Alphaess
your smart energy

V05

AUX CONTACT FUNCTION INTRODUCTION SMILE SERIES

DISCLAIMER

The material furnished in this document is believed to be accurate and reliable. The information and recommendations in this document do not constitute commitments or warranties in the form of assignments. The information in this document is subject to change without notice. You may refer to the AlphaCloud Platform https://cloud.alphaess.com) for the most updated version.

COPYRIGHT STATEMENT

CONTENT

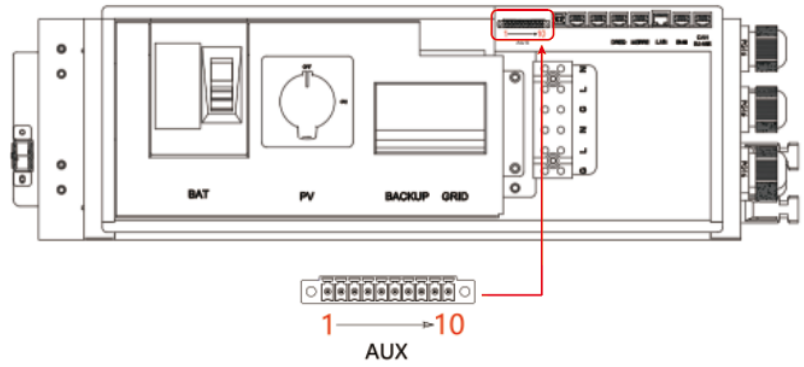
1. Function Overview

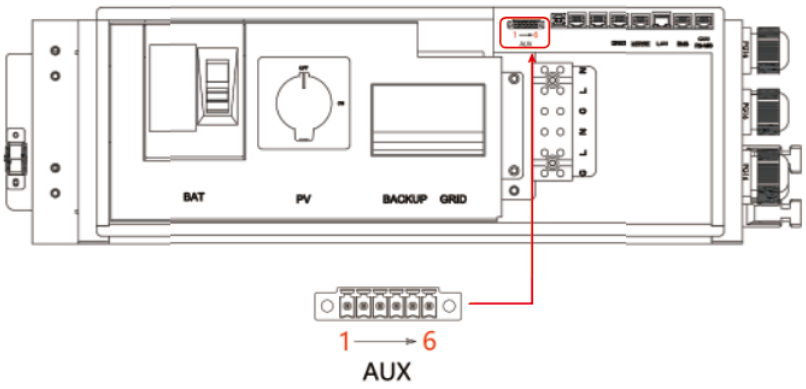
The Aux contact is a passive switch with two statuses, closed and open. There is no polarity between the contacts. This function is designed to control the closing or opening of the contacts between the set conditions to achieve the effect of turning the load on or off.

2. AUX Interface Introduction

2.1. Product model: SMILE5-INV/DE

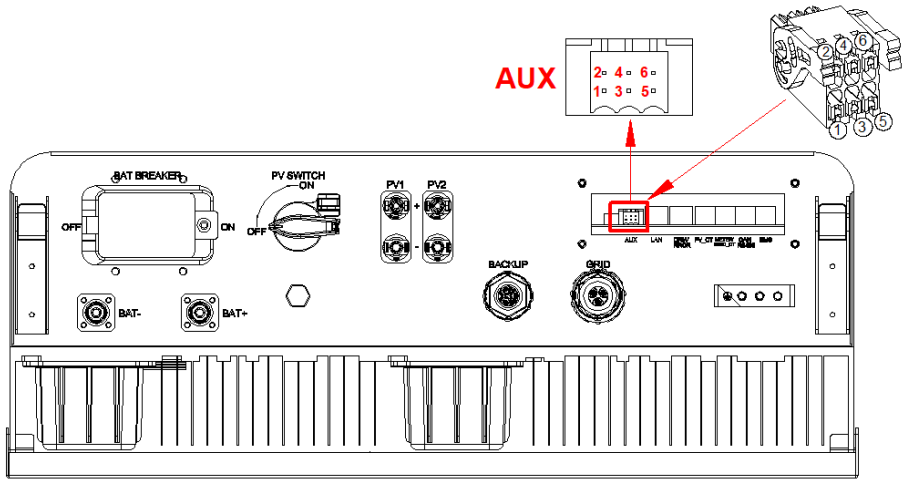
Open the inner cover of the cable box or COM cover, as shown in the figure below. The auxiliary contact connector may have two specifications of interfaces, 10 interfaces and 6 interfaces, but the pin definition is the same.





The pin definition of the Aux ports:

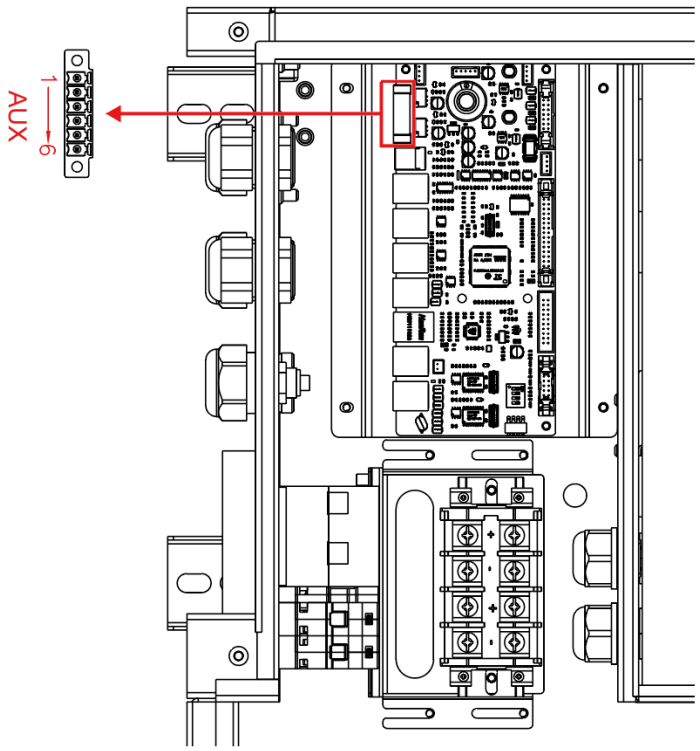
AUX		Electrical Parameters		
1	Do1_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC
2	Do1_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC
3	Do1_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC
4	Do2_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC
5	Do2_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC
6	Do2_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC
7-10	Reserved			



The pin definition of the Aux ports:

AUX	1	2	3	4	5	6
	DO1_NO	DO1_COM	DO1_NC	DI_negative	DI_positive	GND
Electrical Parameters	2A 24VDC	2A 24VDC	2A 24VDC	1A 24VDC	1A 24VDC	1A
	2A 230VAC	2A 230VAC	2A 230VAC			

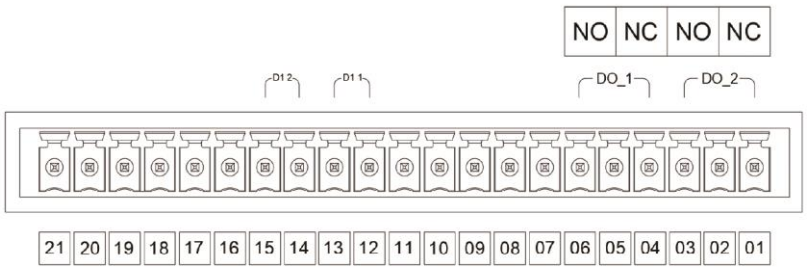
2.2. Product model: SMILE-B3



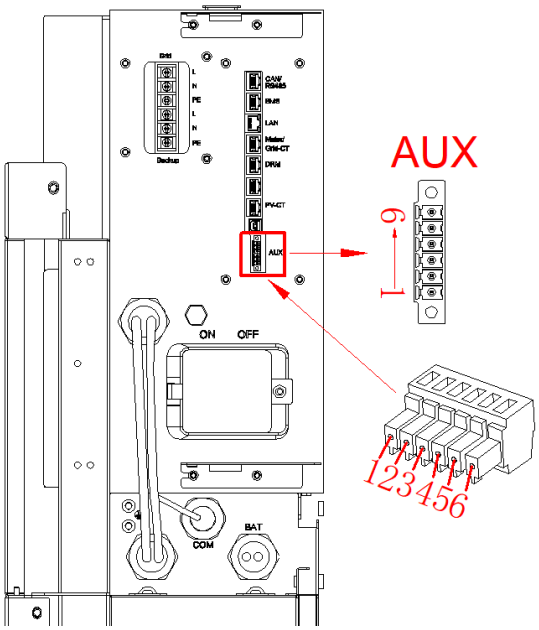
The pin definition of the Aux ports:

AUX		Electrical Parameters		
1	Do1_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC
2	Do1_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC
3	Do1_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC
4	Do2_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC
5	Do2_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC
6	Do2_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC

2.3. Product model: SMILE-T10



2.4. Product model: SMILE-B3-PLUS

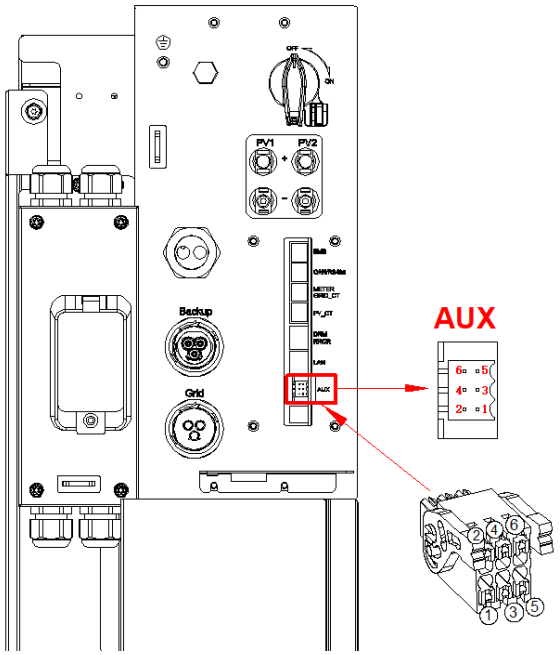


The pin definition of the Aux ports:

AUX		Electrical Parameters		
1	Do1_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC
2	Do1_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC
3	Do1_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC
4	Do2_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC
5	Do2_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC
6	Do2_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC

2.5. Product model: SMILE-S5/B5 (AIO)

Open the COM cover on the lower left of the inverter, as shown in the figure below.

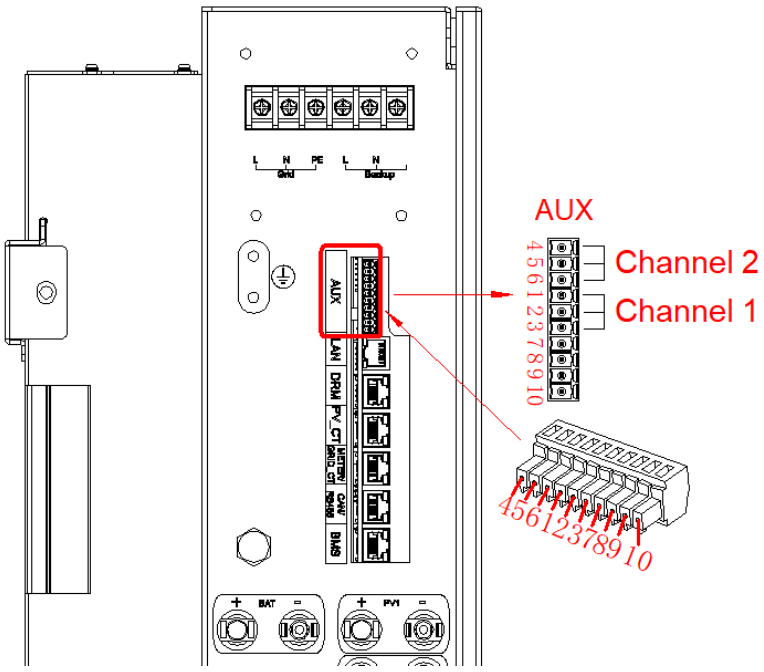


The pin definition of the Aux ports:

AUX	1	2	3	4	5	6
	DO1_NO	DO1_COM	DO1_NC	DI_negative	DI_positive	GND
Electrical Parameters	2A 24VDC	2A 24VDC	2A 24VDC	1A 24VDC	1A 24VDC	1A
	2A 230VAC	2A 230VAC	2A 230VAC			

2.6. Product model: SMILE-S6-INV-HV

Open the COM cover on the middle left of the inverter, as shown in the figure below.

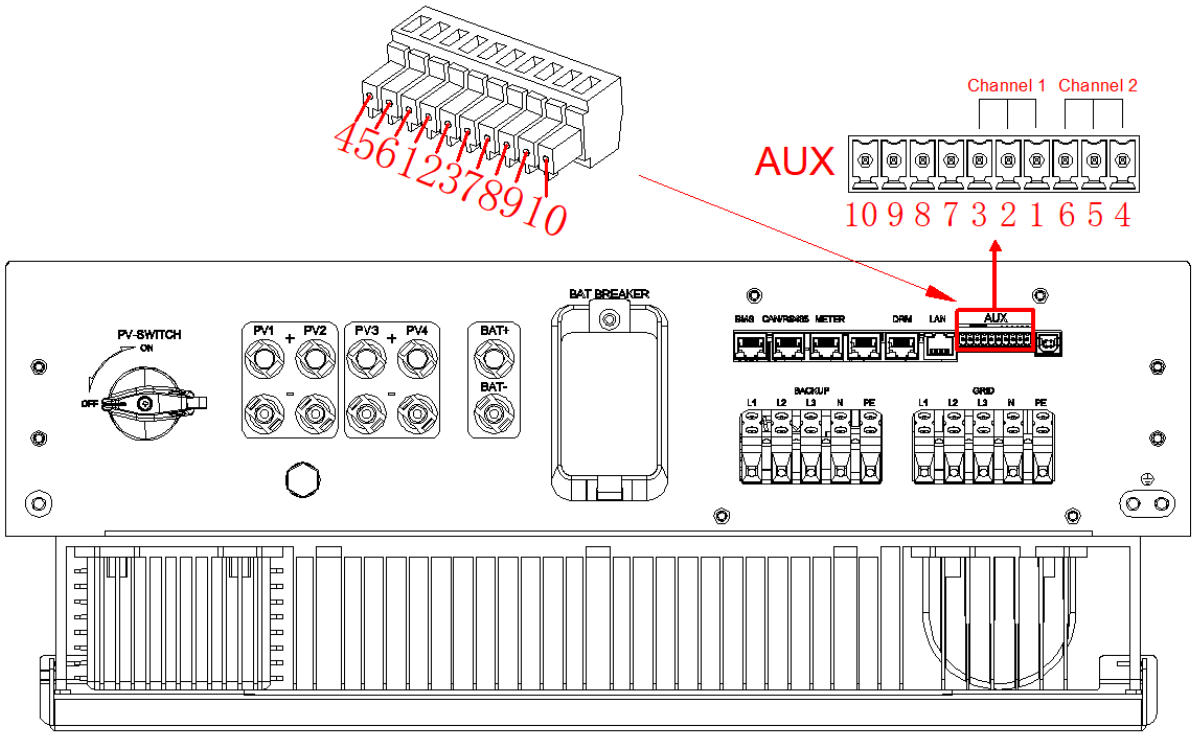


The pin definition of the Aux ports:

AUX			Electrical Parameters		
Channel 1	1	Do1_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC
	2	Do1_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC
	3	Do1_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC
Channel 2	4	Do2_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC
	5	Do2_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC
	6	Do2_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC
	7	Positive DI 1-1	24VDC-0V	24VDC-0V	24VDC-0V
	8	Positive DI 1-2	24VDC-0V	24VDC-0V	24VDC-0V
	9	Positive DI 2-1	24VDC-0V	24VDC-0V	24VDC-0V
	10	Positive DI 2-2	24VDC-0V	24VDC-0V	24VDC-0V

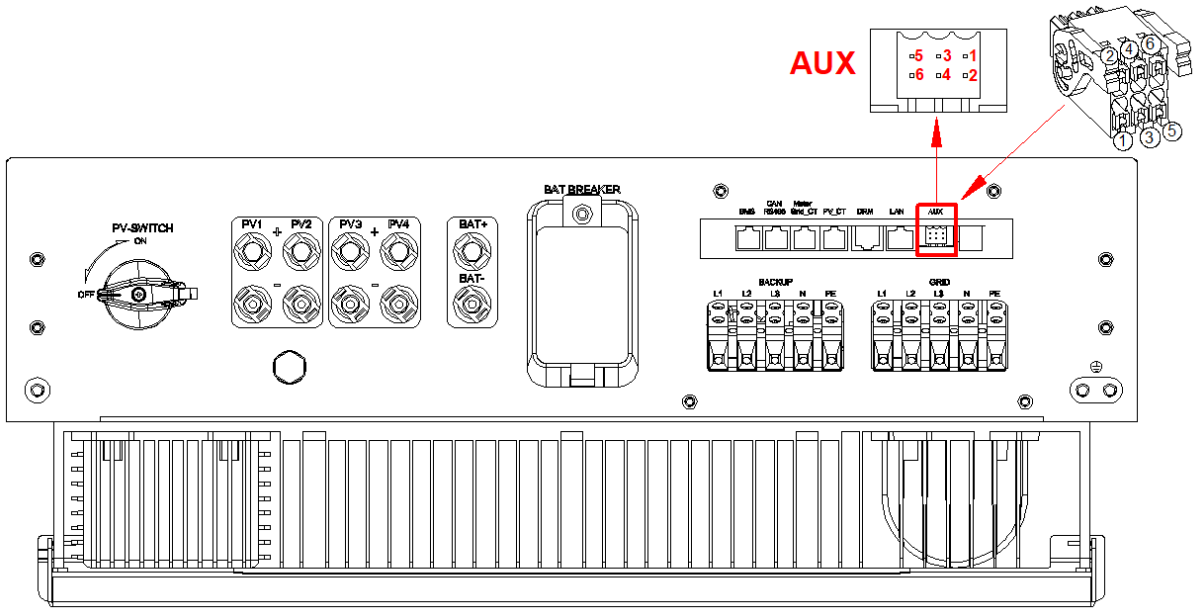
2.7. Product model: SMILE-T10-HV-INV

Open the COM cover at the bottom of the inverter, as shown in the figure below.



The pin definition of the Aux ports:

AUX			Electrical Parameters		
Channel 1	1	Do1_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC
	2	Do1_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC
	3	Do1_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC
Channel 2	4	Do2_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC
	5	Do2_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC
	6	Do2_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC
	7	Positive DI 1-1	24VDC-0V	24VDC-0V	24VDC-0V
	8	Positive DI 1-2	24VDC-0V	24VDC-0V	24VDC-0V
	9	Positive DI 2-1	24VDC-0V	24VDC-0V	24VDC-0V
	10	Positive DI 2-2	24VDC-0V	24VDC-0V	24VDC-0V

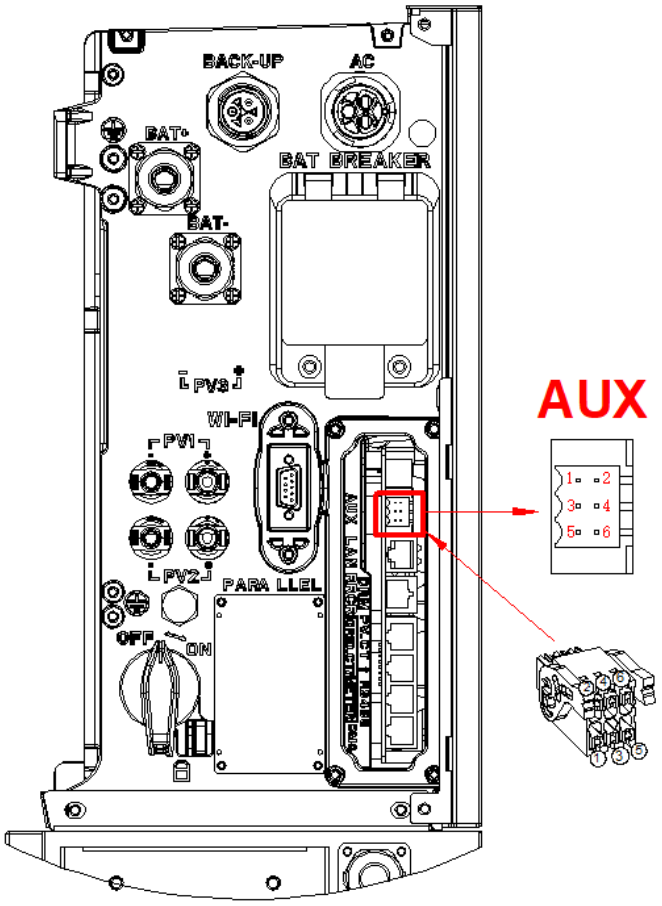


The pin definition of the Aux ports:

AUX	1	2	3	4	5	6
	DO1_NO	DO1_COM	DO1_NC	DI_negative	DI_positive	GND
Electrical Parameters	2A 24VDC	2A 24VDC	2A 24VDC	1A 24VDC	1A 24VDC	1A
	2A 230VAC	2A 230VAC	2A 230VAC			

2.8. Product model: SMILE-G3-S5/S3.6/B5-INV

Open the COM cover on the lower left of the inverter, as shown in the figure below.



The pin definition of the Aux ports:

AUX	1	2	3	4	5	6
	DO1_NO	DO1_COM	DO1_NC	DI_negative	DI_positive	GND
Electrical Parameters	2A 24VDC	2A 24VDC	2A 24VDC	1A 24VDC	1A 24VDC	1A
	2A 230VAC	2A 230VAC	2A 230VAC			

NOTE

Take the green terminal and connect it to the corresponding Aux ports. Close the Inner cover or COM Cover.

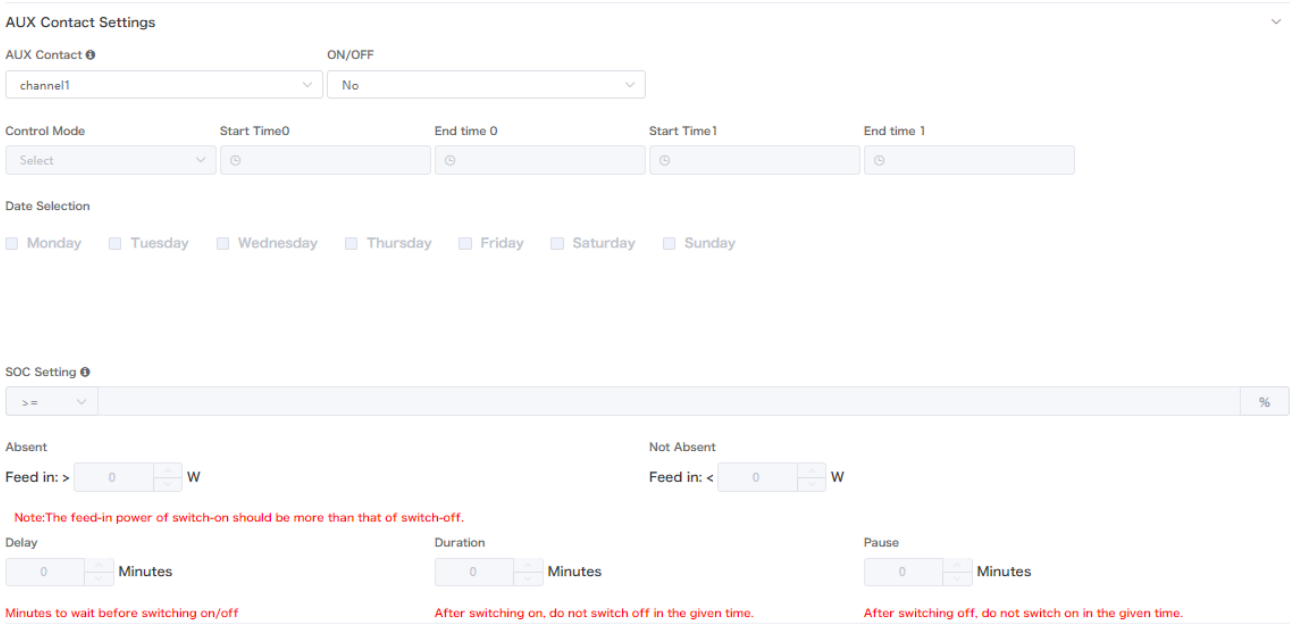
The N/O contact and the N/C contact need to work with one COM contact. If you choose to connect ports 1, 2, 3, you need to use ports 1 and 2, or ports 2 and 3. If you choose to connect ports 4, 5, 6, you need to use ports 4 and 5, or ports 5 and 6. You can select N/O or N/C contact for connection as you wish.

3. AUX Contact Settings

After wiring the Aux contact, its function can be set on AlphaCloud or APP.

3.1. Setting process

1. Open the monitoring website.
2. Click “System setup” and click “AUX Contact setting”. The following interface will appear:



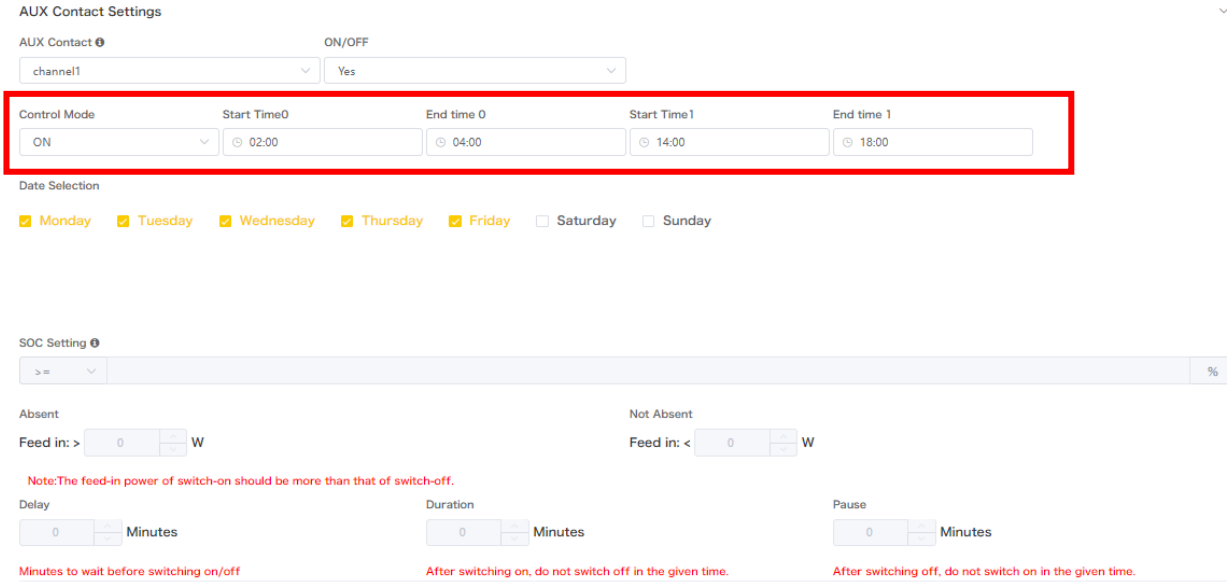
3. Click AUX Contact Channel to choose AUX 1 or AUX 2. Up to two devices can be controlled.

> **NOTE**
>
> Some models have only one channel so they can only control one device.

4. The AUX contact can be set to “normally open” or “normally closed”. When using this function, select the channel and click the “ON” button to enable this channel.
5. Click “Control Mode” to set the function mode, we have 3 modes for the AUX contact: On, Off and Auto.

a. Control Mode On

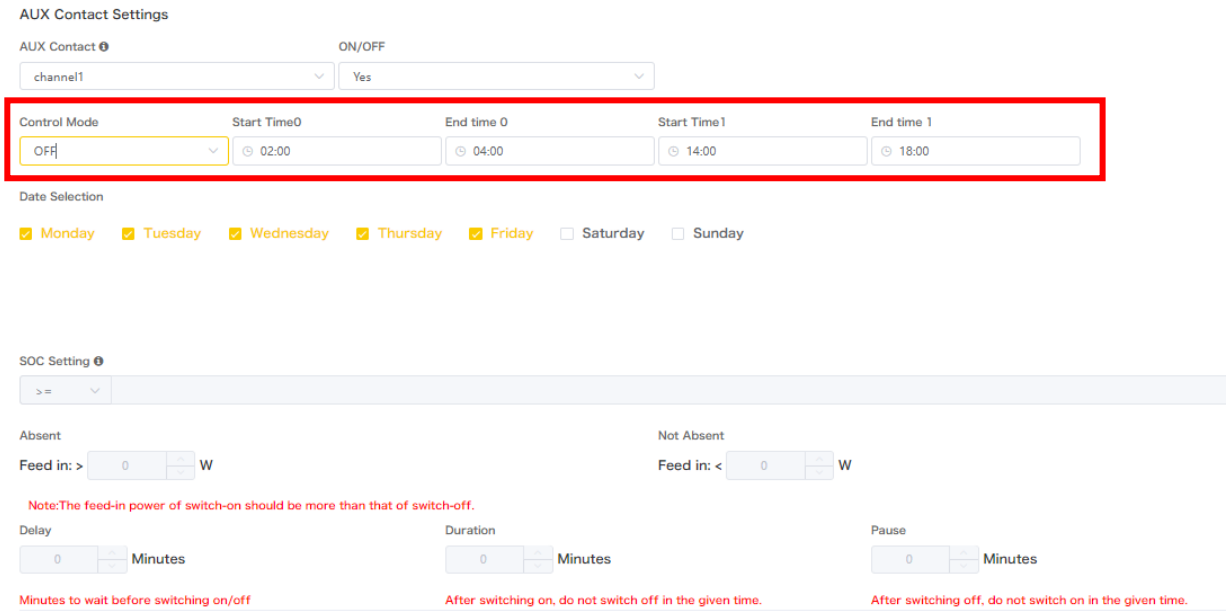
When Control Mode ON is selected, the normally open contact will close during the set time period. Outside the time period, the normally open contact will stay open. If you don't set a time period, this function won't work.



In this mode, the normal self-consumption logic will be applied.

b. Control Mode Off

When Control Mode OFF is selected, the normally closed contact will open during the set time period. Outside the time period, the normally closed contact will stay closed. If you don't set a time period, this function won't work.



In this mode, the normal self-consumption logic will be applied.

c. Control Mode Auto

When Control Mode AUTO is selected, normally open and normally closed contact will be triggered according to the settings below. After setting, the period control function will not work.

When the SOC is set to ">=" mode, the Aux contact of the load needs to be connected to the N/O point. Whenever the battery SOC satisfies the actual setting condition (regardless of the set delay), if the feed-in power is higher than the set "Switch on" power, the N/O point will be closed (load on); if the feed-in power is lower than the set "Switch off" power or the electricity is absorbed from the grid, the N/O point will be disconnected (load off). If the feed-in power is between the two setting data above, no operation will be performed.

When the SOC is set to "<=" mode, the Aux contact of the load needs to be connected to the N/C point. Whenever the battery SOC satisfies the actual setting condition (regardless of the set delay), if the feed-in power is higher than the set "Switch on" power, the N/C point will be closed (load on); if the feed-in power is less than the set "Switch off" power or the electricity is absorbed from the grid, the N/C point will be disconnected (load off). If the feed-in power is between the two setting data above, no operation will be performed.

NOTE

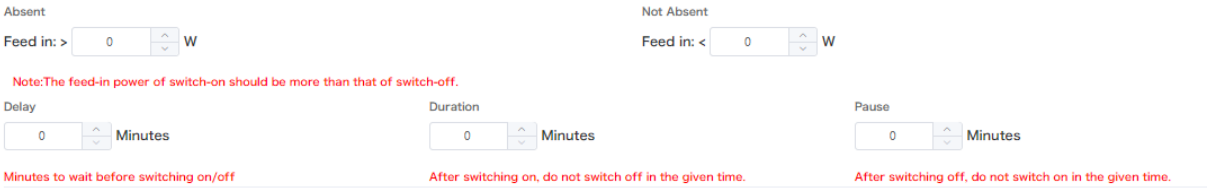
If the feed-in power is 0 to 100W, no judgment will be made and no operation will be performed. In addition, the "Switch on" power must be greater than the "Switch off" power.

There are also three delay time settings.

The “Delay time” refers to the opening/closing action after the set Delay time period.

The “Duration time” refers to the prohibition of the disconnection action within the set Duration time period after the Aux contact is closed.

The “Pause time” refers to the prohibition of the closing action within the set Pause time period after the Aux contact is disconnected.



In this mode, the normal self-consumption logic will be applied.

@AlphaEnergyStorageSystem @AlphaESS @alpha_ess @AlphaESS www.alphaess.com

Alpha ESS Co., Ltd.

+86 513 8060 6891
info@alpha-ess.com
www.alphaess.com
Jiuhua Road 888, Nantong High-Tech Industrial Development Zone, Nantong, Jiangsu Province, China

Alpha ESS Suzhou Co., Ltd.

+86 512 6828 7609
info@alpha-ess.com
www.alphaess.com
Building 10-A, Canal Town Industrial Park, 99 Taihu E Rd, Wuzhong District, Suzhou, Jiangsu Province, China

Alpha ESS Shenzhen Co., Ltd.

+86 0755 2850 3653
service.pps@alpha-ess.com
www.alphaess.com
Bantian Xinghe WORLD B 1302, No. 1 Yabao Rd, Bantian Street, Longgang District, Shenzhen, Guangdong Province, China

Alpha ESS Australia Pty. Ltd.

+61 402 500 520
Australia@alpha-ess.com
www.alphaess.com
8/15-21 Gibbes Street, Chatswood, NSW 2067 Australia

Alpha ESS Europe GmbH

+49 610 3459 1601
europe@alpha-ess.de
www.alphaess.de
Paul-Ehrlich-Straße 1a, Langen, Hessen D-63225 Germany

Alpha ESS Italy S.r.l.

+39 339 462 4288
info@alpha-ess.it
www.alphaess.com
Via Don Minzoni, 17, Calenzano Firenze 50041 Italy

Alpha ESS International Pte. Ltd.

+65 6513 1125 / +65 6513 1126
Singapore@alpha-ess.com
2 Corporation Road #01-06A Corporation Place 618494 Singapore

Alpha ESS UK Co., Ltd

+44 145 354 5222
info@alpha-ess.com
Drake house, Long street, Dursley, gl11 4hh UK

Alpha ESS Korea Co., Ltd

info@alpha-ess.com
2F, 19-4, Nohyeong 11-gil, Jeju-si, Jeju-do, Republic of Korea

Alpha ESS USA, Inc.

+1 408 368 7828
usa@alpha-ess.com
Unit 5 2180 S Ivanhoe St, Denver, CO 80222 USA