

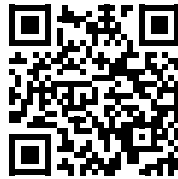


**New Generation / Neue Generation / Yeni Nesil**

**650W-850W HYBRID CONTROLLER USER MANUAL**

**650W-850W HYBRID LADEREGLER BENUTZERHANDBUCH**

**650W-850W HİBRİT ŞARJ KONTROL CİHAZI KULLANMA KILAVUZU**



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### WARNING:

The controller is just for battery charging. It can only directly connect to battery. Please note that + and - poles when the battery is connected. Connect in the same directions. You should never connect directly to any other devices such as inverters. In case of incorrect connection, devices may pose risk of fire hazard.

### DESCRIPTION:

This controller combines the functions of AC to DC rectifier and wind turbine controller. It is the most cost effective solution for renewable energy system.

The controller is suitable for wind turbine with permanent magnet generator or hydro system with permanent magnet generators, which has a 3-phase AC output within the corresponding voltage range. This controller is suitable for use with 150W Solar PV. It rectifies and regulates the generator's 3 phase alternating current in order to be able to charge battery banks in a smooth and safe way the also protects the batteries from over-charging.

When the battery has reached fully charge state, it will cut off current flowing to the battery and brake the wind turbine automatically.

### FEATURES:

Great for wind system controller can support battery charging from simultaneous wind generator load up to 500 watt or 700 watt. It can use together until 150W solar PV.

Load control and diversion control: the controller has over charge protection, short circuit protection, pole confusion protection.

It is reliable with highly efficient, long services life.

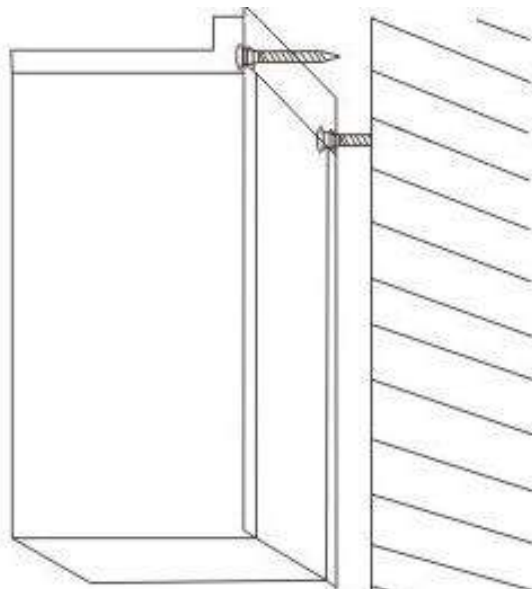
#### Light's Meaning

- RED: When red light is on it mean's brake system work (Battery Discharge)
- ORANGE: When orange light is on it mean's controller work (Battery Charge Mode)

#### SPECIFICATION

| MODEL                           | 12V / 650W               | 24V / 650W              | 12V / 850W               | 24V / 850W               | 48V / 850W              |
|---------------------------------|--------------------------|-------------------------|--------------------------|--------------------------|-------------------------|
| Rated Output Power              | 650W                     | 650W                    | 850W                     | 850W                     | 850W                    |
| Input Voltage Range             | 14,2 ~ 17                | 24,6 ~ 28               | 14,2 ~ 17                | 24,6 ~ 28                | 52,8 ~ 57,9             |
| Range Battery Voltage           | 12V                      | 24V                     | 12V                      | 24V                      | 48V                     |
| Max Input Solar Power           | 150W                     | 150W                    | 150W                     | 150W                     | 150W                    |
| Max Input Wind Power            | 500W                     | 500W                    | 700W                     | 700W                     | 700W                    |
| Over Charge Protection          | 14,9 V                   | 29 V                    | 14,9 V                   | 29 V                     | 58V                     |
| No- load current                | ≤0.2A                    | ≤0.2A                   | ≤0.2A                    | ≤0.2A                    | ≤0.2A                   |
| Recommend Battery               | 12V/150 Ah<br>12V/200 Ah | 24V/75 Ah<br>24V/100 Ah | 12V/200 Ah<br>12V/300 Ah | 24V/150 Ah<br>24V/200 Ah | 48V/75 Ah<br>48V/100 Ah |
| Wind Turbine Max. Input Current | 40 Ah                    | 20 Ah                   | 55 Ah                    | 30 Ah                    | 15 Ah                   |
| Weight (Gross)                  | 620gr                    | 620gr                   | 650gr                    | 650gr                    | 650gr                   |
| Size (mm)                       | 200x115x60               | 200x115x60              | 200x115x60               | 200x115x60               | 200x115x60              |

## INSTALLATION:



The controller is designed to be mounted on a vertical wall

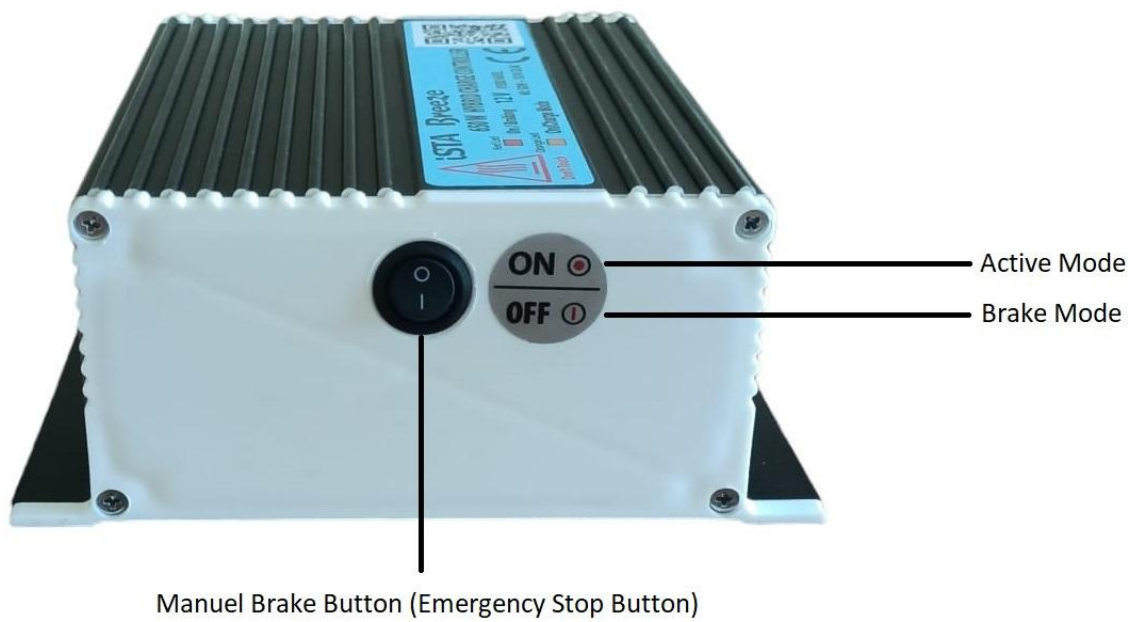
### Step 1:

Connect the device as shown in battery, the battery cable connection, use a minimum thickness of 6mm<sup>2</sup>.

Please attention when you connect terminals, If connecting like +/+ and righth, your controller will burn and it out of warranty.

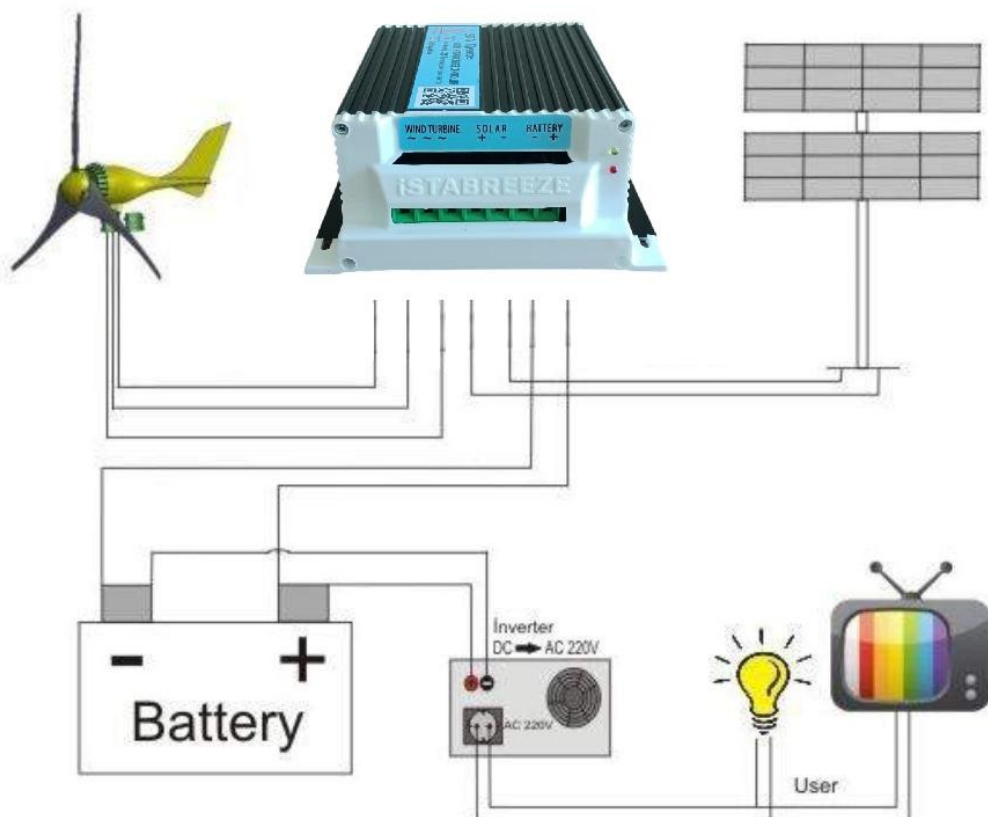
### Step 2:

3 connect the cable from the devices as shown in the wind turbine. (this 3-cable connection sequence is not important.) When start to installation be careful +/- pole, Connect cable comes from Solar PV what is shown on devices.



### Battery and Turbine installation with controller

Now connect the solar system, please adjust to connect the negative pole to negative pole and positive pole to positive pole.



Wiring diagram for an example

That's it. Installation is finished

Warnung:

Der Laderegler ist nur zum Aufladen einer Batterie gedacht.

Schließen Sie den Laderegler niemals an einen Inverter an, da so Brandgefahr entstehen kann und Gefährlich ist.

Beschreibung:

Dieser Laderegler wandelt Wechselstrom in Gleichstrom um. Es ist eine kostengünstige Lösung für erneuerbare Energiesysteme.

Sie können diesen Ladereger für alle 3-Phasen Windgeneratoren oder Wasserkraft Anlagen sowie Standard Solaranlagen benutzen. Sobald die Batterie vollständig aufgeladen ist bremst der Laderegler automatisch ab.

Eigenschaften :

Das Design sorgt für eine effiziente Belüftung und ein effizienten Betrieb geeignet für Wechselstrom und Windgeneratoren.

Dieser Laderegler ist für 500W oder 700W Windgeneratoren und gleichzeitig für 150W Solaranlagen geeignet.

Ladereglung und Umleitungsreglung :

Der Laderegler verfügt über ein Bremsschutz bei vollem Akku und hat ein Kurzschlusschutz.

Er ist zuverlässig und hat eine lange Lebensdauer.

## Leuchtionen:

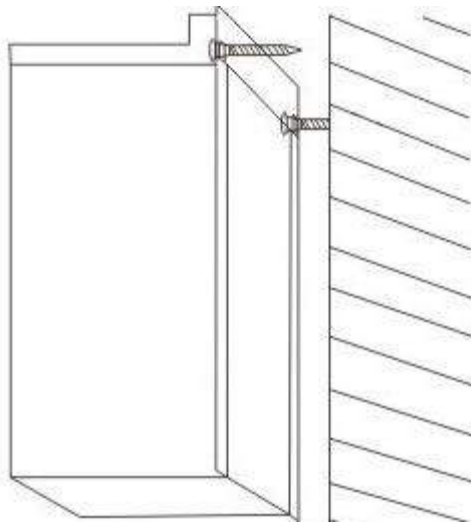
Rote Leuchtide: Wenn die rote Leuchte brennt, bedeutet es dass der Laderegler den Windgenerator bremst. z.B. bei vollem Akku oder wenn die Windgeschwindigkeit zu hoch ist

Orangene Leuchtide: Wenn diese an ist heißt es dass der Laderegler lädt.(Der Laderegler ist im Lademodus)

| MODEL                           | 12V / 650W               | 24V / 650W              | 12V / 850W               | 24V / 850W               | 48V / 850W              |
|---------------------------------|--------------------------|-------------------------|--------------------------|--------------------------|-------------------------|
| Nennausgangsleistung            | 650W                     | 650W                    | 850W                     | 850W                     | 850W                    |
| Eingangsspannungsbereich        | 14,2 ~ 17                | 24,6 ~ 28               | 14,2 ~ 17                | 24,6 ~ 28                | 52,8 ~ 57,9             |
| Batterie                        | 12V                      | 24V                     | 12V                      | 24V                      | 48V                     |
| Max. Eingang Solar Pv.          | 150W                     | 150W                    | 150W                     | 150W                     | 150W                    |
| Max. Eingang Windkraft          | 500W                     | 500W                    | 700W                     | 700W                     | 700W                    |
| Schutzspannung                  | 14,9 V                   | 29 V                    | 14,9 V                   | 29 V                     | 58V                     |
| Eigenverbrauch                  | ≤0.2A                    | ≤0.2A                   | ≤0.2A                    | ≤0.2A                    | ≤0.2A                   |
| Empfohlene Batterie             | 12V/150 Ah<br>12V/200 Ah | 24V/75 Ah<br>24V/100 Ah | 12V/200 Ah<br>12V/300 Ah | 24V/150 Ah<br>24V/200 Ah | 48V/75 Ah<br>48V/100 Ah |
| Wind Turbine Max. Eingangsstrom | 40 Ah                    | 20 Ah                   | 55 Ah                    | 30 Ah                    | 15 Ah                   |
| Gewicht (brutto)                | 620 gr                   | 620 gr                  | 650gr                    | 650gr                    | 650gr                   |
| Größe(mm)                       | 200x115x60               | 200x115x60              | 200x115x60               | 200x115x60               | 200x115x60              |

DEUTSCH

## Installation



Den Laderegler können Sie an eine Wand befestigen.

### Schritt 1

Verbinden Sie den Laderegler sowie es auf der Batterie gezeigt wird.

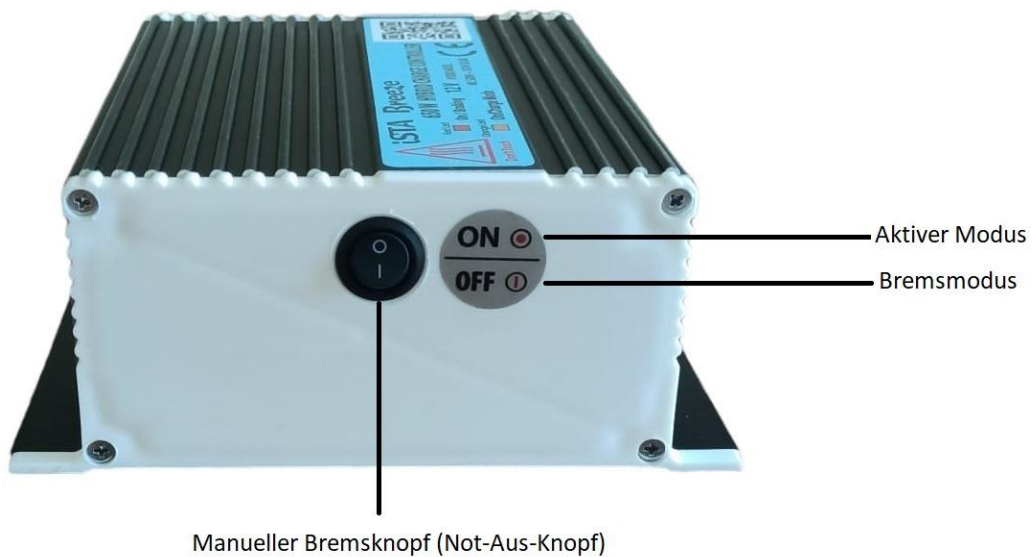
Verwenden Sie ein Kabelanschluss von mind. 6mm<sup>2</sup> für das anschließen des Ladereglers und der Batterie.

Bitte passen Sie auf das Sie die Gleichen Pole anklemmen, das heißt Minuspol zu Minuspol und Pluspol zu Pluspol.

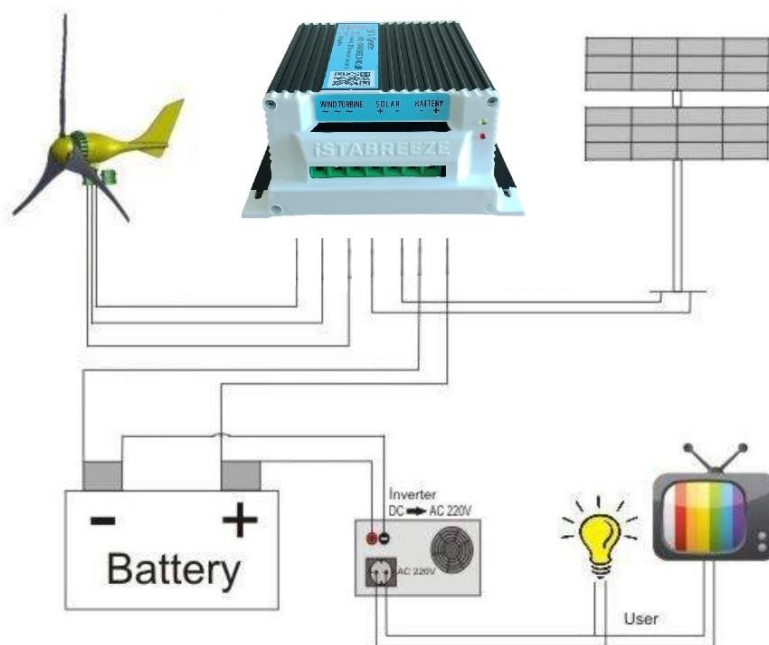
Wenn Sie das nicht beachten brennt der Laderegler ab und die Garantie fällt weg.

### Schritt 2

Schließen Sie die 3 Kabel vom Windgenerator sowie in der Beschreibung unten an. Die Reihen folge ist unwichtig.



### Batterie - und Turbineninstallation mit Controller



Schaltplan Beispiel

Das war`s schon !! Die Installation ist Abgeschlossen.

### UYARI:

Bu şarj kontrol cihazı sadece batarya şarj etmek içindir. Kurulum sırasında ilk önce; şarj kontrol cihazınızı akünüze bağlayınız. Akü bağlantısı yapılırken lütfen + ve – kutuplarına dikkat ediniz. Aynı yönlerde bağlantıyı yapınız, yanlış bağlantı durumunda cihazınız yanar.

Sadece doğrudan bataryaya bağlayabilirsiniz. İnverter gibi cihazlara asla doğrudan bağlamayınız.

### TANIM:

Bu şarj kontrol cihazı rüzgar türbininden gelen AC akımını DC akımına doğrultur ve rüzgar türbini için yük oluşturarak verimli bir şarj olanağı sağlar.

Şarj kontrol cihazı kendi voltaj aralığında 3 fazlı AC çıkışı olan rüzgar türbinlerinde ve standart güneş panellerinde kullanılabilir. Cihaz gelen akımı doğrultmanın yanı sıra bataryayı aşırı şarj olmaktan korur.

Batarya tamamen dolduğunda otomatik olarak rüzgar türbinini frenler.

### Özellikleri:

Yüksek güvenilirlik, alüminyum gövde, verimli havalandırma tasarımı  
Sarj sistemi için 500 W ve 700 W' a kadar olan rüzgar türbinlerini destekler.

Şarj denetleyici, kısa devre fren sistemi yüksek verimli ve uzun ömürlüdür.

## Işık Kodları ;

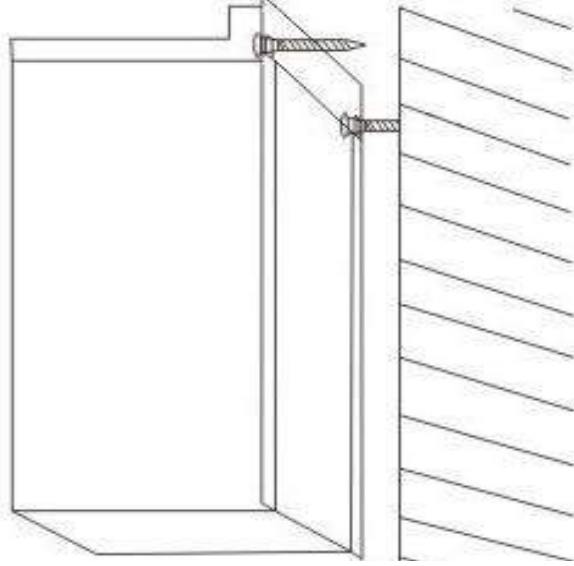
Kırmızı: Kırmızı yanıyor ise otomatik frenleme devrede demektir.

Turuncu: Turuncu yanıyor ise sistem aktif demektir. (şarj olmaya müsait)

## TEKNİK ÖZELLİKLER

| MODEL                              | 12V / 650W               | 24V / 650W              | 12V / 850W               | 24V / 850W               | 48V / 850W              |
|------------------------------------|--------------------------|-------------------------|--------------------------|--------------------------|-------------------------|
| Nominal çıkış gücü                 | 650W                     | 650W                    | 850W                     | 850W                     | 850W                    |
| Giriş voltaj aralığı               | 14,2 ~ 17                | 24,6 ~ 28               | 14,2 ~ 17                | 24,6 ~ 28                | 52,8 ~ 57,9             |
| Batarya voltajı                    | 12V                      | 24V                     | 12V                      | 24V                      | 48V                     |
| Mak. Güneş Ene. girişi             | 150W                     | 150W                    | 150W                     | 150W                     | 150W                    |
| Maks. Rüz. Enerji girişi           | 500W                     | 500W                    | 700W                     | 700W                     | 700W                    |
| Koruma Voltajı                     | 14,9V                    | 29V                     | 14,9V                    | 29 V                     | 58 V                    |
| Batarya Tüketimi                   | ≤0.2A                    | ≤0.2A                   | ≤0.2A                    | ≤0.2A                    | ≤0.2A                   |
| Önerilen batarya                   | 12V/150 Ah<br>12V/200 Ah | 24V/75 Ah<br>24V/100 Ah | 12V/200 Ah<br>12V/300 Ah | 24V/150 Ah<br>24V/200 Ah | 48V/75 Ah<br>48V/100 Ah |
| Maks. Rüzgar türbini enerji girişi | 40 Ah                    | 20 Ah                   | 55 Ah                    | 30 Ah                    | 15 Ah                   |
| Ağırlık (Brüt)                     | 620 gr                   | 620 gr                  | 650gr                    | 650gr                    | 650gr                   |
| Boyut(mm)                          | 200x115x60               | 200x115x60              | 200x115x60               | 200x115x60               | 200x115x60              |

## Kurulum



## Tanım ve özellikleri

Bu sarj kontrol cihazı duvara monte edebileceğiniz şekilde tasarlanmıştır.

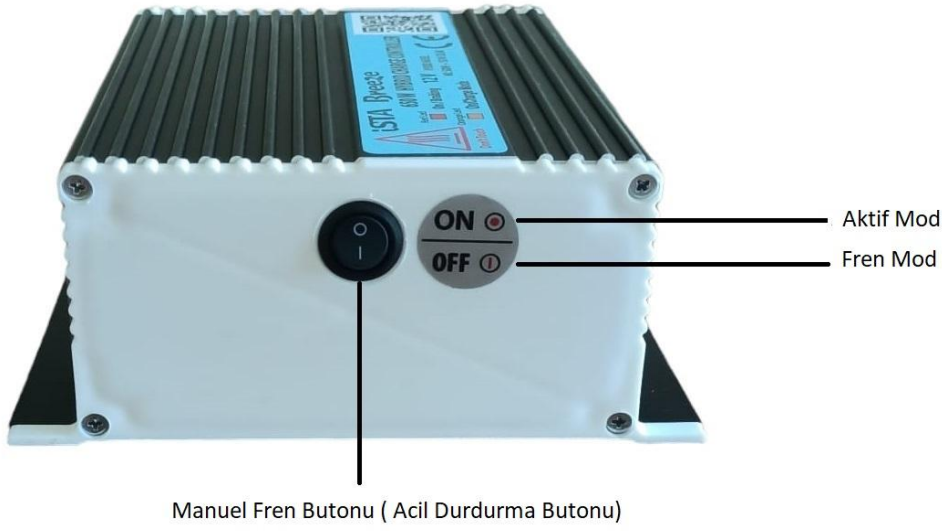
### 1. Adım:

Sekilde gösterildiği gibi bataryanızı cihaza bağlayınız. Batarya bağlantısında en az 6mm<sup>2</sup> kalınlığında kablo kullanmaya özen gösteriniz. Bataryanın pozitif ve negatif uçlarına dikkat ediniz.

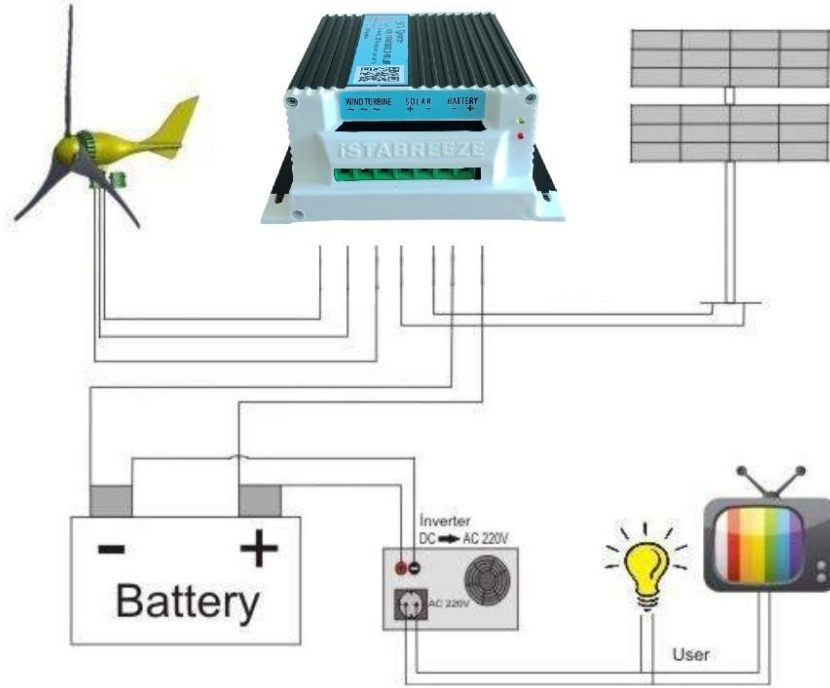
### 2. Adım:

Sekilde gösterildiği gibi rüzgar türbininden gelen 3 kabloyu cihaza bağlayınız.  
( bu 3 kabloda bağlantı sıralaması önemli değildir)

Güneş panelinden gelen 2 kabloyuda + / - kutuplara dikkat ederek cihazda belirtilen yere bağlayınız.



Türbin ve bataryanın şarj kontrol cihazı ile örnek bağlantı şeması



Örnek bağlantı şeması

İşte bu kadar! Kurulumu tamamladınız

