Pylon Technologies Co., Ltd.

No. 73, Lane 887, Zu Chongzhi Road, Zhangjiang Hi-Tech Park Pudong, Shanghai 201203, China

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Pylon Technologies Official Statement

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Subject: US2000C/US3000C Communication Settings

Dear valued customer,

It`s been noticed that among new installations of US2000C/US3000C, in few cases of the modules will suffer buzzer ringing with alarm lighting on permanently after installation in a short period.

The root cause of buzzer ringing with alarm lighting on permanently is the modules have experienced overcharge to above 55Vdc or power device on BMS is damaged, which triggered the secondary protection elements deployed on the BMS. In either case it will need a replacement of the BMS.

During further analysis, it`s found that in all cases the modules have been overcharged to above 55Vdc. This is mainly due to the communication between inverter and battery haven`t been set up properly. Below highlighted two main changings of US2000C/US3000C which will affect the external communication quality:

1) ADD Switch settings

Based on the new design of BMS, the ADD switch is **reversely deployed**.

For instance:

Dip1	Dip2	Dip3	Dip4	The corresponding position of switch	Status
0	0	0	0		RS485:115200 CAN terminal resistance: connected

| 1 | 0 | 0 | 0 | | RS485:9600 CAN terminal resistance: connected |
| 0 | 1 | 0 | 0 | | RS485: 115200 CAN terminal resistance: NONE |

Which means if for the previous US2000/US3000, the inverter requires all ADD switch to DOWN position, then on US2000C/US3000C it shall change the ADD switch all to UP position. The default settings on ADD switch is all to UP position.

Dip1: RS485 baud rate: 1: 9600; 0: 115200. After change, please restart battery.
Dip2: CAN terminal resistance on BMS side. 1: NONE. 0: connected. After change, no restart required. In single group mode, please keep dip2 at 0 position. For multi-groups, please refer to operation manual.
Dip3~4, reversed.

If do not require RS485 baudrate changing OR no multiple groups using purpose. Please DONOT change the default ADD switch settings otherwise the communication with inverter will be affected.

2) Communication cable configuration

Following below table, please make sure in any case **the Pin1/2/3 on both A/CAN and B/RS485 ports shall be NULL**. Otherwise the communication quality will be affected.

Definition of RJ45 Port Pin

	A/CAN	B/RS485
Pin1	**These pins shall be NULL.**	
Pin2	**If not, may influence communication**	
Pin3	**between BMS and inverter.**	
Pin4	CAN-H	CAN-H (single group)
Pin5	CAH-L	CAN-L (single group)
Pin6	CAN-GND	CAN-GND (single group)
Pin7	485A	485A
Pin8	485B	485B
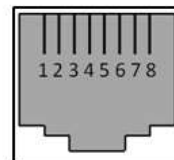
Please also notice that the pin order of GND is changed from Pin2 (US2000/US3000) to

Pin 6(US2000C/US3000C).

For direct-pin communication inverter, please make sure the communication cable Pin1/2/3 are NULL. Or alternatively order the correct communication cable (WI0SCAN30RJ1) or external cable kits (BW0US3000BAL0007) from us.

For cross-pin communication inverter, please make sure it`s strictly follow the Pin order and requirements defined above to make the cable. It needs to highlight that due to Pin1/2/3 shall be NULL, some of the premade cross-pin communication cable supplied by inverter manufacture will be not applicable.

Apart from above two points, for some inverter operation interface it also supports manual settings of the operation voltage on the battery module. Under lithium battery operation mode such kind of manual settings might be followed in case the communication with battery is lost. Please make sure **the charge cut-off voltage is set at 53.2 – 52.5Vdc, discharge cut-off voltage is set at 45.5Vdc or higher for US2000C/US3000C**.

Pylontech Service Team

Pylon Technologies Co., Ltd.

T +86-21-51317697 | F +86-21-51317698

E service@pylontech.com.cn

W www.pylontech.com.cn