



## SP PRO ABB Managed AC Coupling

### Introduction

The SP PRO ABB Managed AC Coupling provides a method of linking the ABB PVI-3.0/3.6/4.2-TL-OUTD and ABB PVI-5000/6000-TL-OUTD string inverters to the SP PRO via the AC Load supply so that regardless of whether the grid or a generator is connected, the SP PRO can manage and control the ABB string inverters.

Each SP PRO can manage a maximum of five ABB string inverters by commanding each string inverter to output the right amount of power that is needed simultaneously to supply the load, export any excess and maintain the battery bank at any particular point in time. This is done via a communications link which also serves to retrieve all the operational data for display and logging by the SP PRO.

This document details the additional steps needed to install the managed system. The SP PRO and ABB inverters can be installed as per their individual installation instructions with the additional allowance of a communications cable linking all of the inverters.

*Notes: This document needs to be read in conjunction with the SP PRO Instruction Manual and the ABB PVI-3.0/3.6/4.2-TL-OUTD Series or ABB PVI-5000/6000-TL-OUTD Instruction Manuals.*

*ONLY Selectronic Certified ABB inverters can be used for managed AC coupling, noncertified ABB inverters can be used as a generic configuration.*

### Important information

ABB can only be configured while minimum 200Vdc is applied to the solar inputs.

### Additional information

For more installation information and installation video scan QR code =>  
or go to: <http://www.selectronic.com.au/ABBSolar/guides/>

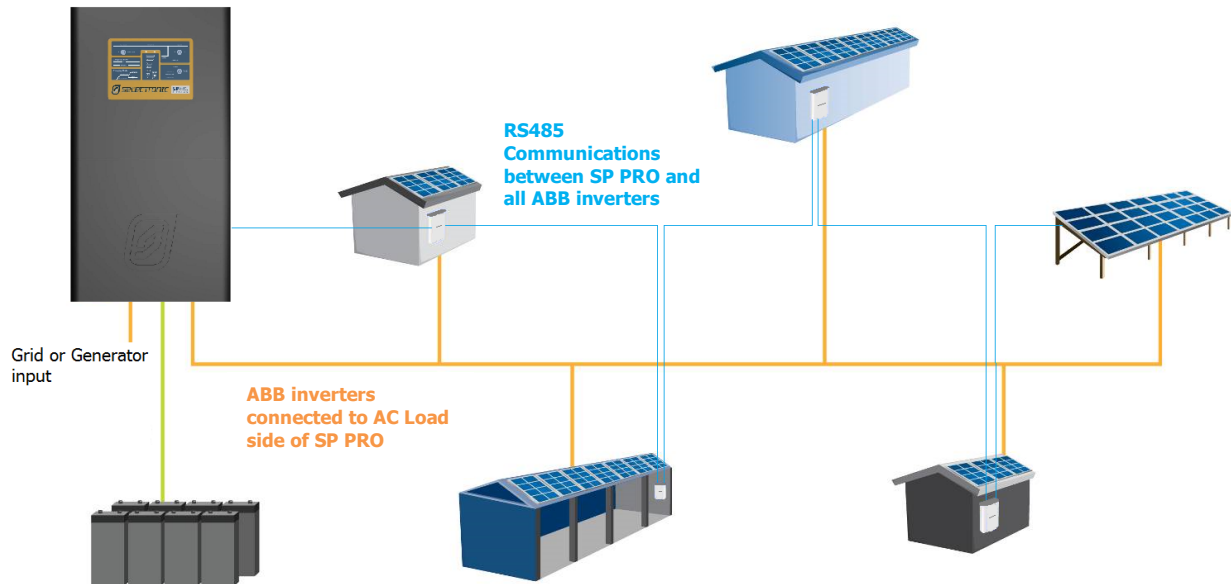


# SP PRO ABB Managed AC Coupling Installation Notes



## The Overview

The diagram below shows a managed AC coupled system with five ABB inverters.



## System Requirements

To successfully install an SP PRO ABB managed system, there are particular requirements that need to be met.

- This installation document is applicable to **SP PRO series II (revision 21 or greater)** inverters only with 8.0 Firmware or greater.
- Combined maximum AC output of all the connected ABB inverters must not exceed twice the continuous rating of the SP PRO (Except for SPLC1202 which is 35kW).
- Battery bank must be sized to suit the SP PRO model and the combined maximum AC Output power of the ABB inverters.
- SP PRO inverter must have firmware version 8.0 or greater.
- All ABB inverters must be Selectronic Certified (Selectronic signage on front access cover).
- Maximum of 5 ABB inverters per SP PRO

# SP PRO ABB Managed AC Coupling Installation Notes



## SP PRO MODEL AND MINIMUM BATTERY CAPACITY FOR SOLAR HYBRID SYSTEMS

For a Solar Hybrid (grid connected) system, the minimum battery capacity that must be connected to the SP PRO inverter varies depending on SP PRO model only. The following table defines the minimum battery capacity for each SP PRO model.

When the system is islanded (e.g. during a grid outage) the SP PRO will limit the output of the AC coupled solar based on the actual installed battery size (see table 3 in Appendix I)

Minimum Battery Capacity for Solar Hybrid Systems (@C10) <sup>1,2</sup>							
Combined max. ABB AC Output	SP PRO Model						
	SPMC240	SPMC241	SPMC481	SPMC482	SPMC1201	SPLC1200	SPLC1202
1 kW	180 Ah	180 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
2 kW	180 Ah	180 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
3 kW	180 Ah	180 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
4 kW	180 Ah	180 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
5 kW	180 Ah	180 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
6 kW	180 Ah	180 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
7 kW	Not valid	180 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
8 kW	Not valid	180 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
9 kW	Not valid	180 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
10 kW	Not valid	Not valid	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
11 kW	Not valid	Not valid	Not valid	180 Ah	100 Ah	250 Ah	250 Ah
12 kW	Not valid	Not valid	Not valid	180 Ah	100 Ah	250 Ah	250 Ah
13 kW	Not valid	Not valid	Not valid	180 Ah	100 Ah	250 Ah	250 Ah
14 kW	Not valid	Not valid	Not valid	180 Ah	100 Ah	250 Ah	250 Ah
15 kW	Not valid	Not valid	Not valid	180 Ah	100 Ah	250 Ah	250 Ah
16 kW	Not valid	Not valid	Not valid	Not valid	Not valid	250 Ah	250 Ah
17 kW	Not valid	Not valid	Not valid	Not valid	Not valid	250 Ah	250 Ah
18 kW	Not valid	Not valid	Not valid	Not valid	Not valid	250 Ah	250 Ah
19 kW	Not valid	Not valid	Not valid	Not valid	Not valid	250 Ah	250 Ah
20 kW	Not valid	Not valid	Not valid	Not valid	Not valid	250 Ah	250 Ah
25 kW	Not valid	Not valid	Not valid	Not valid	Not valid	250 Ah	250 Ah
30 kW	Not valid	Not valid	Not valid	Not valid	Not valid	250 Ah	250 Ah
35 kW	Not valid	Not valid	Not valid	Not valid	Not valid	Not valid	250 Ah

Table 1: Solar Hybrid: Minimum Battery capacity for each SP PRO model and AC solar

### Notes:

1. Battery capacity is C10 rating.
2. Round battery capacity up as appropriate to available battery sizes.

Ensure that the system meets these minimum battery capacity requirements. Any battery combinations larger than the minimum are suitable.

# SP PRO ABB Managed AC Coupling Installation Notes



## SP PRO MODEL AND MINIMUM BATTERY CAPACITY FOR OFF GRID SYSTEM

The minimum battery capacity that must be connected to the SP PRO inverter varies depending on SP PRO model, an overriding minimum battery capacity and the combined maximum ABB AC Output. The following table defines the minimum battery capacity for each SP PRO model.

Minimum Battery Capacity for Off Grid Systems (@C10) <sup>1,2</sup>							
Combined max. ABB AC Output	SP PRO Model						
	SPMC240	SPMC241	SPMC481	SPMC482	SPMC1201	SPLC1200	SPLC1202
1 kW	180 Ah	180 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
2 kW	320 Ah	320 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
3 kW	480 Ah	480 Ah	180 Ah	180 Ah	100 Ah	250 Ah	250 Ah
4 kW	640 Ah	640 Ah	320 Ah	320 Ah	128 Ah	250 Ah	250 Ah
5 kW	800 Ah	800 Ah	400 Ah	400 Ah	160 Ah	250 Ah	250 Ah
6 kW	960 Ah	960 Ah	480 Ah	480 Ah	192 Ah	250 Ah	250 Ah
7 kW	Not valid	1120 Ah	560 Ah	560 Ah	224 Ah	250 Ah	250 Ah
8 kW	Not valid	1280 Ah	640 Ah	640 Ah	256 Ah	256 Ah	256 Ah
9 kW	Not valid	1440 Ah	720 Ah	720 Ah	288 Ah	288 Ah	288 Ah
10 kW	Not valid	Not valid	800 Ah	800 Ah	320 Ah	320 Ah	320 Ah
11 kW	Not valid	Not valid	Not valid	880 Ah	352 Ah	352 Ah	352 Ah
12 kW	Not valid	Not valid	Not valid	960 Ah	384 Ah	384 Ah	384 Ah
13 kW	Not valid	Not valid	Not valid	1040 Ah	416 Ah	416 Ah	416 Ah
14 kW	Not valid	Not valid	Not valid	1120 Ah	448 Ah	448 Ah	448 Ah
15 kW	Not valid	Not valid	Not valid	1200 Ah	480 Ah	480 Ah	480 Ah
16 kW	Not valid	Not valid	Not valid	Not valid	Not valid	512 Ah	512 Ah
17 kW	Not valid	Not valid	Not valid	Not valid	Not valid	544 Ah	544 Ah
18 kW	Not valid	Not valid	Not valid	Not valid	Not valid	576 Ah	576 Ah
19 kW	Not valid	Not valid	Not valid	Not valid	Not valid	608 Ah	608 Ah
20 kW	Not valid	Not valid	Not valid	Not valid	Not valid	640 Ah	640 Ah
25 kW	Not valid	Not valid	Not valid	Not valid	Not valid	800 Ah	800 Ah
30 kW	Not valid	Not valid	Not valid	Not valid	Not valid	960 Ah	960 Ah
35 kW	Not valid	Not valid	Not valid	Not valid	Not valid	Not valid	1120 Ah

Table 2: Off Grid: Minimum Battery capacity for each SP PRO model and AC solar

### Notes:

1. Battery capacity is C10 rating.
2. Round battery capacity up as appropriate to available battery sizes.

Ensure that the system meets these minimum battery capacity requirements. Any battery combinations larger than the minimum are suitable.

# SP PRO ABB Managed AC Coupling Installation Notes



## SP PRO REQUIREMENTS

1. The SP PRO units' revision must be 21 or later (series II).
2. SP PRO Software Version 8.0 or later is required. To check software revision run SP LINK, connect to the SP PRO and go to Data View – Technical Data – “SP PRO Revision” and “Software Version”



ACN 063 863 785

SGSE/090398

CB:FI-11386

Serial No: **114713**  
GQNJSBX

Revision: **21**

1 2 3 4 5 6 7 8

Packed weight: **45 kg**

Model No:

**SPMC241**

Stock Code: **004724**

Packaging Label indicating Revision: 21

Site Information		Configuration Settings		QuickView		Data View					
Now		Today		DC History		AC History		Technical Data		Exp	
Inverter											
SP PRO Model				Power Module 1 Serial Number							
SPMC482-AU				115764							
SP PRO Ratings				Power Module 1 Revision							
48V DC, 7.5kW, 240V AC				3							
SP PRO Serial Number				Power Module 1 Mod Status							
118096											
SP PRO Revision				Power Module 2 Serial Number							
21				115754							
SP PRO Mod Status				Power Module 2 Revision							
				3							
Software Version				Power Module 2 Mod Status							
8.0											
Control PCA Serial Number				SP PRO Total Run Time							
117299				4259.7h							
Control PCA Revision				Grid Connect SW Version							
20				2.00							
Control PCA Mod Status											

- Older revisions of firmware must be updated to firmware revision 8.0 or later.
- Do **NOT** change any configuration settings until firmware is updated.

*Note: Selectronic web site – <http://www.selectronic.com.au> for latest SP PRO firmware and Tech Note 34 SP PRO Firmware Update Procedure.*

# SP PRO ABB Managed AC Coupling Installation Notes



## Installation

The SP PRO and ABB inverters should be installed as per their respective installation instructions. Particular instructions directly related to Managed AC Coupling are listed below.

It is good practice to number each ABB inverter from 1 up to 5 so that each inverter can be easily referenced within SP LINK. In a three phase AC coupled system label each ABB inverter L1-1 to L1-5 for the ABB inverters connected to SP PRO L1, L2-1 to L2-5 for those connected to L2 and so on.

*Note: The address numbers programmed into the ABB solar inverters start from 2 and go up to 6 instead of 1 to 5. This is because the lowest address that can be programmed into the ABB solar inverter is 2. When viewing Data in SP Link the inverter #1 in SP Link is connected to ABB inverter address 2, inverter #2 in SP Link is connected to ABB inverter address 3 etc.*

## ABB AC WIRING

The ABB AC output wiring must be connected to the AC Load terminals of the SP PRO in accordance with local wiring rules for correct operation.

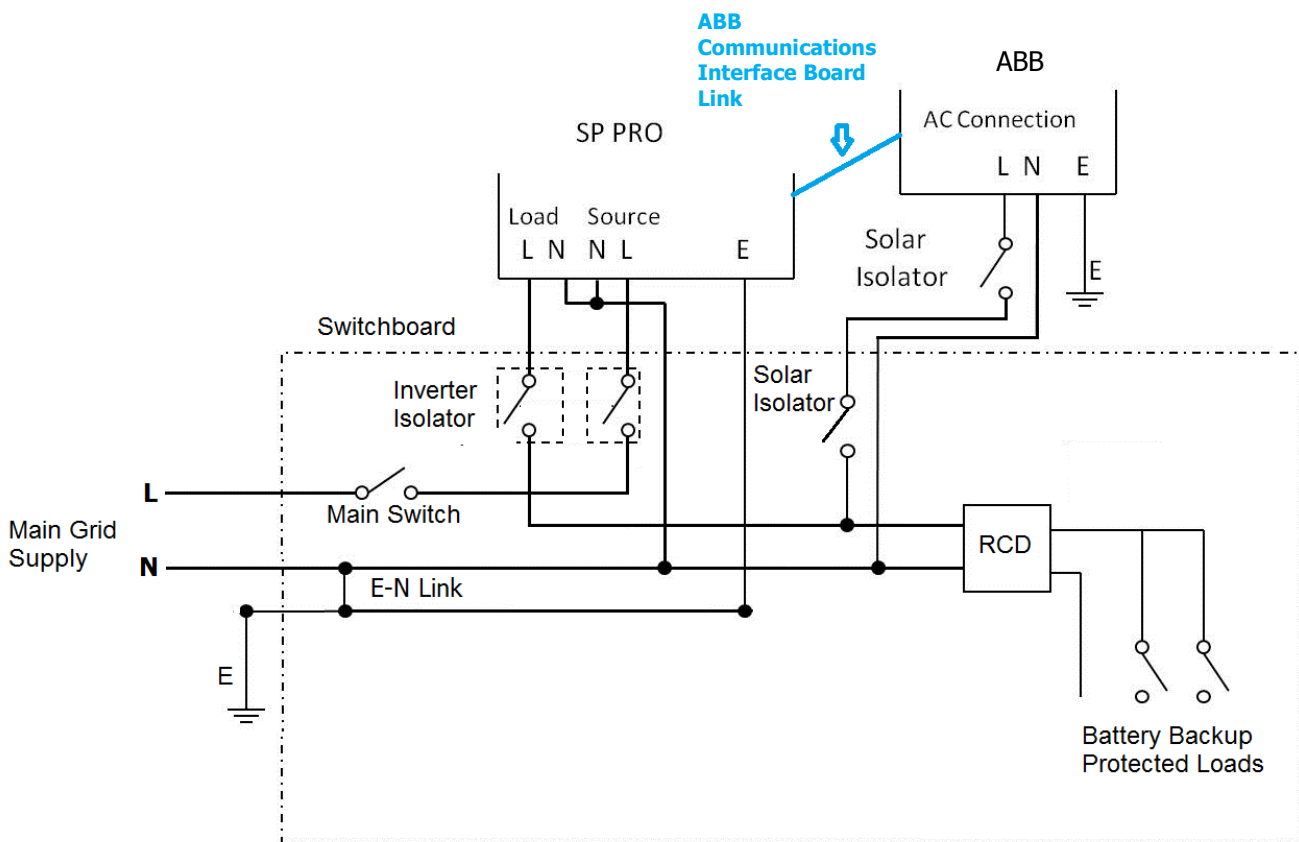


ABB AC Wiring guide for Grid connected installation

# SP PRO ABB Managed AC Coupling Installation Notes

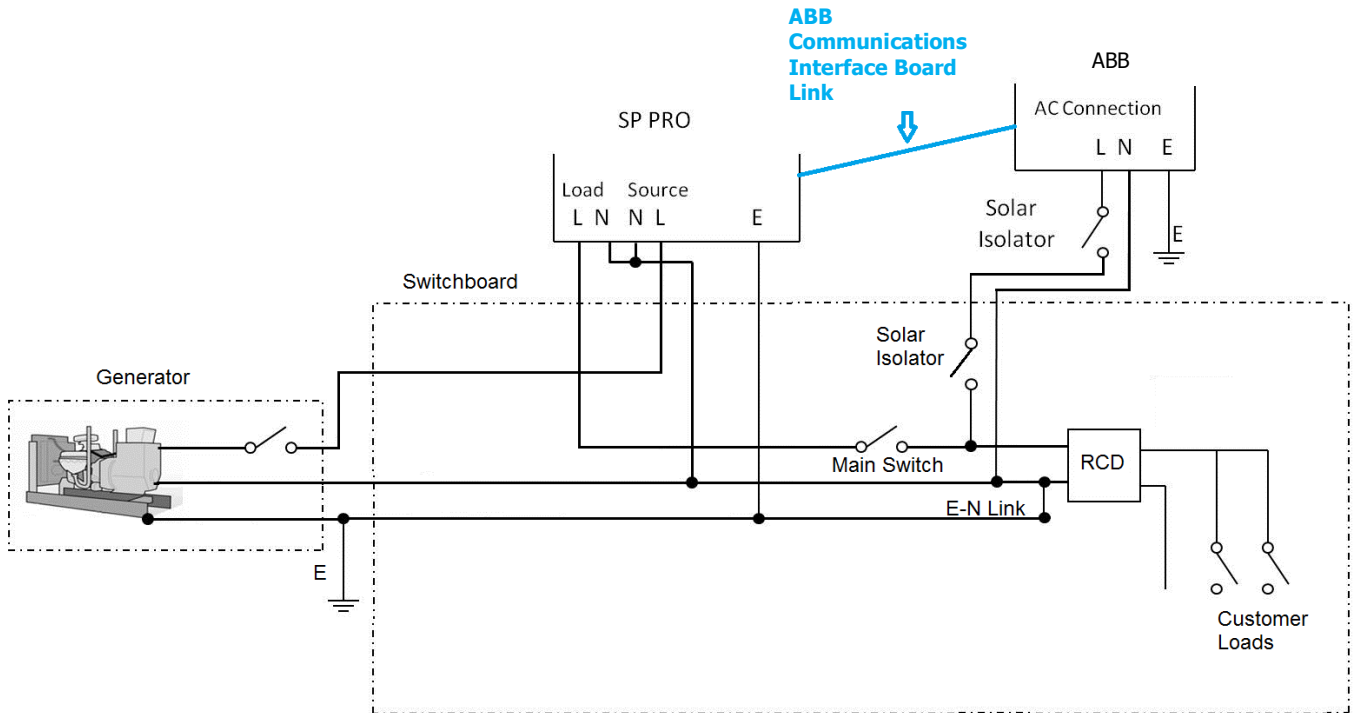


ABB AC Wiring guide for Off Grid installation

*Note: The system will NOT function correctly if the ABB inverters are installed on the AC Source side of the SP PRO.*



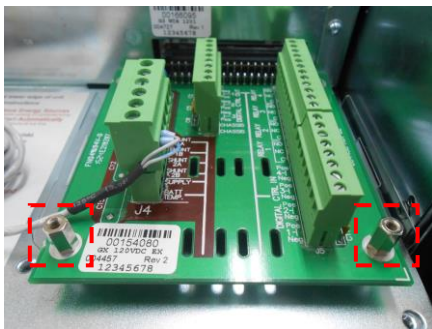


# SP PRO ABB Managed AC Coupling Installation Notes

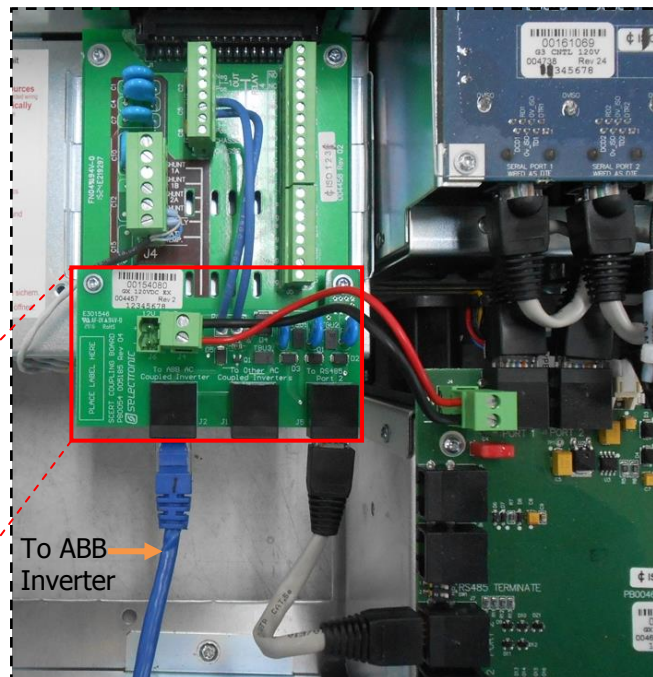
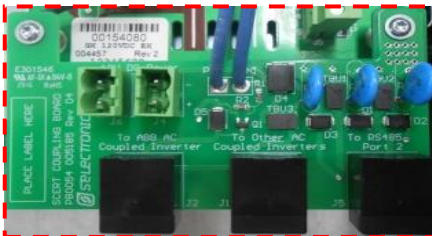
## COMMUNICATIONS LINK (RS485)

The communication link always starts at the SP PRO and links to the "AC Coupled Interface PCA (Sergio)", then connects to all the ABB inverters in a daisy chain arrangement and finishes at the last ABB inverter. There is no need to connect the ABB inverters in any particular order.

To install the AC Coupled Interface PCA (Sergio), remove the bottom two screws from the Expansion Card and replace them with the provided 2x stand offs. Then mount the AC Coupled Interface PCA (Sergio) to the Expansion Card inside the SP PRO close to the Serial Communication PCA as illustrated.



Expansion Card bottom screws replaced with stand offs.

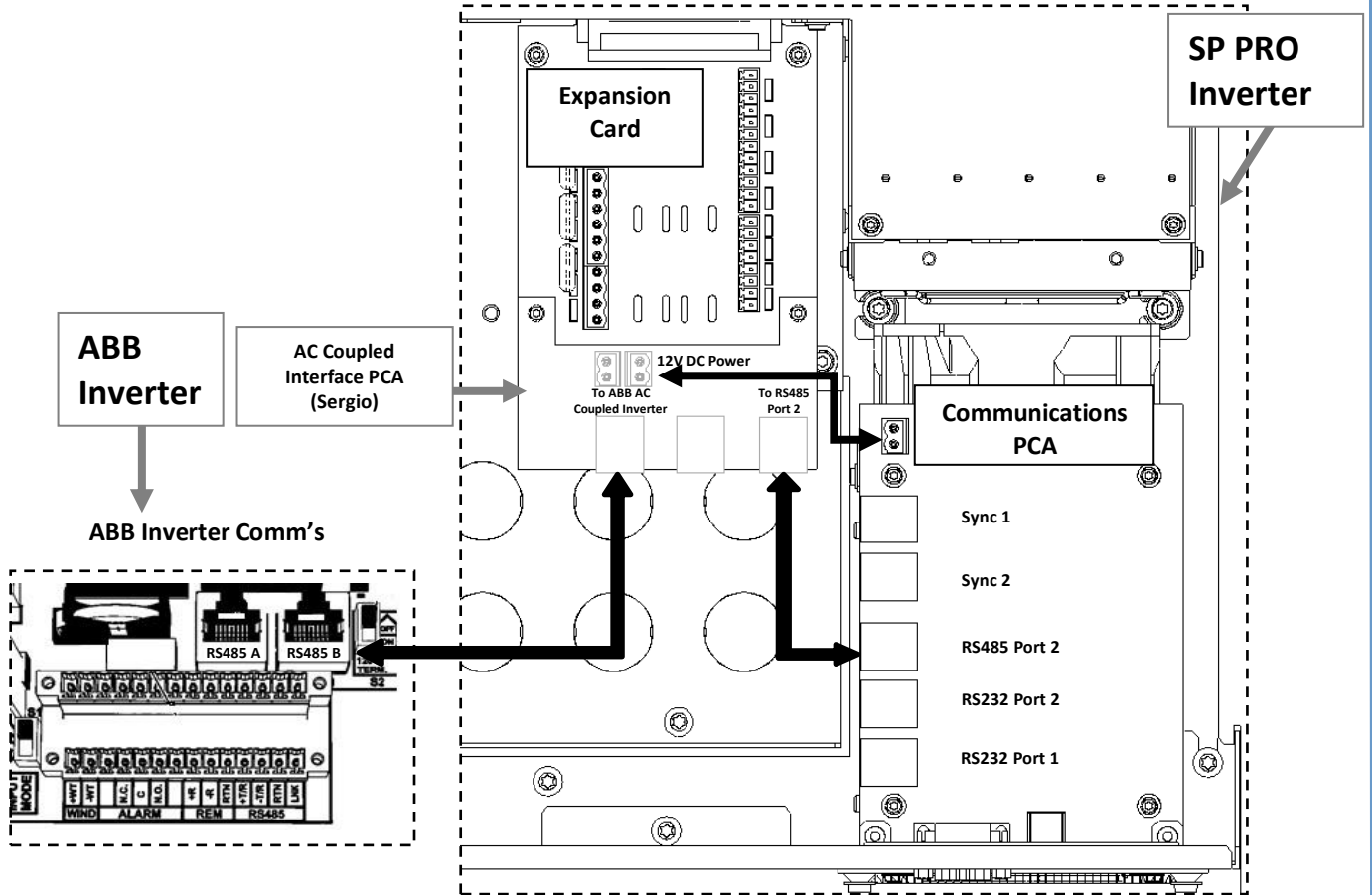


Connect the RJ45 Connector lead from the AC Coupled Interface PCA (Sergio) "To RS485 Port 2" to the SP PRO Serial Communication PCA **RS485 Port 2** and connect the second RJ45 lead from the AC Coupled Interface PCA (Sergio) "To ABB AC Coupled Inverter" to the ABB inverter **RS485B** connector. Connect the AC Coupled Interface PCA (Sergio) power loom (12V) from AC Coupled Interface PCA (Sergio) "**12V DC Power J4**" to the SP PRO Serial Communication PCA 12V connector.

*Note: Do not connect any RJ45 leads to the Sergio AC Coupled Interface PCA "To Other AC Coupled Inverters" connector as the pin out is different to the ABB connection.*



# SP PRO ABB Managed AC Coupling Installation Notes



SP PRO Connections (inside unit) – RS485 Port 2 RJ45 connector to AC Coupled Interface PCA (Sergio) and to ABB inverter RS485B connector



# SP PRO ABB Managed AC Coupling Installation Notes

## ABB PVI-3.0/3.6/4.2-TL-OUTD Series RS485 Connections

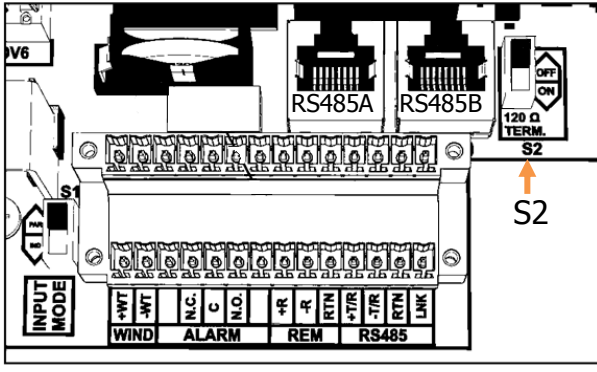
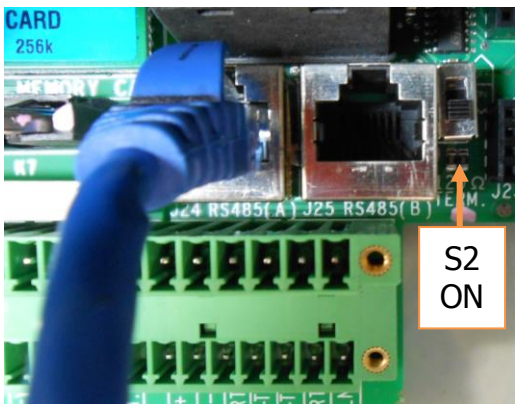


ABB PVI-3.0/3.6/4.2-TL-OUTD Series RS485 Connections (inside unit) – RJ45 connectors

On the ABB inverter there are two RJ45 sockets allowing “looping through” of the wiring to additional inverters. Either connection point is suitable.

When looped to another ABB inverter, the termination switch should be set to “OFF” (away from ON). For the last ABB inverter on the Communications Link (RS485) (or when only one ABB inverter is used), the termination switch must be set to “ON”.



Last ABB on Communications Link (RS485), or when only ABB is used:  
S2 ON (Terminator ON)



ABB loop-through:  
S2 OFF (Terminator OFF)

# SP PRO ABB Managed AC Coupling Installation Notes



## ABB PVI-5000/6000-TL-OUTD Series

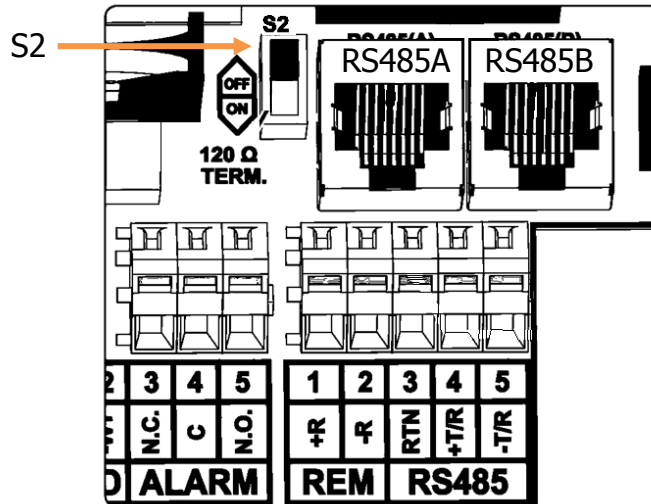
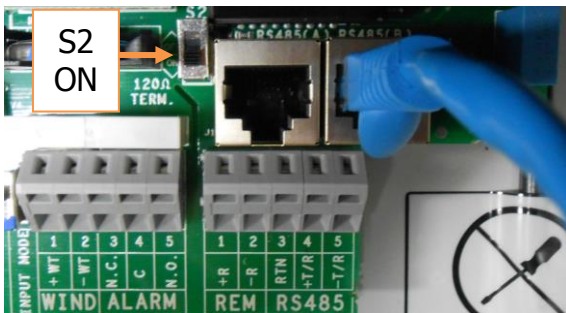


ABB PVI-5000/6000-TL-OUTD Series RS485 Connections (inside unit) – RJ45 connectors

On the ABB inverter there are two parallel sets of RJ45 connections allowing “looping through” of the wiring to additional inverters. Either connection point is suitable.

When looped to another ABB, the termination switch should be set to “OFF” (away from ON). For the last ABB inverter on the Communications Link (RS485) (or when only one ABB inverter is used), the termination switch must be set to “ON”.



Last ABB on Communications Link (RS485), or when only ABB is used:  
S2 ON (Terminator ON)



ABB loop-through:  
S2 OFF (Terminator OFF)

# SP PRO ABB Managed AC Coupling Installation Notes



## Configuration – Additional Settings

**It is recommended that the Site Configuration wizard in the Easy Start Guide (in SP LINK 8.0 and above) be used to configure the SP PRO settings. Using the wizard will ensure all the SP PRO settings are compatible with the manage AC coupled system.**

The settings detailed below will be set when the Site Configuration Wizard is used to configure the SP PRO. Only the additional settings required to enable ABB Managed AC Coupling are shown. The remainder of systems settings will be set by the Site Configuration Wizard.

The SP PRO **must** be configured **before** any of the ABB inverters are energised. The AC coupled failsafe system in the SP PRO is only enabled when the correct ABB configuration has been programmed into the SP PRO.

The ABB inverters must be appropriately addressed to ensure correct communications (see "ABB Port Configuration" section).

## SETTINGS THAT ARE SET BY SITE CONFIGURATION WIZARD

In SP LINK – CONFIGURATION SETTINGS – SYSTEM the follow settings will be set.

- **Managed AC Coupled Link, String Inverter** is set to ABB Solar.
- **Number of ABB inverters connected** is set to the number of ABB inverters installed in the system.

The screenshot shows the 'Managed AC Coupled Solar' configuration window. It includes the following settings:

- String Inverter:** ABB Solar
- Fallback Power:** Disabled
- Number of Devices [1 - 5]:** 2
- Islanding Power Limit [0.1 - 50 kW]:** 2.5 kW
- Grid Export Limit Monitor:** Over Export Trip Time [0 - 1000 s]: 10
- Over Export Trip Limit [0 - 50 kW]:** 0.10 kW

SP LINK - Configuration Settings – System tab

*Note:*

- Port 2 Communication settings will not be available once ABB Communication port has been enabled.*
- The ABB inverters numbering starts from 2 to 6 instead of 1 to 5 when creating a communication link to SP Link e.g. inverter 1 in SP Link is connected to ABB inverter address 2, inverter 2 in SP Link is connected to ABB inverter address 3 etc.*

In the example used above, there are only two ABB inverter connected to the SP PRO.

# SP PRO ABB Managed AC Coupling Installation Notes



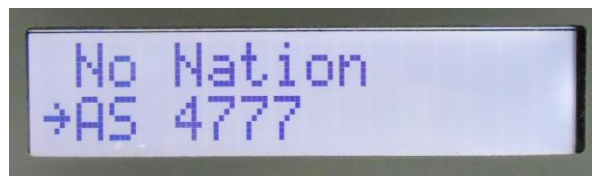
## ABB PORT CONFIGURATION

The settings listed below are all that is required.

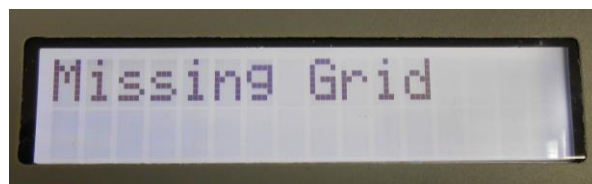
Each ABB inverter must be set to an inverter address from 2 to 6 as appropriate.

**NOTE:** The ABB inverters numbering starts from 2 to 6 instead of 1 to 5 when creating a communication link to SP Link e.g. inverter 1 in SP Link is connected to ABB inverter address 2, inverter 2 in SP Link is connected to ABB inverter address 3 etc.

1. Isolate the AC and connect the DC supply to the ABB inverter(s) and ensure that the DC supply (Minimum 200Vdc) is present at the ABB inverter.
2. When the ABB inverter is powered for the first time, select the "Nation" of installation. For Australia and New Zealand select "AS 4777" and press the **ENTER** key once and to save the setting, hold the ENTER key for 5 seconds, the ABB inverter will reset.



*Note: When an ABB inverter is powered without the AC, "Missing Grid "will be displayed on screen.*



3. Once the display is active on the ABB inverter, enter parameter settings mode. To enter settings mode, press the **ESC** button to access the main menu, then using the **DOWN** key, scroll to Setting and press **ENTER**. The **ESC** is also used to escape back to the previous menu or to edit previous digits.

Use the **UP** and **DOWN** keys to scroll through the various menu items in settings. The menu is continuous. When the end is reached, the display automatically returns to the first item. The **UP/DOWN** keys are used to scroll menu options or to shift numerical scales in ascending/ descending order.

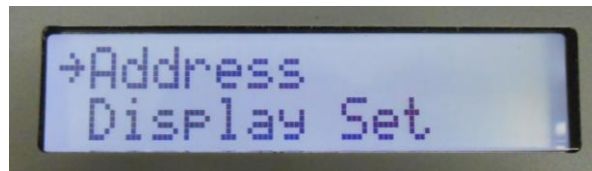


# SP PRO ABB Managed AC Coupling Installation Notes

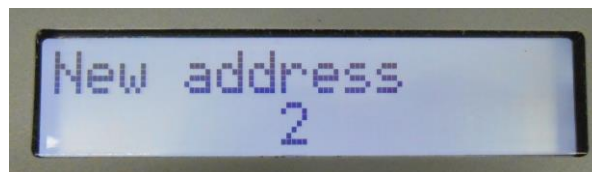


To access "Settings", a passcode is required. By default **0000** is the passcode or by pressing the **ENTER** key four times to access the setting option. Use **ENTER** key to confirm an action or to access submenus.

4. Scroll to **Address** setting and press **ENTER**.



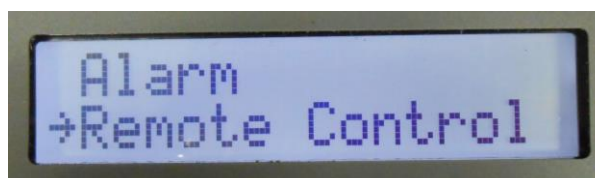
- a. If only one ABB inverter is installed then the address must be set to 2.
- b. If more than one ABB inverter is installed then the address must be allocated sequentially starting from 2 (i.e. first ABB = 2, second ABB = 3, third ABB = 4 etc).
- c. Once the "Address" is selected, press the **ENTER** key to configure and return to the "Setting" menu.



*Note:*

- a. The ABB inverter address starts from 2 to 6, where inverter 1 in SP Link is connected to ABB inverter Address 2, i.e. ABB inverter 1 address 2 = inverter 1 SP Link, ABB inverter 2 address 3 = inverter 2 SP Link, ABB inverter 3 address 4 = inverter 3 SP Link etc.
- b. Do Not skip any address numbers in the sequence when using multiple ABB inverters.

5. Scroll to **Remote Control** setting and press **ENTER**.



- a. Set the ABB inverter "Remote Control" to Enable, this will allow the ABB inverter to disconnect through the control signal.
- b. Once the "Remote Control" is enabled, press the **ENTER** key to configure and return to the "Setting" menu.

*Note: The PVI-6000-TL-OUTD Remote Control setting contains an extra sub menu "Three Phase Unbalanced", when prompted, press the ESC key to return to Enable/Disable Remote Control and select Enable.*



# SP PRO ABB Managed AC Coupling Installation Notes



6. Scroll to the **Power Reduction** setting and press **ENTER**.

**NOTE:** ABB inverters compliant with the AS/NZS 4777.2-2015 will **not contain** the Power Reduction setting in the inverter.



- a. The ABB inverter is set to 100% as default, use the **UP** key to set the "Power Reduction" to 0.0%.
- b. Once the "Remote Reduction" is selected, press the **ENTER** key to configure and return to the "Setting" menu.

**NOTE:** Do not go back into the Power Reduction setting once it is set to 0% otherwise the display will show 100% even though the setting was set to 0%. This is normal. The 0% can be verified by the commissioning test "Testing the Failsafe on the RS485 Link" on Pg 16.

7. Press the ESC key once to return to the main menu. The ABB inverter may perform an automatic reset to configure the changes made.
8. If there are multiple ABB inverters installed, repeat for all others.
9. When all is configured, the ABB inverter display screen will cycle through the main menu automatically. To stop the menu from cycling, press and hold the **ENTER** key until a lock appears at the top right hand corner of the display screen.
  - a. To check that the ABB inverter is under power control, use the **DOWN** key to approach the following menu screen, make sure a percentage is displayed on the display indicating that the inverter is controlled by the SP PRO.



ABB inverter  
display locked

- b. The Percentage Power may be displaying less than 100% even though no power limiting is required. This is because the SP PRO intelligently uses predictive algorithms to determine the optimum value based on the available solar input to the grid inverter at that time.

10. Carry out the System Commissioning testing in the following section (Page 16).

# SP PRO ABB Managed AC Coupling Installation Notes



**Note:**

If Reactive Power is required to be configured, perform the following procedure before step 6.

Note: Reactive Power must also be set in the SP PRO that is connected to the ABB inverter.

- a. Scroll to **Reactive Power** setting and press **ENTER**.



- b. The ABB inverter "Reactive Power" consists of four types of management to enable. Set the appropriate parameters required, press the **ENTER** key to configure and return to the "Setting" menu.



# SP PRO ABB Managed AC Coupling Installation Notes



## System Commissioning – Additional Tests

In addition to the normal system testing that would be performed, the following additional tests must be performed as detailed below.

The commissioning sequence should verify the SP PRO and its operation without any of the ABB inverters in operation and then once the steps below are performed, the ABB inverters can be brought into service.

## COMMUNICATIONS LINK (RS485) VERIFICATION

The correct operation of the ABB Managed AC Coupling relies on the Communications Link. It is vital that the communications link (RS485) connection has been setup correctly before operating the AC coupled system.

1. Check that all the RS485 connections have been connected correctly.
2. Isolate the AC and connect the DC supply to the ABB inverter. Make sure that the DC supply is present at the ABB inverter and its display is on.
3. In the Data View => Technical Data tab there should be live data for all the connected ABB inverters. As a minimum there should be a reading for the DC volts, the ABB Device Address and the ABB model number displayed.
  - a. If the ABB inverter data is "Inverter off line" then check the RS485 wiring and connections.

*Note: AC Energy Today, DC current, AC power, and AC current are not available from an ABB inverter.*

AC Solar #1 (PVI-3.0)	
RS485 Device Address: 2	
AC Energy Today	Not Applicable
AC Power	0.00 kW
AC Volts	0.0 V
AC Current	Not Applicable
DC Power	Not Applicable
DC Volts	225.3 V
DC Current	Not Applicable
Temperature	32 °C
AC Power Peak Today	0.00 kW

For SP PRO Firmware version 8.00 or greater the Communication link may be further tested using the AC Solar Link Test found in SP LINK under the Service Settings tab.

1. In the Service Settings tab click the "Reset Counters" button.
2. Wait 2 minutes and check that the error count remains at zero for all the connected ABB inverters. (An error count of 3 or less per minute is acceptable but in this case it is good practice to check the wiring and that the termination resistors are set correctly in the SP PRO and ABB.

Once the Communications link has been verified for each ABB inverter, the AC feeds to each ABB inverter can be switched on and full system testing and verification can be performed.

## TESTING THE FAILSAFE ON THE RS485 LINK

Once the system is operational, unplug the RS485 communications link from the SP PRO to the ABB inverters. Wait 1 minute and check that the output of each of the ABB inverters has dropped to approximately 0.1kW.

AC Solar Link Test

Errors or non-responses from grid-tie inverters can indicate quality of link.

Counting while grid tie inverter is off is normal.

Link #1	0
Link #2	0
Link #3	
Link #4	
Link #5	

Reset Counters



## Appendix I : Islanding power limit vs battery capacity

Islanded power limit (kW)							
Battery Capacity Ah (C10)	SP PRO Model						
	SPMC240	SPMC241	SPMC481	SPMC482	SPMC1201	SPLC1200	SPLC1202
100	Not valid	Not valid	Not valid	Not valid	3.1kW	Not valid	Not valid
180	1.1kW	1.1kW	2.3kW	2.3kW	5.6kW	Not valid	Not valid
250	1.6kW	1.6kW	3.1kW	3.1kW	7.8kW	7.8kW	7.8kW
300	1.9kW	1.9kW	3.8kW	3.8kW	9.4kW	9.4kW	9.4kW
400	2.5kW	2.4kW	5.0kW	5.0kW	12.5kW	12.5kW	12.5kW
500	3.1kW	3.1kW	6.3kW	6.3kW	15.0kW	15.6kW	15.6kW
600	3.8kW	3.8kW	7.5kW	7.5kW	15.0kW	18.8kW	18.8kW
700	4.4kW	4.4kW	8.8kW	8.8kW	15.0kW	21.9kW	21.9kW
800	5.0kW	5.0kW	10.0kW	10.0kW	15.0kW	25.0kW	25.0kW
900	5.6kW	5.6kW	10.0kW	11.3kW	15.0kW	28.1kW	28.1kW
1000	6.0kW	6.3kW	10.0kW	12.5kW	15.0kW	30.0kW	31.3kW
1100	6.0kW	6.9kW	10.0kW	13.8kW	15.0kW	30.0kW	34.4kW
1200	6.0kW	7.5kW	10.0kW	15.0kW	15.0kW	30.0kW	35.0kW
1300	6.0kW	8.1kW	10.0kW	15.0kW	15.0kW	30.0kW	35.0kW
1400	6.0kW	8.8kW	10.0kW	15.0kW	15.0kW	30.0kW	35.0kW
1500 +	6.0kW	9.0kW	10.0kW	15.0kW	15.0kW	30.0kW	35.0kW

Table 3: Limit to AC couple solar during islanding vs battery capacity