

2UCD074000E004_H

PCS100 AVC-40

Active Voltage Conditioner IEC/UL Commissioning Checklist



This Commissioning Checklist is for use by ABB Certified Engineers holding an Expert Certificate and applies to PCS100 AVC-40s with software version R2J4.

All steps in the checklist must be performed and ticked during commissioning and the completed document scanned and sent to the ABB factory.



About This Document

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We are an established world force in the design and manufacturing of power electronics and power protection equipment.

As part of ABB, a world leader in electrical technology, we offer customers application expertise, service, and support worldwide.

We are committed to teamwork, high quality manufacturing, advanced technology and unrivalled service and support.

The quality, accuracy and performance of the Company's products result from over 100 years' experience, combined with a continuous program of innovative design and development to incorporate the latest technology.

Quality Control

The products listed in this catalogue are manufactured in an ISO 9001 accredited facility.



Registration No. 2469

For More Information

Further publications for the PCS100 AVC-40 are available to download for free from

<http://new.abb.com/ups/power-and-voltage-conditioners/voltage-conditioners/pcs100-avc-40>



Document Information

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This Document

This document contains information regarding:

- commissioning of the PCS100 AVC-40

Usage

This document should be used when:

- commissioning the PCS100 AVC-40

Who Should Read This Document?

This document is intended for:

- commissioning engineers

Prerequisites

A Commissioning Engineer working with the PCS100 AVC-40 must:

- be trained by ABB and have electrical operational and safety knowledge
- have sufficient training to operate in an accidentally touch safe service environment
- use this document in conjunction with the PCS100 AVC-40 User Manual and PCS100 AVC-40 Installation Checklist and ensure all of the installation checks have been performed prior to completing this checklist

Software Revision

This document applies to PCS100 AVC-40 systems with software revision R2J4.



Safety

Safety Instructions

AR	<p>تحذير: جهد كهربائي خطير! راجع تعليمات التشغيل افصل الكهرباء وقم بتأمينها قبل العمل في هذا الجهاز تنبيه! يجب عدم التركيب إلا من خلال شخص على دراية بمجال التقنية الكهربائية</p>	IT	<p>Attenzione: Tensione pericolosa! Fare riferimento alle istruzioni per l'uso. Prima di intervenire su questo dispositivo, scollegare e isolare tutte le fonti di alimentazione. Attenzione! L'installazione deve essere eseguita esclusivamente da un installatore qualificato.</p>
BG	<p>Предупреждение: Опасно напрежение! Вижте инструкциите за работа. Изключете и блокирайте захранването преди да работите с устройството. Внимание! Да се монтира само от експерт електротехник.</p>	LT	<p>Įspėjimas: Pavojinga įtampa! Žr. naudojimo instrukcijas. Atjunkite ir laikinai užblokuokite maitinimą prieš dirbdami su šiuo įrenginiu. Dėmesio! Įrengti gali tik asmuo, turintis elektrotechniko patirties.</p>
CS	<p>Varování: Nebezpečné napětí! Viz návod k obsluze. Před zahájením prací na tomto zařízení odpojte a uzamkněte napájení. Pozor! Toto zařízení smí instalovat pouze osoba s elektrotechnickou odborností.</p>	LV	<p>Bīdīnājums: Bīstams spriegums! Skatiet darba norādījumus. Pirms sākat darbu ar šo ierīci, atvienojiet un bloķējiet strāvas padevi. Uzmanību! Uzstādīšanu drīkst veikt tikai persona ar zināšanām par elektrotehniku.</p>
DA	<p>Advarsel: Farlig elektrisk spænding! Se betjeningsvejledningen. Frakobl enheden, og afbryd strømforsyningen, før du arbejder med denne enhed. Giv agt! Installation må kun foretages af personer med elektroteknisk ekspertise.</p>	NL	<p>Waarschuwing: Gevaarlijke spanning! Raadpleeg de bedieningsinstructies. Koppel dit apparaat los van de stroomvoorziening voordat u werkzaamheden uitvoert. Let op! Installatie mag alleen worden uitgevoerd door een monteur met elektrotechnische expertise.</p>
DE	<p>Warnung: Gefährliche Spannung! Siehe Bedienungsanleitung. Vor dem Arbeiten Gerät ausschalten und von der Spannungsversorgung trennen. Achtung! Installation nur durch elektrotechnische Fachkraft.</p>	NO	<p>Advarsel: Farlig spenning! Se i bruksanvisningen. Koble fra og steng av strømmen før du arbeider på denne enheten. Forsiktig! Montering skal kun utføres av kvalifiserte personer med elektrokompetanse.</p>
EL	<p>Προειδοποίηση: Επικίνδυνη τάση! Ανατρέξτε στις οδηγίες λειτουργίας. Αποσυνδέστε και απομονώστε την παροχή ισχύος προτού ξε κινήσετε τις εργασίες σε αυτήν τη συσκευή. Προσοχή! Η εγκατάσταση πρέπει να γίνεται μόνο από αδειούχο ηλεκτρολόγο εγκαταστάτη.</p>	PL	<p>Ostrzeżenie: Niebezpieczne napięcie! Patrz: instrukcja obsługi. Przed rozpoczęciem wykonywania pracy z tym urządzeniem odłącz i zablokuj zasilanie. Uwaga! Montaż może wykonywać wyłącznie osoba posiadająca doświadczenie elektrotechniczne.</p>
EN	<p>Warning: Hazardous voltage! Refer to installation instructions. Disconnect and lock out power before working on this device. Attention! Installation by person with electrotechnical expertise only.</p>	PT	<p>Aviso: Tensão perigosa! Consulte as instruções de operação. Desconecte e desligue a energia elétrica antes de trabalhar nesse dispositivo. Atenção! A instalação deve ser feita apenas por uma pessoa com especialidade eletrotécnica.</p>
		RO	<p>Avertisment: Tensiune electrică periculoasă! Consultați instrucțiunile de utilizare. Deconectați și închideți sursa de energie înainte de a lucra cu acest dispozitiv. Atenție! Instalare</p>

<p>Advertencia: ¡Tensión peligrosa! Consulte las instrucciones de funcionamiento.</p> <p>ES Antes de trabajar con este dispositivo, desconecte y bloquee la corriente. ¡Atención! La instalación debe ser realizada únicamente por un técnico electricista.</p>	<p>Внимание: Опасное электрическое напряжение! Обратитесь к инструкциям по эксплуатации.</p> <p>RU Отключите питание и обесточьте устройство перед началом работ. Внимание! Установка должна выполняться только специалистом по электротехническим работам.</p>
<p>Hoiatus: Elektrilöögi oht! Lisateavet vaadake kasutusjuhendist. ET Enne selle seadmega töötamist ühendage lahti ja lukustage toide. Tähelepanu! Seadet tohib paigaldada ainult elektrotehnilise kogemusega isik.</p>	<p>Výstraha: Nebezpečné napätie! Pozrite si návod na použitie. SK Pred začatím prác na tomto zariadení odpojte a zablokujte napájanie. Pozor! Inštaláciu smie vykonávať len osoba s odbornými znalosťami v oblasti elektrotechniky.</p>
<p>Varoitus: Vaarallinen jännite! Katso käyttöohje. FI Katkaise virta ja estä virran kytkeminen lukituksella ennen töiden aloittamista. Huomio! Asennuksen saa suorittaa vain henkilö, jolla on kokemusta sähkötekniikasta.</p>	<p>Opozorilo: Nevarna napetost! Glejte navodila za uporabo. SL Pred delom na tej napravi izklopite in zaklenite električno napajanje. Pozor! Namestitev sme izvesti samo elektrotehnični strokovnjak.</p>
<p>Avertissement: Tension dangereuse! Consultez les consignes d'utilisation. FR Débranchez et verrouillez l'alimentation électrique avant d'entreprendre des travaux sur cet appareil. Attention! L'installation doit être effectuée uniquement par une personne ayant une expertise en électrotechnique.</p>	<p>Varning: Livsfarlig spänning! Se i bruksanvisningen. SV Frånkoppla och blockera anläggning eller en anläggningsdel innan arbete utförs. Obs! Får endast installeras av behörig elektriker.</p>
<p>Upozorenje: Opasan napon! Pogledajte upute za uporabu. HR Odspojite i isključite struju prije rada na ovom uređaju. Pažnja! Ugradnja je dopuštena samo osobama stručnim u području elektrotehnike.</p>	<p>Uyarı: Tehlikeli gerilim! Çalışma talimatlarına bakın. TR Bu cihaz üzerinde çalışmadan önce elektriği kesin ve kilitleyin. Dikkat! Yalnızca elektroteknik uzmanlığa sahip kişiler tarafından kurulabilir.</p>
<p>Figyelmeztetés: Veszélyes feszültség! Lásd a használati utasítást. HU Válassza le és zárja ki az áramellátást, mielőtt a berendezésen dolgozni kezd. Figyelem! Az üzembe helyezést csak elektrotechnikai szakértelemmel rendelkező személy végezheti el.</p>	<p>警告：高压危险! 请参见操作手册 ZH 操作本设备前请断开并锁定电源。 注意！安装仅限专业电工人员。</p>



Safety Notices

This checklist contains important information regarding the operation of the ABB's PCS100 AVC-40. This checklist provides technical and operational guidance for commissioning engineers. The following safety instructions are to be observed.

**DANGER**

This checklist does not provide sufficient information for safe service of the PCS100 AVC-40. For such service information refer to appropriate manual.

**CAUTION – Trained Commissioning Engineers**

All operations on the PCS100 AVC-40 must only be carried out by a trained commissioning engineer familiar with the contents of this checklist. Hazardous conditions could arise from incorrect adjustment.

**DANGER – Stored Charge**

Stored charge is present after the device is switched off.

**DANGER – Protective Covers**

Normal operation of this product requires any protective covers in place and doors secured closed.

**DANGER – Personal Protection Equipment**

Ensure safety glasses are worn while working if any part of the unit could be energized.

Contents

About This Document	2
The Company.....	2
Quality Control.....	2
For More Information.....	2
Document Information.....	3
This Document.....	3
Usage.....	3
Who Should Read This Document?.....	3
Prerequisites.....	3
Software Revision.....	3
 Safety 4	
Safety Instructions.....	4
Safety Notices.....	6
 Commissioning Checklist	8
1.1 Pre-Power Visual Checks.....	8
1.2 DIP Switch Settings.....	10
1.3 Power Connection Checks.....	12
1.4 Earth (Ground) Checks.....	13
1.5 Change Frequency from 50Hz to 60Hz (if required).....	14
1.6 Initial Power Up – Utility Supply.....	14
1.7 Stop – Enable Switch Test.....	16
1.8 Initial Run – No Load.....	16
1.9 External Transformer Wiring Check – No Load.....	17
1.10 External Transformer Thermal Test (Optional).....	17
1.11 Load Test.....	18
1.12 Documentation and Handover.....	18
1.13 PCS100 AVC-40 Settings.....	19
1.14 Deviations.....	20
1.15 Sign-Off.....	20

Commissioning Checklist

The following commissioning checklist for the PCS100 AVC-40 is required to be completed and signed off by a suitably qualified engineer who has been trained in the use of power systems, electrical safety and the PCS100 AVC-40 products.

Company:

Site:

Plant:

PCS100 AVC-40 Model:

PCS100 AVC-40 Serial Number:

Engineer:

Date:

Before proceeding with this commissioning schedule, the Commissioning Engineer should be familiar with the following:

- accessing and navigating within the menu, including the commissioning section, on the GDM
- adjusting system parameters on the GDM
- starting and stopping the PCS100 AVC-40 via the GDM

1.1 Pre-Power Visual Checks

No	Description	Check
1.	Check power to the unit is safely isolated and locked off.	
2.	Confirm power is isolated with a meter check.	
3.	Visual check mechanical installation.	
4.	Check there is no physical damage to unit and internal parts.	
5.	Check no debris, swarf or wire strands are present.	
6.	Check there is no insulation damage or signs of exposure to water or conductive dust during transport and storage.	
7.	Check the clearances between terminals, cables, bolts, and lugs are appropriate. Ideally the main supply and load power terminations at the transformer should be fully insulated.	
8.	Check the supply and load cable or buswork used is adequate for PCS100 AVC-40 load rating.	
9.	Check all rectifier and inverter modules are correctly connected to the power wiring and the communications and control ribbon cable is fully bedded.	

-
10. Check the Auxiliary Master Module is correctly connected to the power wiring and the communications ribbon cable is fully bedded.
-
11. Check the GDM is correctly connected to the power wiring and the communications ribbon cable is fully bedded.
-
12. Check there is no cooling air path blockage at front and rear (at least 200mm) of the Controller Enclosure
-
13. Check the environment is suitable for the PCS100 AVC-40's IP20 rating, i.e. water or excessive dust is not able to enter the PCS100 AVC-40 enclosures.
-
14. Check fuses:
 F1 12A Auxiliary Master Module
 F2 12A Auxiliary Master Module
 F3 Auxiliary Master Module – NOT USED
 F8 6A Auxiliary Master Module
 F4/F5 20A located in the Transformer Enclosure for large systems.
 Transformer enclosure Circuit Breaker: check short circuit protection I3 (magnetic) setting is as per the current listed in the following table. Note: if the CB does not have the exact I3 current setting shown in the table, then the CB I3 should be set to the next higher setting.
 Overload protection (thermal) by the CB is not required as it is provided by the inverters. If the CB has overload protection set it to maximum.

No. module pairs	PCS100 AVC-40 Voltage Rating		
	208V fully rated	220V/208V de-rated	380 - 480 V
1	1385	1308	600
2	N/A	2616	1200
3	N/A	3924	1800
4	N/A	5232	2400
5	N/A	6540	3000
6	N/A	7848	3600
8	N/A	N/A	4800
10	N/A	N/A	6000
12	N/A	N/A	7200

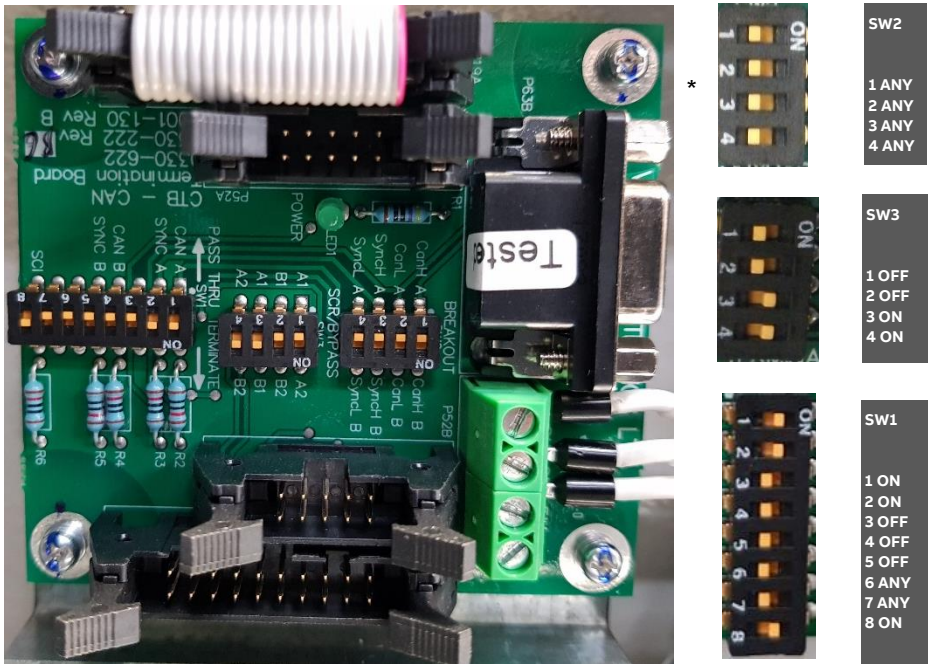
1.2 DIP Switch Settings

Check the DIP switch settings of the various components within the system if they have been replaced or have changed prior to commissioning. Note these switches are all set at the Factory as part of the production test process.

Note:

The following pictures may not represent actual settings for this unit, refer to the appropriate table.

No	Description	Check
15.	Check the DIP switch settings on the CAN Termination Board. The CAN Termination Board is mounted on the right hand side of the Master Controller Enclosure.	

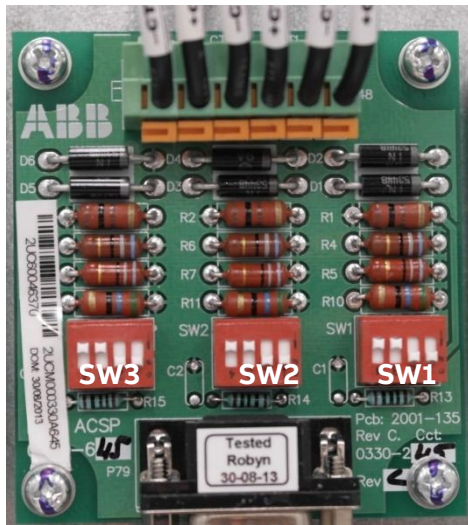


SW1 (bottom) has DIP switches 3-5 set to OFF. Switches 1,2 and 8 are set to ON. Switches 6,7 can be set to ON or OFF.
 * SW2 (top) is not used therefore DIP switches can be set ON or OFF
 SW3 (middle) has DIP switches 1 & 2 set to OFF and 3 & 4 set to ON.

Text...

No	Description	Check
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16. Check the DIP switch settings on the Current Sense Board.



Current Sense Board

The Current sense board is mounted in the Transformer Enclosure, on or near the circuit breaker panel. It has three sets of DIP switches. All DIP switches, SW1, SW2 & SW3 on the current sense board are set for the current rating of the unit. These settings are set in the Factory and should not need to be adjusted. If any settings are found to be different from these settings stated below, please contact the factory.

Power Rating (kVA)	Pole	SW3	SW2	SW1
150 (IEC & UL)	1	Off	Off	Off
	2	Off	Off	Off
	3	Off	Off	Off
	4	Not Used		
225 - 300 (IEC & UL) 450 (IEC)	1	On	On	On
	2	Off	Off	Off
	3	Off	Off	Off
	4	Not Used		
600 (IEC)	1	On	On	On
	2	On	On	On
	3	Off	Off	Off
	4	Not Used		
750 (IEC)	1	On	On	On
	2	Off	Off	Off
	3	On	On	On
	4	Not Used		
900 (IEC)	1	On	On	On
	2	On	On	On
	3	On	On	On
	4	Not Used		

No	Description	Check
----	-------------	-------

Power Modules	Pole	SW3	SW2	SW1
1200, 1500 (IEC)	1	On	On	On
	2	Off	Off	Off
	3	On	On	On
	4	Not Used		
1800 (IEC)	1	On	On	On
	2	On	On	On
	3	On	On	On
	4	Not Used		
2400, 3000 (IEC)	1	On	On	On
	2	Off	Off	Off
	3	On	On	On
	4	Not Used		
3600 (IEC)	1	On	On	On
	2	On	On	On
	3	On	On	On
	4	Not Used		

1.3 Power Connection Checks

No	Description	Check
17.	Check all power connections are assembled and tightened correctly; check power terminations have been fully insulated	
18.	Perform a point-to-point wiring check as per installation wiring diagram to determine the transformer is correctly connected and phased.	
19.	Open MCCB (if fitted) and F4/F5 20A auxiliary fuses. Using a simple ohm-meter check there is no short circuit PCS100 AVC-40 input to input (L1-L2, L2-L3, L3-L1) (load disconnected and input circuit breaker open).	
20.	Perform this step only with the 400/480V PCS100 AVC-40 (these are the models that do not have an autotransformer) fitted with a MCCB (rectifier circuit breaker). Open the rectifier feed MCCB and F4/F5 20A auxiliary in the MC Enclosure. Check for continuity L1-L2, L2-L3 and L3-L1 on the downstream side (rectifier side) of the MCCB. This must show an open circuit. Close F4/F5 fuses.	
21.	Using the resistance range of a multimeter, check there is no short circuit at PCS100 AVC-40 input to ground (L1-G, L2-G, L3-G).	
22.	Using the resistance range of a multimeter, check there is no short circuit at rectifier supply input to ground (L1R-G, L2R-G, L3R-G.).	

23. Check for continuity between injection transformer A2, B2, C2 and the PCS100 AVC-40 Inverter module AC terminals, U, V, W. This will require either removing the module covers, or inserting a digital multi meter/duspol probe under the module front cover on the PCS100 Inverter module.

NB: PCS100 Inverter modules on the PCS100 AVC-40 2B and larger machines are always on the upper shelf of the Controller Enclosure.



PCS100 Inverter modules

24. Check there is no short circuit at inverter output to ground (Inv L1-G, Inv L2-G, Inv L3-G).
25. Confirm the auxiliary supply cable is connected to the correct terminals located under the rectifier shelf next to the L1R terminal of all Controller Enclosures. The label at the bottom of each Controller Enclosure shows the correct connections depending on the AVC system voltage.

1.4 Earth (Ground) Checks

No	Description	Check
26.	Check the PCS100 AVC-40 is earthed to the utility supply at the main Earth Stud.	
27.	Check the internal earth to the PCS100 AVC-40 Enclosure (PE).	
28.	Check the internal earth to the Injection Transformer (TE).	

1.5 Change Frequency from 50Hz to 60Hz (if required)

If the PCS100 AVC-40 needs to be changed from a 50Hz to a 60Hz machine.

No	Description	Check
29.	Unplug the DB9 cable to the Auxiliary Master Module from VR1 and VR2	
30.	This is not applicable to all models as some MCCBs do not have frequency settings. Check the switch settings on the MCCB and if there is a frequency setting adjust this to the 60Hz setting. Do not adjust any other settings on the MCCB.	
31.	Perform the power up procedure as described in Section 1.6. up to step 42.	
32.	Power down the PCS100 AVC-40 and reconnect VR1 and VR2 to the Auxiliary Master Module.	
33.	Turn power on again to the PCS100 AVC-40 and continue from step 43.	

1.6 Initial Power Up – Utility Supply

All loads should remain disconnected at this stage.

No	Description	Check
34.	Check all protective covers are in place.	
35.	Ensure the Stop – Enable switch is set to Stop.	
36.	Apply utility power to the PCS100 AVC-40 and verify the system has energised correctly.	
37.	Verify the red LED on top of the Auxiliary Master Module and any Auxiliary Slave Module is on. This indicates the 26.5 volts DC power supply is operational.	
38.	Once the automatic start-up and configuration check has been performed verify the blue LED on top of the master module is flashing. This indicates the DSPE micro is running	
39.	Verify the inverter and rectifier modules power up correctly by checking the module display board status LEDs. Refer to the PCS100 AVC-40 User Manual for descriptions of these LEDs. The OK LEDs should be on and the run LEDs should be off. Check the module identification numbers are unique. Resolve any abnormal condition before continuing with this checklist. L0 remaining on the module display boards indicates a fatal error in the System Configuration Manager (SCM). The exact error code will be signaled by the flashing LED on the SCM board. (Refer to ABB document no <i>2UCD200000E430 SCM diagnostics</i>).	
40.	Verify the GDM powers up, if not confirm the GDM is turned on by pressing the small button on the GDM rear panel (left hand end). It will initially show default start-up screens. Successful configuration check will be indicated by the GDM displaying the Status Page, and no configuration errors being reported. The GDM control panel should show 'Inhibit' indicating the system is inhibited from starting by the Stop – Enable switch. The GDM should show Status: BYPASS indicating the bypass condition of the unit.	
41.	On the GDM, access the Menu page and select 00 Password and enter the correct Tech password to change to the Tech menu	

-
42. Check **13 Supply Voltage** and **14 Supply Frequency** are correct for the application. Adjust if necessary.

 43. Check **12 Transformer Config** is set correctly for the application. This parameter is set by default to “Top Input”, but if the transformer wiring was changed for “Bottom Input” (contact the Factory for the procedure to perform this change), then this parameter must be checked and changed accordingly to “Bottom Input”.

 44. Check **600 V Set Manual** setting is correct for the application. Adjust if necessary.

 45. Check **601 V Set Source** is set to MANUAL.

 46. Check the Customer’s requirements and set **27 Auto Start** and **A63 SSH Port Enable** accordingly.

 47. If any faults are present and reported on the display then resolve these faults before continuing.

 48. If Modbus TCP or remote webpages are to be used adjust the network configuration parameters B11 to B14.

 49. Enter the company, site and plant via parameters 02, 03 and 04. (Entering the Operator or Tech password is required).

 50. Verify the Input Voltage and Output Voltage (and Frequency if possible) measurements shown on the GDM status screen are correct with a true RMS meter.

 51. Verify all the rectifier, inverter module fans are running and exhausting correctly (check air flow at rear).

 52. Verify all transformer fans (if applicable) are running correctly.

 53. Check the GDM s/w revision is up to date using the GDM Software Upgrade Tool.

 54. Power down the PCS100 AVC-40.

 55. Set the Stop – Enable switch to Enable.

 56. Ensure the doors are closed and then re-power the PCS100 AVC and allow the configuration check to complete. Following this verify the INHIBIT is now removed from the Status Bar on the GDM.
-

1.7 Stop – Enable Switch Test

This stage verifies correct function of the Stop – Enable switch.

No	Description	Check
57.	Start the PCS100 AVC-40. Verify the PCS100 AVC-40 enters RUN mode, and no faults exist.	
58.	Turn the Stop - Enable switch to Stop to bypass the PCS100 AVC-40. Verify the PCS100 AVC-40 enters BYPASS mode, and no faults exist. INHIBIT will be shown on the GDM.	
59.	Return the Stop - Enable switch to Enable. Verify the PCS100 AVC-40 remains in BYPASS mode. INHIBIT will be removed from the display.	

1.8 Initial Run – No Load

This stage verifies correct function of the inverter. Ensure that the load is disconnected from the PCS100 AVC-40 to prevent the test affecting the load.

No	Description	Check
60.	Start the PCS100 AVC-40. Verify the PCS100 AVC-40 enters RUN mode, and no faults exist.	
61.	Stop the PCS100 AVC-40. Verify the PCS100 AVC-40 returns to the BYPASS mode and no faults exist.	
62.	Access the menu and change 600 V Set Manual to 105% of the nominal supply voltage and start the PCS100 AVC-40. The PCS100 AVC-40 will correct the output voltage to 105% of nominal supply voltage. Verify the GDM Output Voltage measurements show 105% of nominal supply voltage on the status page, and that no faults exist.	
63.	Stop the PCS100 AVC-40. Verify the PCS100 AVC-40 returns to BYPASS and set 600 V Set Manual back to 100% of the nominal supply voltage or set to needed level.	

1.9 External Transformer Wiring Check – No Load

This test only needs to be performed on the PCS100 AVC-40s constructed with separate Controller and Transformer Enclosures. It is not necessary for small PCS100 AVC-40s with a single enclosure.

Note: This test will add up to 10% over-voltage at the output of the PCS100 AVC-40.

No	Description	Check
64.	Set 20 Configuration Check Mode to “true” in the COMMISSIONING menu and Start the PCS100 AVC-40. This will correct the output voltages V1 to 100%, V2 to 105% and V3 to 110% of 13 Supply Voltage setting. Note : $V1 = V L1'L2'$, $V2 = V L2'L3'$, $V3 = V L3'L1'$	
65.	Scroll to the status page of the GDM and verify the displayed output voltage V1, V2 and V3 is within $\pm 1\%$ of the values in step 62. This verifies the transformer is wired correctly and ratios are correct. Stop the PCS100 AVC-40 and then set 20 Configuration Check Mode back to “false”.	
66.	If the output voltages V1, V2 and V3 are not within $\pm 1\%$ of the values in step 62 then recheck transformer connections as per the wiring diagram. Repeat the steps above when PCS100 AVC-40 is re-powered.	

1.10 External Transformer Thermal Test (Optional)

This test is not required for normal commissioning. This is a special test which permits a full current thermal test for the transformer. It should only be performed if there is special requirement to check the transformer and in consultation with the factory. Standard units are type tested and do not require this test. It requires an external bypass circuit.

No	Description	Check
67.	Ensure bypass switch S1, S2, S3 are closed, and the load isolator switch is open or the load turned off.	
68.	Ensure the load is turned off. Power up the PCS100 AVC-40 if not already powered up. Log in on the GDM using the Tech Access password.	
69.	Set 21 Test Mode to OUTWAVEPLL. Start the PCS100 AVC-40. Increase 22 Test Voltage until the load current on the GDM status screen equals approximately 95%. At this time full rated load current will be flowing through the short circuit on the supply side of the Injection Transformer created by switches S1, S2 and S3 as shown in Figure 0-1. Allow temperatures to stabilise (will take several hours) and check the transformer, switch, and cable connection temperatures are not excessive.	

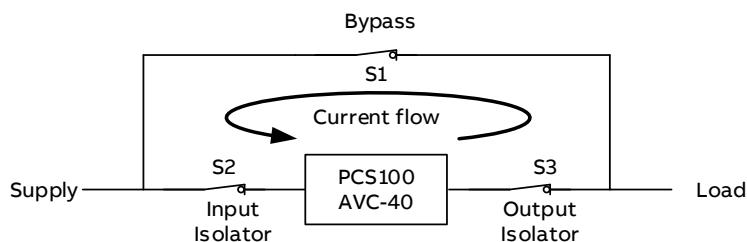


Figure 0-1: PCS100 AVC-40 with external bypass circuit

-
70. At the end of this test stop the PCS100 AVC-40. Set **21 Test Mode** to NONE and **22 Test Voltage** to 0V.
-

1.11 Load Test

No	Description	Check
71.	Switch the load on. Start the PCS100 AVC-40. Verify the PCS100 AVC-40 enters RUN mode and no faults exist.	
72.	Check the voltages on the GDM status screen are as expected. The output voltage should be ~ 100% of the 600 V Set Manual value.	
73.	Check the load currents on the GDM status screen match the actual measured load currents within tolerance. Ensure greater than 5% load current is applied for this check.	
74.	Check the loading level < 100% on GDM status screen.	
75.	Check no overload is shown on the GDM unless greater than 10% voltage correction is being provided.	

1.12 Documentation and Handover

No	Description	Check
76.	Connect a PC to the PCS100 AVC-40 via the GDM USB and run a web browser on the PC. Download and save the Service Log for future use or reference. See document 2UCD200000E001 How to View the GDM Remote Web Pages for detailed instructions.	
77.	In the PCS100 AVC-40 Settings below record the settings that have been changed	
78.	Ensure the digital enabled QR code links to the user manual correctly.	
79.	Place or store other documentation at appropriate locations.	
80.	Provide training to appropriate staff.	
81.	Ensure plant staff knows the system is now in service.	
82.	A copy of this checklist and the Service Log must be either uploaded to ServIS (if accessible) or emailed to nz-powerconditioningservice@abb.com. Failure to comply with this may affect any possible future warranty claims.	

1.13 PCS100 AVC-40 Settings

Menu number & name	Parameter number & name	Value
0 General	02	Customer Name
	03	Plant Name
	04	Site Name
1 System Electrical	10	System Current
	11	Rectifier Voltage
	12	Transformer Config
	13	Supply Voltage
	14	Supply Frequency
	15	Sag Threshold
	16	Surge Threshold
6 References	600	V Set Manual
GDM A00 Display	A31	GDM Control Enable
GDM B00 Network Settings	B11	Dynamic IP DHCP
	B12	Static IP address
	B13	Static IP mask
	B14	Static IP gateway

1.14 Deviations

List any outstanding issues in the space below.

No	Description
1.	
2.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

1.15 Sign-Off

Party	Name	Date
Customer	Name (please print): Signature:	
Commissioning Engineer	Name (please print): Signature:	



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