
| Regulation Voltage Sealed Battery | 14.1 V | 28.2 V |
| Load Disconnect | 11.5 V | 23.0 V |
| LVD Reconnect | 12.6 V | 25.2 V |
| Temp Comp. (mV/C) | -28 to -56C | |
| Operating Temp. | -40 to +85C | |
| Protection | Class I Div II fused disconnects | |



How to Order Solar Power Systems

From the table below, find the sku of the system that meets or exceeds your calculated TSL. The system will ship complete with integrated solar enclosure, solar modules, battery bank and conduit wiring harness.

12 VDC Complete Solar Power Systems

| SKU | Solar Module Output Amp-Hr/Day | | | | | Battery Bank Capacity Amp-Hr/Day | | | Array Size (Watts) | Enclosure Size |
|---------------|--------------------------------|--------|--------|--------|--------|----------------------------------|-------|-------|--------------------|----------------|
| | Zone A | Zone B | Zone C | Zone D | Zone E | Lat 1 | Lat 2 | Lat 3 | | |
| VS11120390530 | 92.8 | 77.7 | 59.9 | 43.2 | 26.0 | 132.3 | 74.7 | 49.1 | 390 | 40x27x13 Alum |
| VS11120260420 | 59.5 | 49.8 | 38.4 | 27.7 | 16.6 | 104.8 | 59.2 | 38.9 | 260 | 40x27x13 Alum |
| VS11120170265 | 37.8 | 31.7 | 24.4 | 17.6 | 10.6 | 66.1 | 37.4 | 24.6 | 170 | 40x27x13 Alum |
| VS05120085198 | 30.9 | 25.9 | 19.9 | 14.4 | 8.6 | 24.7 | 14.0 | 9.2 | 85 | 26X27X12 Alum |
| VS05120130198 | 30.9 | 25.9 | 19.9 | 14.4 | 8.6 | 49.4 | 27.9 | 18.4 | 130 | 26X27X12 Alum |
| VS04120085099 | 19.4 | 16.2 | 12.5 | 9.0 | 5.4 | 24.7 | 14.0 | 9.2 | 85 | 26X16X12 Alum |
| VS04120130099 | 19.4 | 16.2 | 12.5 | 9.0 | 5.4 | 49.4 | 27.9 | 18.4 | 130 | 26X16X12 Alum |
| VS04120065099 | 14.6 | 12.2 | 9.4 | 6.8 | 4.1 | 24.7 | 14.0 | 9.2 | 65 | 26X16X12 Alum |
| VS04120050099 | 11.5 | 9.6 | 7.4 | 5.3 | 3.2 | 24.7 | 14.0 | 9.2 | 50 | 26X16X12 Alum |
| VS03120020036 | 9.1 | 7.6 | 5.9 | 4.2 | 2.5 | 4.3 | 2.4 | 1.6 | 20 | 18X16X12 Alum |
| VS03120040036 | 9.1 | 7.6 | 5.9 | 4.2 | 2.5 | 9.0 | 5.1 | 3.3 | 40 | 18X16X12 Alum |
| VS04120040099 | 9.1 | 7.6 | 5.9 | 4.2 | 2.5 | 24.7 | 14.0 | 9.2 | 40 | 26X16X12 Alum |
| VS03120010036 | 4.7 | 3.9 | 3.0 | 2.2 | 1.3 | 9.0 | 5.1 | 3.3 | 10 | 18X16X12 Alum |
| VS01120040018 | 4.7 | 3.9 | 3.0 | 2.2 | 1.3 | 4.3 | 2.4 | 1.6 | 40 | 12x10x6 PC |
| VS01120020018 | 2.3 | 1.9 | 1.5 | 1.1 | 0.6 | 9.0 | 5.1 | 3.3 | 20 | 12x10x6 PC |
| VS01120010018 | 2.3 | 1.9 | 1.5 | 1.1 | 0.6 | 4.3 | 2.4 | 1.6 | 10 | 12x10x6 PC |

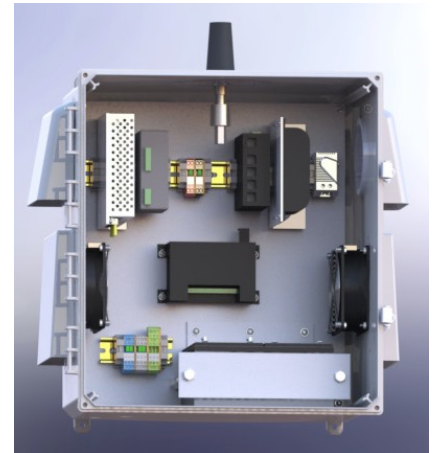
24 VDC Complete Solar Power Systems

| SKU | Solar Module Output Amp-Hr/Day | | | | | Battery Bank Capacity Amp-Hr/Day | | | Array Size (Watts) | Enclosure Size |
|---------------|--------------------------------|--------|--------|--------|--------|----------------------------------|-------|-------|--------------------|----------------|
| | Zone A | Zone B | Zone C | Zone D | Zone E | Lat 1 | Lat 2 | Lat 3 | | |
| VS11120390530 | 92.8 | 77.7 | 59.9 | 43.2 | 26.0 | 132.3 | 74.7 | 49.1 | 390 | 40x27x13 Alum |
| VS11240540265 | 58.3 | 48.9 | 37.6 | 27.1 | 16.3 | 66.1 | 37.4 | 24.6 | 540 | 40X27X13 Alum |
| VS11240360210 | 38.9 | 32.6 | 25.1 | 18.1 | 10.9 | 52.4 | 29.6 | 19.5 | 360 | 40X27X13 Alum |
| VS05240260099 | 29.6 | 24.8 | 19.1 | 13.8 | 8.3 | 24.7 | 14.0 | 9.2 | 260 | 26X27X12 Alum |
| VS05240180099 | 19.4 | 16.3 | 12.5 | 9.0 | 5.4 | 24.7 | 14.0 | 9.2 | 180 | 26X27X12 Alum |
| VS05240100099 | 14.6 | 12.3 | 9.4 | 6.8 | 4.1 | 24.7 | 14.0 | 9.2 | 100 | 26X27X12 Alum |
| VS03240130036 | 11.3 | 9.5 | 7.3 | 5.3 | 3.2 | 9.0 | 5.1 | 3.3 | 130 | 18X16X12 Alum |
| VS05240080099 | 11.3 | 9.5 | 7.3 | 5.3 | 3.2 | 24.7 | 14.0 | 9.2 | 80 | 26X27X12 Alum |
| VS03240080036 | 9.1 | 7.6 | 5.9 | 4.2 | 2.5 | 9.0 | 5.1 | 3.3 | 80 | 18X16X12 Alum |
| VS03240100036 | 9.1 | 7.6 | 5.9 | 4.2 | 2.5 | 24.7 | 14.0 | 9.2 | 100 | 18X16X12 Alum |

Custom Integrated Systems

Ventev designs and manufactures standard, off-the-shelf power systems for outdoor applications. These pre-configured power systems are designed for ultimate flexibility and ease of implementation. Combined with the broad portfolio of components offered by TESSCO Technologies, they ensure reliable network performance and efficient deployments.

Whether you wish to install components into the Ventev Power Systems yourself or purchase a fully integrated system, you can engage our engineers to design a solution that meets your technical requirements. Our application and system engineers will collaborate with you to define a solution.



The Ventev/TESSCO partnership provides expertise in remote monitoring applications such as Smart Grid, Positive Train Control, oil & gas pipeline monitoring, as well as wireless & fiber networking.

Plug & Play Options and Accessories

Radios

- Sierra Wireless
- GE MDS
- Sixnet



Switches & Routers

- DIN rail mountable
- 3 to 18 port Ethernet managed or unmanaged
- Industrial grade -40 to +75C



Media converters

- 10/100 fiber, Gigabit Ethernet, Serial, RS232 and RS485
- Audio to fiber media converters



RTU and Dataloggers

- Remote Terminal Unit Dataloggers with a Data base client and Telemetry interface
- Rugged, flexible performance



Battery Monitoring

- Monitor battery health remotely
- Unique, active battery testing and Ethernet reporting
- Small form factor, DIN mountable for easy integration



TESSCO Technologies and Ventev

Ventev products are exclusively sold by TESSCO Technologies. The partnership between Ventev and TESSCO ensure a broad range of components which are available from stock, improving deployment speed. TESSCO is a leader in the wireless industry and a supply chain expert. The partnership between Ventev and TESSCO ensures that a solution is engineered to your needs and delivered with the lowest total cost.

About Ventev Innovations

Ventev Innovations, is an engineering-driven manufacturer, focused on developing high-performing, intelligent, and exciting products for the ever-changing world of wireless. Whether developing fun and interesting accessories to complement the latest in mobile devices or designing, engineering and introducing complex, first-to-market battery backup systems, Ventev Innovations, a division of TESSCO Technologies Incorporated, is changing the way discerning customers think of wireless. In addition to its newest brand, Ventev™, the company also develops and delivers extraordinary solutions under the TerraWave Solutions® and Wireless Solutions® brands. TESSCO Technologies, which owns Ventev Innovations, is the exclusive distributor of all three brands.

Where to Buy:

Ventev Outdoor Power Systems are exclusively available from TESSCO Technologies.

Please visit www.tessco.com/go/backup or call 800.759.9996.