



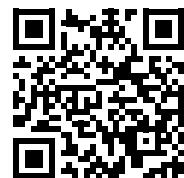
MADE IN  
TURKEY

New Generation / Neue Generation / Yeni Nesil

650W-850W HYBRID CONTROLLER USER MANUAL

650W-850W HYBRID LADEREGLER BENUTZERHANDBUCH

650W-850W HİBRİT ŞARJ KONTROL CİHAZI KULLANMA KİLAVUZU



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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.

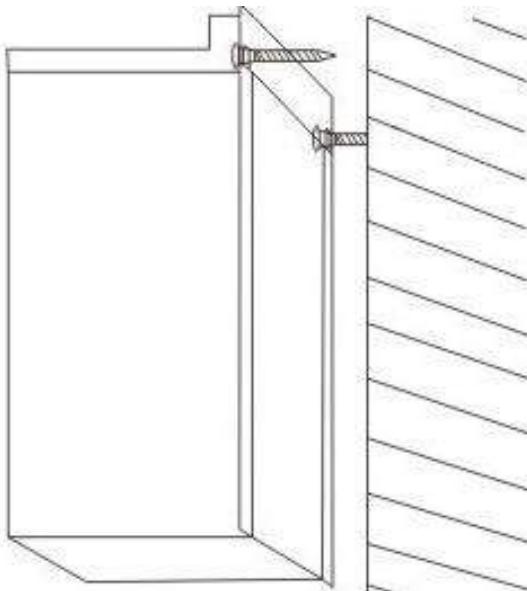
### Light's Meaning

- 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 12V/200 Ah	24V/75 Ah 24V/100 Ah	12V/200 Ah 12V/300 Ah	24V/150 Ah 24V/200 Ah	48V/75 Ah 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:**

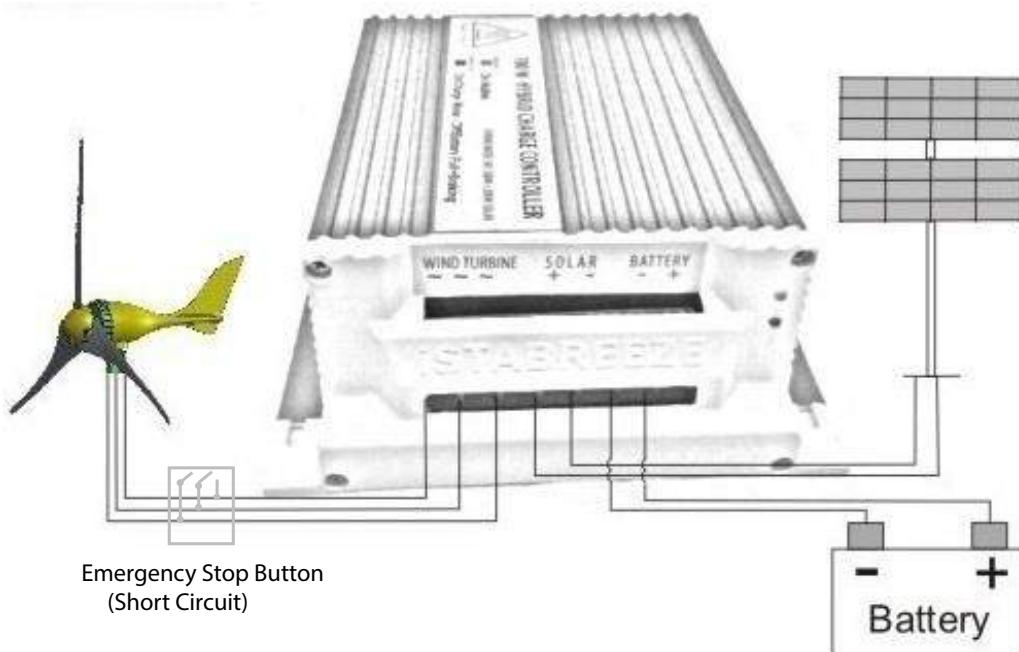
Connect the device as shown in battery, the battery cable connection, use a minimum thickness of 6mm<sup>2</sup>.

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

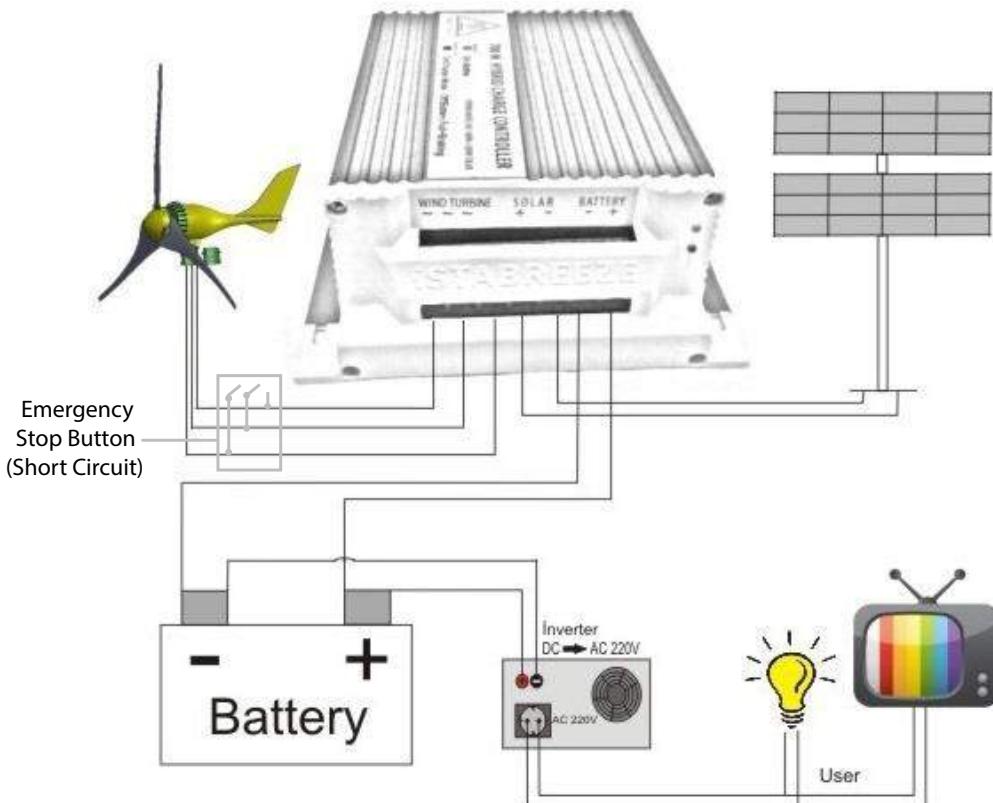
**Step 2:**

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.

# ENGLISH



Battery and Turbine installation with controller



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 Kurzschlussschutz.

Er ist zuverlässig und hat eine lange Lebensdauer.

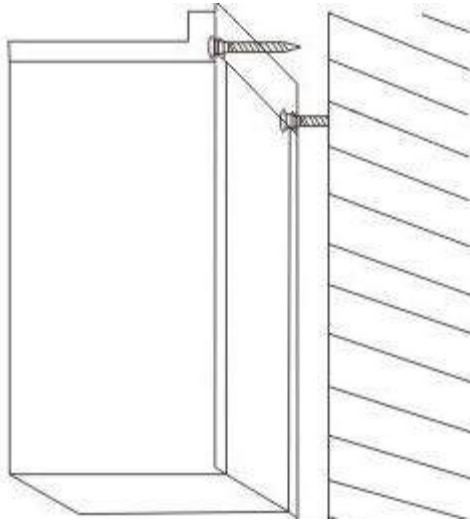
## Leuchtionen:

Rote Leuchtiode: 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 Leuchtiode: 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 12V/200 Ah	24V/75 Ah 24V/100 Ah	12V/200 Ah 12V/300 Ah	24V/150 Ah 24V/200 Ah	48V/75 Ah 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
Göße(mm)	200x115x60	200x115x60	200x115x60	200x115x60	200x115x60

## 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.  $6\text{mm}^2$  für das anschließen des Ladereglers und der Batterie.

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

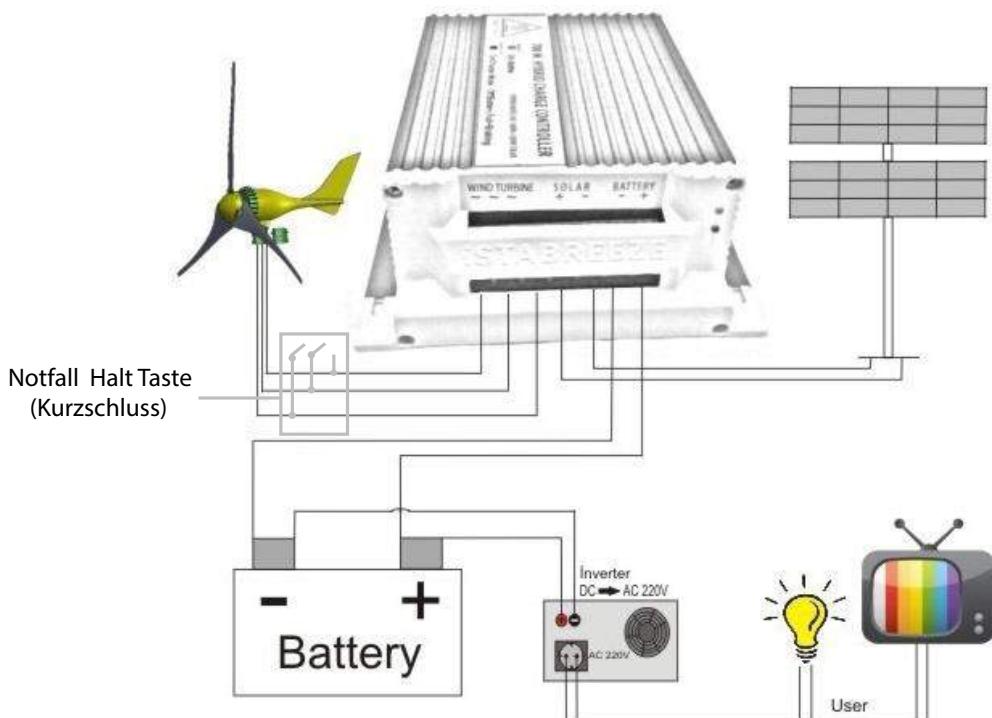
Wenn Sie das nicht beachten brennt der Laderegler ab und die Garantie fällt weg.

### Schritt 2

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



Batterie - und Turbineninstallation mit Controller



Schaltplan Beispiel

DEUTSCH

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 turbini 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 turbinini frenler.

## Özellikleri:

Yüksek güvenilirlik, alüminyum gövde, verimli havalandırma tasarımlı 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.

### İşık Kodları ;

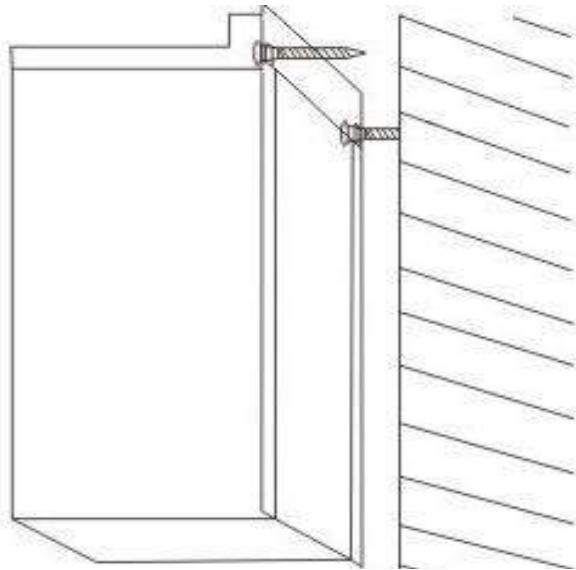
Kırmızı: Kırmızı yanıyorsa otomatik frenleme devrede demektir.

Turuncu: Turuncu yanıyorsa 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 12V/200 Ah	24V/75 Ah 24V/100 Ah	12V/200 Ah 12V/300 Ah	24V/150 Ah 24V/200 Ah	48V/75 Ah 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 özellikler

Bu sarj kontrol cihazı duvara monte edebileceğiniz şekilde tasarlanmıştır.

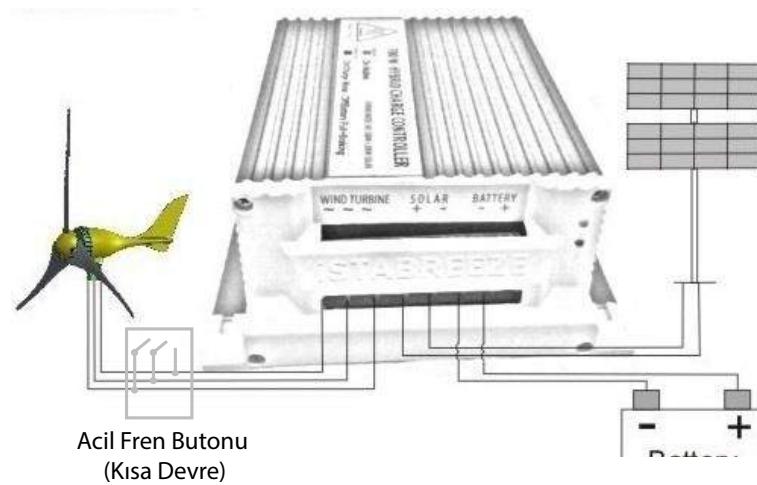
### 1. Adım:

Sekilde gösterildiği gibi bataryanızı cihaza baglayınız. Batarya baglantısında en az  $6\text{mm}^2$  kalınlığında kablo kullanmaya özen gösteriniz. Bataryanın pozitif ve negatif uclarına dikkat ediniz.

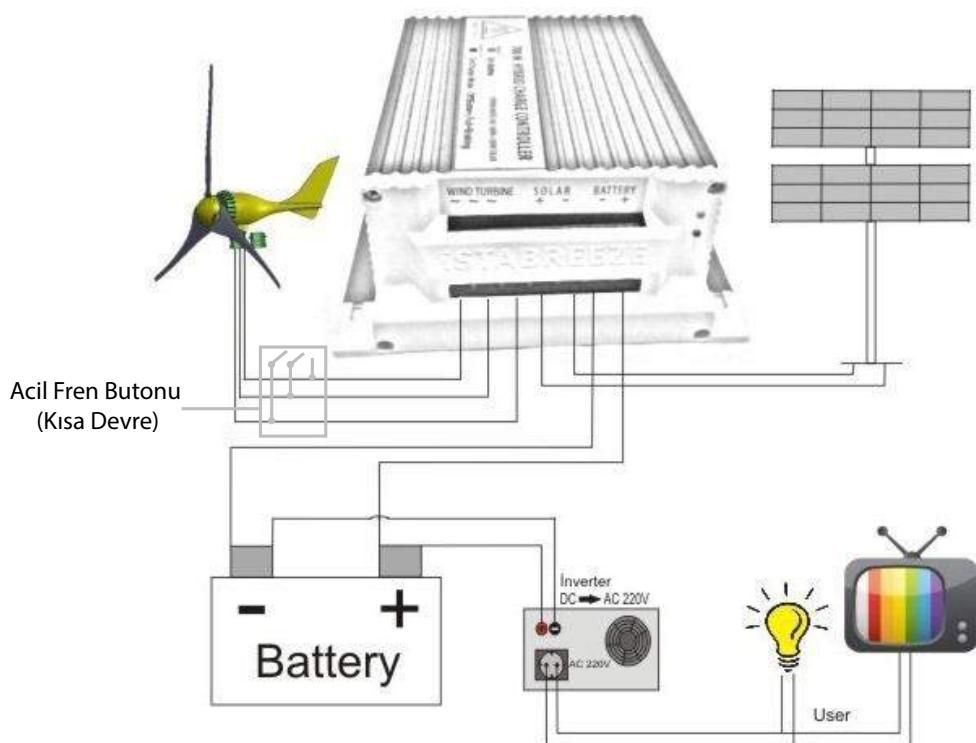
### 2. Adım:

Sekilde gösterildiği gibi rüzgar türbininden gelen 3 kabloyu cihaza baglayınız.  
( bu 3 kabloda baglanti siralaması önemli degildir)

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



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