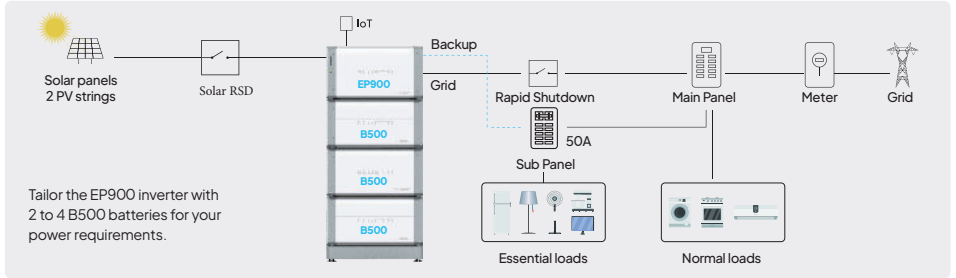


# **BLUETTI EP900 ESS SYSTEM**

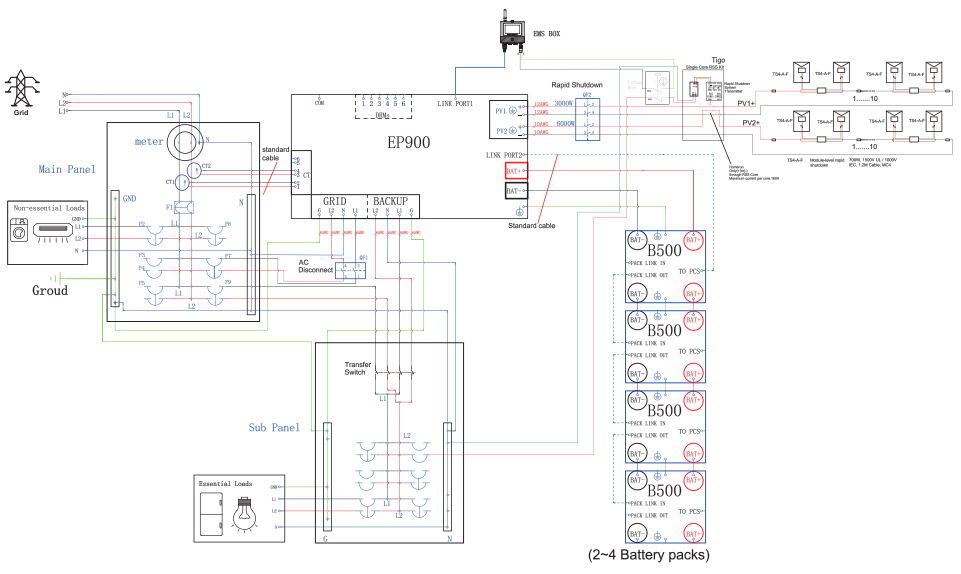
for new installing solar system

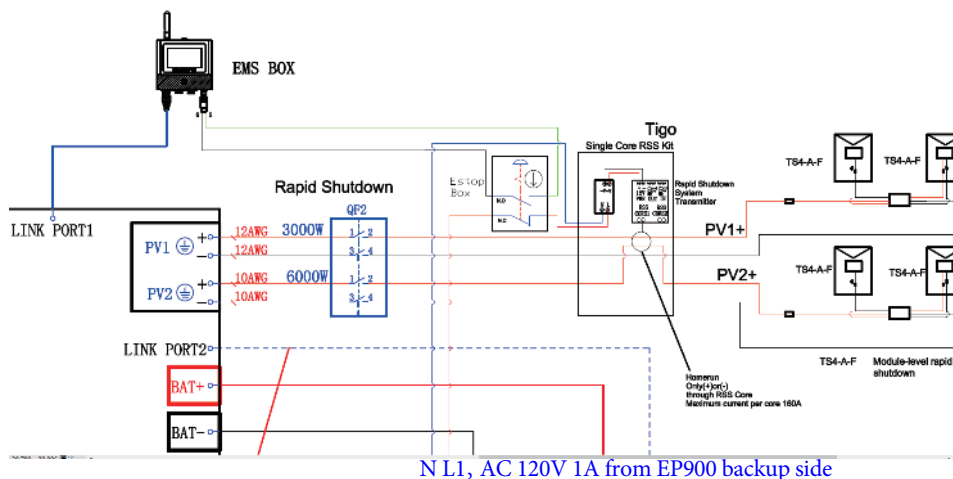
V1.4

# 1. System



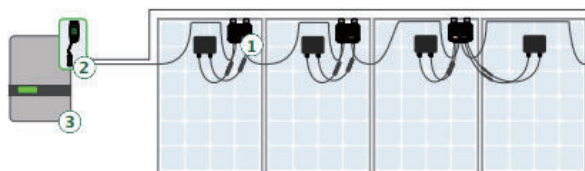
# 2. Electrical Diagrams





### 3. System connection

**SCHEMATIC | F, 2F**  
**Dedicated, reliable rapid shutdown devices**



#### 1. TS4: F or 2F

Tigo's Fire Safety line of TS4 are completely dedicated to the rapid shutdown function and communication via PLC with the RSS Transmitter.

#### 2. Required: RSS Transmitter

The Tigo Rapid Shutdown System (RSS) Transmitter\* enables UL PVRSS certified rapid shutdown with TS4-A-F and -2F units to meet required safety codes.

\*RSS Transmitter may be inside the inverter, see Tigo Enhanced Inverters.

#### 3. Monitoring: Inverter

Tigo's TS4-A-F and -2F are dedicated rapid shutdown devices. Inverter monitoring may provide DC data at the string, MPPT or array level.




### 4. Component

No.	Product	Mode	Description	SKU	Quantity
1	Module-level rapid shutdown	TS4-A-F or TS4-A-2F	700W, 1500V UL / 1000V IEC, 1.2M Cable, MC4	459-00252-32	20
2	Tigo RSS Transmitter Kit	100A DIN Rail Transmitter Kit, 120/240VAC power supply, Enclosure	100A DIN Rail Transmitter Kit, 120/240VAC power supply, Enclosure	492-00000-10	1
3	Estop Switches with Box	E-Stop Box	switch box, lth : 10A; Ui : 600V; Contact type: 1 NC+1NO;		1

## 5.Introduction for component

### 5.1Module-level rapid shutdown

#### Rapid Shutdown with Power Line Communication

TS4-A Advanced Add-on			SKU
TS4-A-F	500W, 1500V UL / 1000V IEC, 1.2M Cable, MC4		458-00252-32
TS4-A-F	700W, 1500V UL / 1000V IEC, 1.2M Cable, MC4		459-00252-32
TS4-A-2F	1000W, 1500V UL / 1000V IEC, 2.2M Cable, MC4		484-00252-22

#### Tigo TS4 – A-F for single Module

PRODUCT CERTIFICATION REQUIREMENTS | INSTALLATION | INITIAL PERFORMANCE MONITORING | TYPICAL



#### Tigo TS4-A-F Module Add-On Rapid Shutdown, Fire Safety

Brand: Tigo


3.9  4 ratings | Search this page

\$28<sup>28</sup>

Get \$10 off instantly. Pay \$18.28 ~~\$28.28~~ upon approval for the Amazon Store Card. No annual fee.

- Up to 700W per channel
- IEC and UL certified
- Meets US NEC rapid shutdown safety requirements
- UL PVRSS certified with the largest network of inverters
- Max Input/Output (DC): 80V, 15A, 700W
- MC4 (standard) connectors
- Snaps to module frame for easy mounting

▼ Show more

 Report an issue with this product or seller

[https://www.amazon.com/Tigo-Module-Rapid-Shutdown-Safety/dp/B07ZQSFC6F/ref=pd\\_xgy\\_thbs\\_d\\_scc1\\_1/140-3056847-2341054?pd\\_rd\\_w=NeilN&content-id=amzn1.sym.3858a394-39a9-4946-90e6-86a3153d2546&pf\\_rd\\_p=3858a394-39a9-4946-90e6-86a3153d2546&pf\\_rd\\_r=7834Z5GC82M4DMXZMSBQ&pd\\_rd\\_wg=Tuqrb&pd\\_rd\\_r=887771d8-5a2b-4256-8987-ea392d2852fc&pd\\_rd\\_i=B07ZQSFC6F&psc=1](https://www.amazon.com/Tigo-Module-Rapid-Shutdown-Safety/dp/B07ZQSFC6F/ref=pd_xgy_thbs_d_scc1_1/140-3056847-2341054?pd_rd_w=NeilN&content-id=amzn1.sym.3858a394-39a9-4946-90e6-86a3153d2546&pf_rd_p=3858a394-39a9-4946-90e6-86a3153d2546&pf_rd_r=7834Z5GC82M4DMXZMSBQ&pd_rd_wg=Tuqrb&pd_rd_r=887771d8-5a2b-4256-8987-ea392d2852fc&pd_rd_i=B07ZQSFC6F&psc=1)

## Tigo TS4-A-2F for two PV modules



### Tigo TS4-A-2F PV Module-Level Rapid Shutdown for Two Modules

Brand: Tigo Energy

3.3 ★★★★★

4 ratings | Search this page


\$59<sup>45</sup>

FREE Returns

Get \$10 off instantly. Pay \$49.45 ~~\$59.45~~ upon approval for the Amazon Store Card. No annual fee.

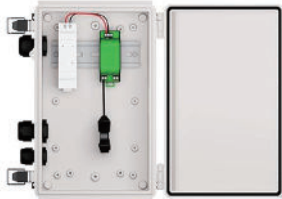
Available at a lower price from other sellers that may not offer free Prime shipping.

- Single MLPE connects to 2 PV modules | MC4 (standard) connectors
- IEC and UL certified | Meets US NEC rapid shutdown safety requirements
- UL PVRSS certified with the largest network of inverters
- 1000W (500W per channel) | 16-90V, 15A (per channel)
- Snaps to module frame for easy mounting | Does not require ground wire | PLC communication

 Report an issue with this product or seller

[https://www.amazon.com/Tigo-Energy-Module-Level-Shutdown-Modules/dp/B09CN2XL9D/ref=pd\\_bxgy\\_d\\_sccl\\_2/140-3056847-2341054?pd\\_rd\\_w=SQVjv&content-id=amzn1.sym.3858a394-39a9-4946-90e6-86a3153d2546&pf\\_rd\\_p=3858a394-39a9-4946-90e6-86a3153d2546&pf\\_rd\\_r=HJYW7MCD6VCN2BK3XS39&pd\\_rd\\_wg=L9scw&pd\\_rd\\_r=f1256b08-02d0-481d-8aef-f0c0162df6ec&pd\\_rd\\_i=B09CN2XL9D&psc=1](https://www.amazon.com/Tigo-Energy-Module-Level-Shutdown-Modules/dp/B09CN2XL9D/ref=pd_bxgy_d_sccl_2/140-3056847-2341054?pd_rd_w=SQVjv&content-id=amzn1.sym.3858a394-39a9-4946-90e6-86a3153d2546&pf_rd_p=3858a394-39a9-4946-90e6-86a3153d2546&pf_rd_r=HJYW7MCD6VCN2BK3XS39&pd_rd_wg=L9scw&pd_rd_r=f1256b08-02d0-481d-8aef-f0c0162df6ec&pd_rd_i=B09CN2XL9D&psc=1)

## 3.2 Tigo RSS Transmitter Kit




### Tigo 492-00000-51 RSS Transmitter Kit Single Core Outdoor

Brand: Generic

Search this page

\$145<sup>46</sup> (\$48.49 / Item)

- Rapid shutdown initiation device for Tigo TS4-A-F and TS4-A-2F
- Multivendor UL Certified solution to meet the NEC 690.12 2017/2020 code requirements
- The Module-level deactivation with automatic or manual shutdown
- Easy installation, no commissioning process is required
- Compatible with the largest network of UL-listed residential & commercial inverters
- Integrated into many inverters, enabling plug and play installations with Tigo TS4-A-F and TS4-A-2F
- NEW: available with Pure Signal technology, to simplify the design and installation of sites with multiple transmitters

 Report an issue with this product or seller

[https://www.amazon.com/Tigo-492-00000-51-Transmitter-Single-Outdoor/dp/BOBRDFF3GS/ref=sr\\_1\\_8?crd=211CYDGK929XT&dib=eyJ2JjoiMSJ9.XnWV71NH\\_v0TOAXDrAzUKDITvInGyqEdFinisPwPxAX9GxE1GP-09faP8AhePJ2\\_PEP0MVwiC8ne\\_mLXIdNCrTHLvlxIEDbi9uWkAphU39zKTiDMa6Su7Lffgg5wDbOnO6OwF39HTNH-kAejItOP2YwAnPQzRnubieJrmT8fRts1fQBnueRzRurlE2iUkYsnejrIVBUGikaAEJU07Q\\_O113BO4tZ2ITvTOM\\_n5pS734.C3NkozIE-97ZXgGY8Ans47UXtRFdpn2cmsXWpcunx5E&dib\\_tag=se&keywords=TIGO&qid=1724899636&prefix=tigo%2Caps%2C289&sr=8-8](https://www.amazon.com/Tigo-492-00000-51-Transmitter-Single-Outdoor/dp/BOBRDFF3GS/ref=sr_1_8?crd=211CYDGK929XT&dib=eyJ2JjoiMSJ9.XnWV71NH_v0TOAXDrAzUKDITvInGyqEdFinisPwPxAX9GxE1GP-09faP8AhePJ2_PEP0MVwiC8ne_mLXIdNCrTHLvlxIEDbi9uWkAphU39zKTiDMa6Su7Lffgg5wDbOnO6OwF39HTNH-kAejItOP2YwAnPQzRnubieJrmT8fRts1fQBnueRzRurlE2iUkYsnejrIVBUGikaAEJU07Q_O113BO4tZ2ITvTOM_n5pS734.C3NkozIE-97ZXgGY8Ans47UXtRFdpn2cmsXWpcunx5E&dib_tag=se&keywords=TIGO&qid=1724899636&prefix=tigo%2Caps%2C289&sr=8-8)

### 3.3 Estop Switches



Roll over image to zoom in



#### TWTADE/Red Lamp Self Locking Emergency Stop Mushroom Switch Push Button Station 660V 10A Stop Switch Box YW1B-V4E11R-BOX

Visit the TWTADE Store

3.4 ★★★★★ 15 ratings | Search this page

-13% ~~\$13.99~~

List Price: \$14.99

Get Fast, Free Shipping with Amazon Prime

FREE Returns

Operation Mode	ON-OFF
Current Rating	10 Amps
Operating Voltage	660 Volts
Contact Type	Normally Open, Normally Closed
Connector Type	Screw
Brand	TWTADE
Terminal	Through Hole

See more

**Switch Type**  
Push Button

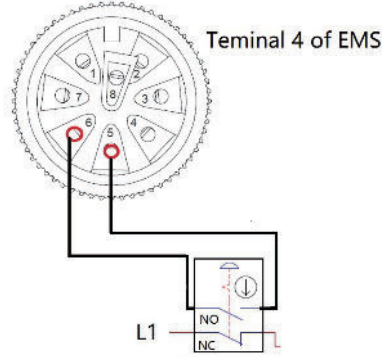
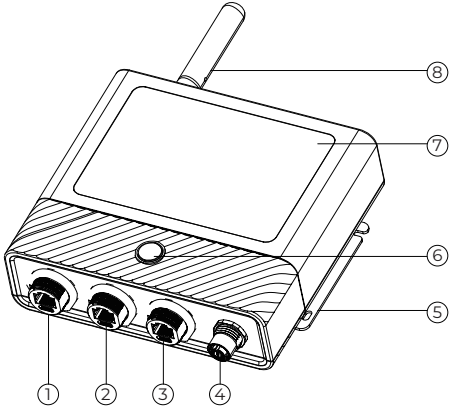
**Material**  
Plastic

#### About this item

- This Push Button switch Exquisite workmanship, Quality assurance for 3 years. If there are quality problems within 3 years, you can send us email. We will send you new ones.
- Product Name: Push Button Switch Station; Country of Manufacture: CHINA; Material: Plastic, Metal
- Contact Type: 1 NO, 1 NC; Action Type: Self Locking
- Net Weight: 170g; Package Content: 1 x Push Button Station; Box Size: 7.8x7x6.6cm / 3.1x2.7x2.5inch (L\*W\*H)
- Button Size: 4 x 2.5cm / 1.57 x 1 inch (D \* H); Mounting Screw Hole Diameter: 5mm / 0.19 Inch UK 660V; Ith: 10A

[https://www.amazon.com/TWTADE-Emergency-Mushroom-box%EF%BC%88Quality-assurance/dp/B07CFKQR51/ref=pd\\_ci\\_mcx\\_di\\_int\\_sccai\\_cn\\_d\\_scc1\\_2\\_20/140-3056847-2341054?pd\\_rd\\_w=YTTPh&content-id=amzn1.sym.751acc83-5c05-42d0-a15e-303622651e1e&pf\\_rd\\_p=751acc83-5c05-42d0-a15e-303622651e1e&pf\\_rd\\_r=N3PYHA2CAQ6X752HQGRN&pd\\_rd\\_wg=JcJg7&pd\\_rd\\_r=620f1a71-1d58-48f6-a9fd-9a602216ddf6&pd\\_rd\\_i=B07CFKQR51&psc=1](https://www.amazon.com/TWTADE-Emergency-Mushroom-box%EF%BC%88Quality-assurance/dp/B07CFKQR51/ref=pd_ci_mcx_di_int_sccai_cn_d_scc1_2_20/140-3056847-2341054?pd_rd_w=YTTPh&content-id=amzn1.sym.751acc83-5c05-42d0-a15e-303622651e1e&pf_rd_p=751acc83-5c05-42d0-a15e-303622651e1e&pf_rd_r=N3PYHA2CAQ6X752HQGRN&pd_rd_wg=JcJg7&pd_rd_r=620f1a71-1d58-48f6-a9fd-9a602216ddf6&pd_rd_i=B07CFKQR51&psc=1)

### 3.4 BLUETTI EMS BOX



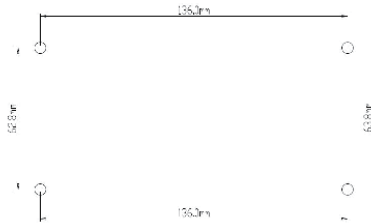
No.	Name	Description
1-3	PCSPort1-3	Connectstotheinverter'sLINKPORTtootherdevices.
4	Multi-use Port	For third-party meter and charging station communication, as well as external ATS control. Ensure the connected meter meets the inverter's requirements.
5	Bracket	For mounting the EMS controller on the wall. Pre-assembled with the EMS controller. Remove it before installing the EMS controller.
6	Alarm Indicator / HOME Button	Steady Green: Normal operation Steady Yellow: Minor alarm Steady Red: Severe alarm Off: Power off During normal operation, press to access the home page.
7	Touch Screen	View EMS controller status, energy settings, and more.
8	Antenna	For internal WiFi and Bluetooth signal transmission and reception.

For a strong and uninterrupted wireless signal, install the EMS controller in an open area, away from obstructions.

Keep it close to your home WiFi router.

Do not place the controller near walls made of steel-reinforced concrete or metal, as these materials can disrupt both WiFi and Bluetooth signals.

1. Remove the screws from the top of the bracket.
2. Drill 4 holes in the wall with an electric drill (5mm). The depth of the holes is 1.02in (26mm).

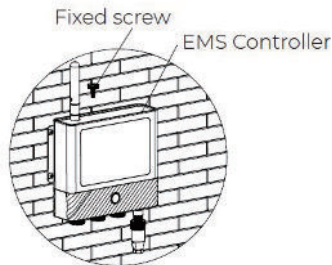


(Unit: in / mm)

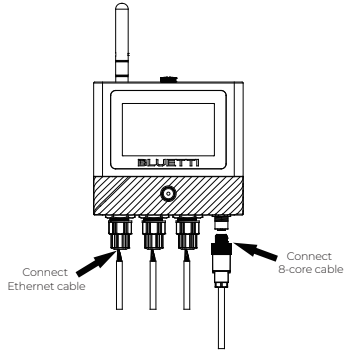
3. Put the bracket back on and snap the controller into position.



4. Secure the EMS controller using the screws removed in step 1.



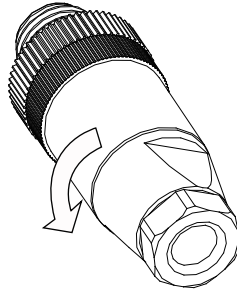
## 8.1 8-core Cable and Ethernet Cable Connection



Connecting 8-core cable:

Step 1: Prepare an 8-core cable (recommended: UL2238, 24AWG) of the appropriate length.

Step 2: Twist off the end cap of the 8-core cable.

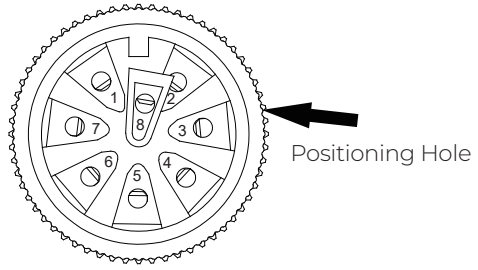
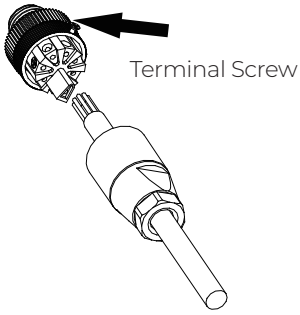



Step 3:

Pass the 8-core cable through the cap.

Loosen the terminal screw.

Refer to the 8-core terminal sequence in the table, insert the cores accordingly, and tighten the screw.



Connector	Function	Description	Note	Reference Diagram
1	RS485-B2	Charging station RS485 communication	Connects to RS485-B-	
2	RS485-A2		Connects to RS485-A+	
3	RS485-B1	Meter RS485 communication	Connects to grid meter and ACPV meter RS485-B-	
4	RS485-A1		Connects to grid meter and ACPV meter RS485-A+	
5	GND	I/O reference ground	For both 12V output and DRMs input	
6	EXT_IN	DRMs input	Signal input	
7	12V	12V output	Power supply for ATS control	
8	GEN_NO	SPDT relay NO terminal	I/O control for ATS	

## 4. How to use system RSD

When an emergency situation occurs, it is necessary to quickly shut down the entire system. Simply press the emergency button, and the EP900 energy storage system will automatically shut down, and the solar PV system will also be quickly disconnected to ensure safety. After the safety hazard is eliminated, we need recover the RSD , it is necessary to press the system start button on B500 to start EP900 and then turn on the system switch in the APP to run Tigo RSS Transmitter Kit, then the solar system will works.

## 5. Firmware version

Must be latest than

IOT v9052.11 , HMI1 v6062.18, HMI2: v6063.05 EP900: ARM: v5021.18 ; DSP: v5019.15

B500: Safety Module :v1026.10; BMU :v1028.06; High-voltage Module :v1027.06;BCU: v1025.19

## 6. More information

Website: [www.bluettipower.com](http://www.bluettipower.com)

Email: [service@bluettipower.com](mailto:service@bluettipower.com)