

V05

AUX CONTACT FUNCTION INTRODUCTION SMILE SERIES



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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.





	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			1.0
	2A 230VAC	2A 230VAC	2A 230VAC		TA 24VDC TA 24VDC	IA

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	Elect	trical Parame	ters
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.



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			1 0
	2A 230VAC	2A 230VAC	2A 230VAC	TA 24VDC		IA

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.



AUX			Electrical Parameters			
	1	Do1_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC	
Channel 1	2	Do1_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC	
	3	Do1_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC	
	4	Do2_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC	
Channel 2	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.



AUX			Electrical Parameters			
	1	Do1_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC	
Channel 1	2	Do1_COM	1A 24VDC	0.5A 125VAC	0.25A 230VAC	
	3	Do1_NC	1A 24VDC	0.5A 125VAC	0.25A 230VAC	
	4	Do2_NO	1A 24VDC	0.5A 125VAC	0.25A 230VAC	
Channel 2	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			1.0
	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			1 A
	2A 230VAC	2A 230VAC	2A 230VAC	IA 24VDC	TA 24VDC TA 24VDC	IA

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:

AUX Contact Settings				~
AUX Contact 9	ON/OFF			
channel1	No	\sim		
Control Mode Start Time0	End time 0	Start Time1	End time 1	
Select \checkmark \bigcirc				
Date Selection	🗌 Thursday 📄 Friday 📄 Saturd	lay 🔲 Sunday		
SOC Setting				
>= ~				%
Absent		Not Absent		
Feed in: > 0 🔶 W		Feed in: < 0 🔗 W		
Note:The feed-in power of switch-on should be more	e than that of switch-off.			
Delay	Duration		Pause	
0 Minutes	0 Minutes		0 Minutes	
Minutes to wait before switching on/off	After switching on do not switc	the off in the circon time		

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

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.

AUX Contact Se	ettings				· · · · · · · · · · · · · · · · · · ·
AUX Contact ()		ON/OFF			
channel1	\sim	Yes	\sim		
Control Mode	Stort Time0	End time 0	Stort Time 1	End time 1	
Control Mode	Start Timeo	End time o	Start Time I		
ON	© 02:00	04:00	6 14:00	G 18:00	
Date Selection					
Monday	🛛 Tuesday 🛛 🗖 Wednesday	🗖 Thursday 🗖 Friday 🗆 Sat	turday Sunday		
SOC Setting 0					
>=					%
Absort			Not Absort		
Freedlaw (
Feed in: >	W			v	
Note:The feed-in	power of switch-on should be mor	e than that of switch-off.			
Delay		Duration		Pause	
0	Minutes	0 Minute	es	0 Minutes	
Minutes to wait be	fore switching on/off	After switching on, do not :	switch off in the given time.	After switching off, do not switch on in the	given time.

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.

AUX Contact Settings				
AUX Contact	ON/OFF			
channel1 \vee	Yes 🗸]		
Control Mode Start Time0	End time 0	Start Time1	End time 1	
OFF ~ ③ 02:00	· 04:00	© 14:00	· 18:00	
Date Selection				
🛛 Monday 🔽 Tuesday 🗾 Wednesday	🔽 Thursday 🗾 Friday 🗌 Saturday	Sunday		
SOC Setting 0				
>= V				
Absent		Not Absent		
Feed in: > 0 🙀 W		Feed in: < 0 W		
Note:The feed-in power of switch-on should be more	e than that of switch-off.			
Delay	Duration		Pause	
0 Minutes	0 Minutes		0 Minutes	
Minutes to wait before switching on off	After switching on do not switch o	ff in the given time	After switching off, do not switch on in t	the given time

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.

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.

AUX Contact Settings		15	
Absent Feed in: > 0 û	Not Absent Feed in: < 0		
Note:The feed-in power of switch-on should be more than that of swit	ch-off.		
Delay	Duration	Pause	
0 A Minutes	0	0 A Minutes	
Minutes to wait before switching on/off	After switching on do not switch off in the given time	After switching off, do not switch on in the given time	

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

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