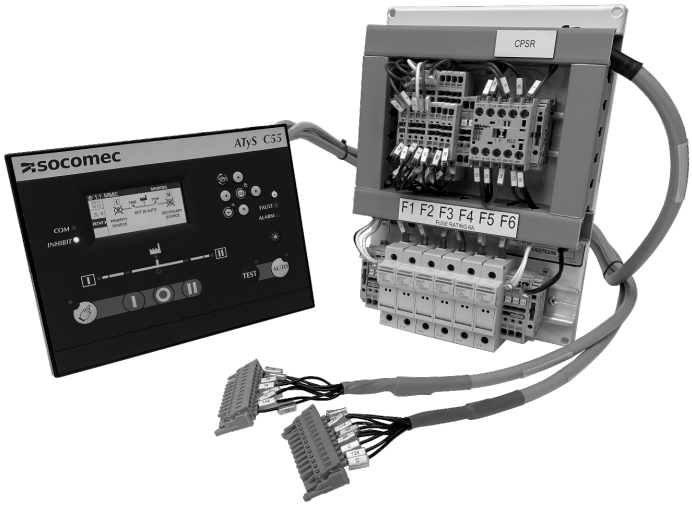
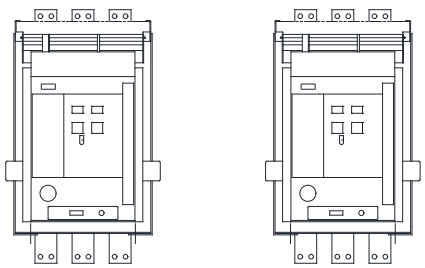
INSTALLATION MANUAL



Cat No: ATYSCxxCIPACB

For NHP AR ACBs



ACBs must contain the following:

Trip Unit: AGR21, AGR31, Non-Auto
Shunt: 240VAC
LRC: 240VAC
Motor: 240VAC
Mechanical Interlock

Product Specifications	
ATYSC55CIPACB	ATyS C55 Transfer Switch Control Interface for NHP AR ACBs
ATYSC65CIPACB	ATyS C65 Transfer Switch Control Interface for NHP AR ACBs

WARNING:

Risk of electrocution, burns or injury to persons and / or damage to equipment.
This Installation Manual is intended for personnel trained in the installation and commissioning of this product. For further details refer to the product instruction manual for the C55 & C65 and refer NHP documentation.

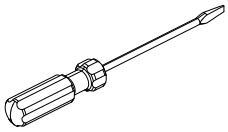
ATTENTION:

- **This product must always be installed and commissioned by qualified and approved personnel.**
- **Maintenance and servicing operations should be performed by trained and authorized personnel.**
- **Do not handle any control or power cables connected to the product when voltage may be, or may become present on the product, directly through the mains or indirectly through external circuits.**
- **Always use an appropriate voltage detection device to confirm the absence of voltage.**
- **Ensure that no metal objects are allowed to fall in the cabinet (risk of electrical arcing).**

Risk of damaging the device in case the product is dropped or damaged in any way it is recommended to replace the complete product.
Installation standards must be respected.

Tools Required (not supplied)

T1

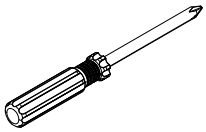


Screwdriver Flathead

T2

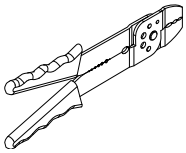
Terminal Screwdriver

T3



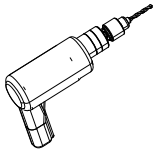
Screwdriver Phillips Ph #1

T4



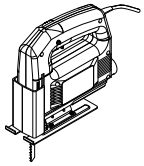
Wire Strip & Crimp Tool

T5



Drill

T6



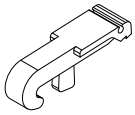
Applicable Cutting Tool

T7

Ruler or Tape Measure

Tools Required (supplied)

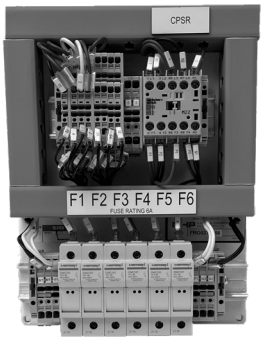
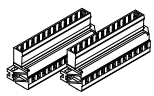
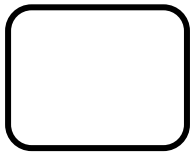
T8



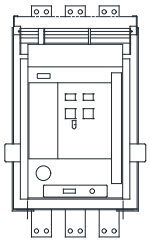
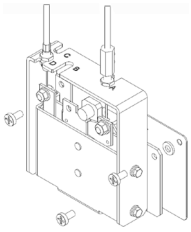
Wire Terminating Tool

Non contractual document.
Subject to change without notice

Supplied Items

Part Number	Controller	Control Interface Panel	CIP Looms & Plugs	IP65 Gasket
ATYSC55CIPACB	**x 1** - C55 - 16000055 	 **x 1** *Not available separately*	 2.5-meter Looms *ATYSLOOMA, B, C* **x 1** each Loom **x 1** - 231642019000 **x 1** - 231612019000  *Looms are prewired to CIP and controller plugs*	*Not Supplied* 16090001
ATYSC65CIPACB	**x 1** - C65 - 16000065 			 **X 1** 16090001

Required Items Not Supplied

Part Number	
ACBs	 x 2 ACBs with interlocks mech installed on bodies and  x 2 Carriage Interlock Mech and  x 2 Interlock Cable

TemPower PRO

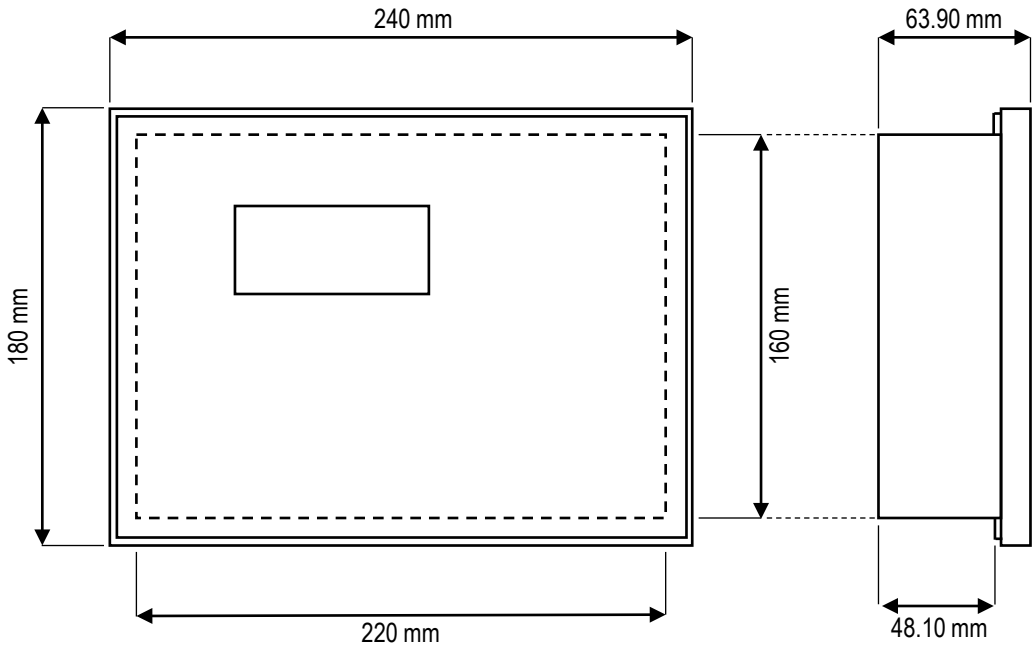
SCAN ME

Scan QR Code for more information

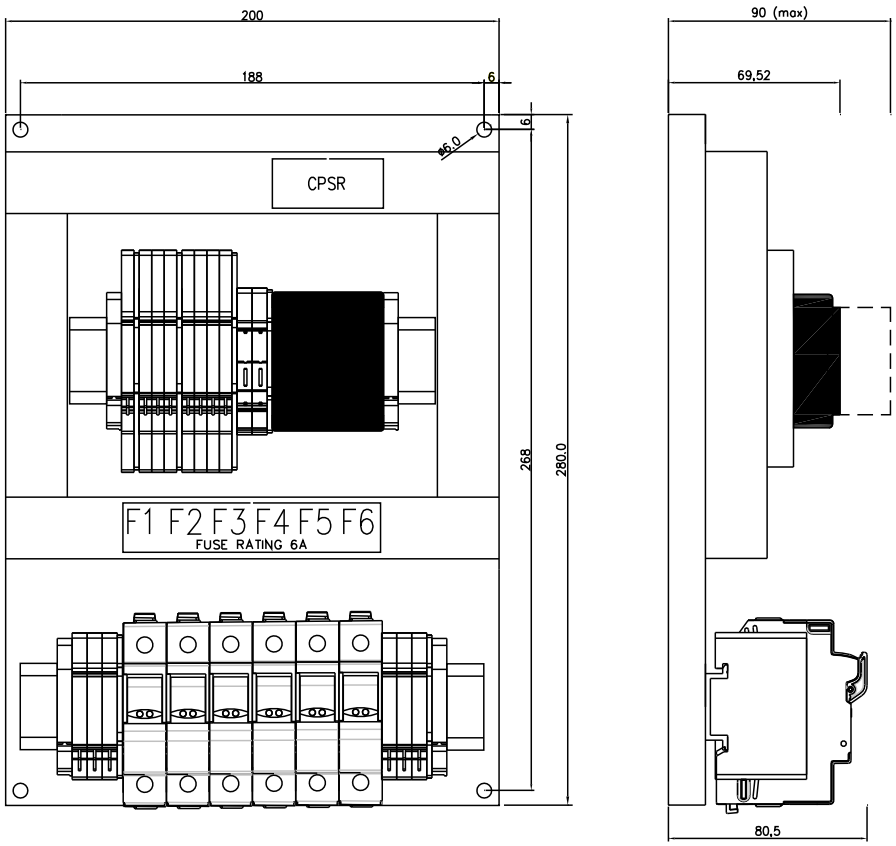
ACBs required be installed with a shunt, LRC and motor at 230/240VAC

For ACB mechanical interlock instructions refer to the AR ACB Cable Mechanical Interlock Instructions (AR-IN-006-EN) Contact NHP

ATyS C55/65 Controller



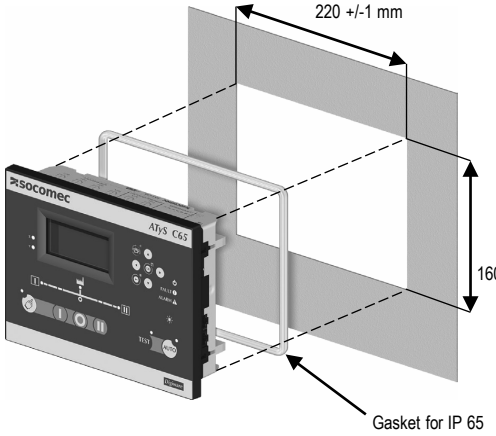
Control Interface Panel

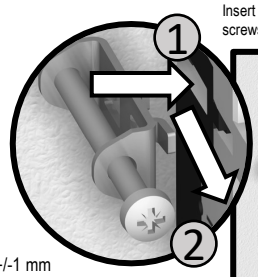


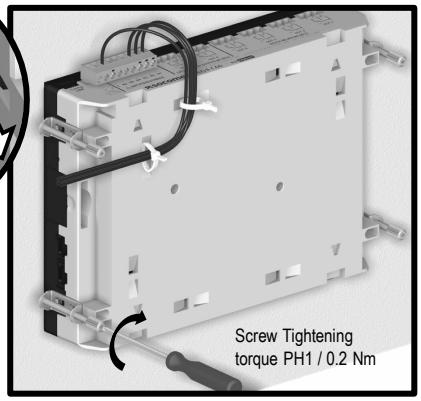
Dimensions not to scale

Panel

Remove all connectors then place the ATS controller inside the door cut-out and clip the door mounting screws into the side of the controller (2 screws on each side). It is important to respect the tightening torque indicated below and follow good engineering practise when installing the ATS controller.

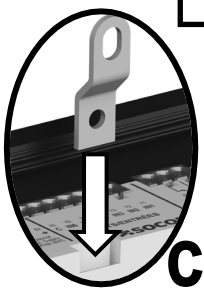


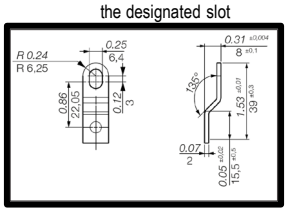


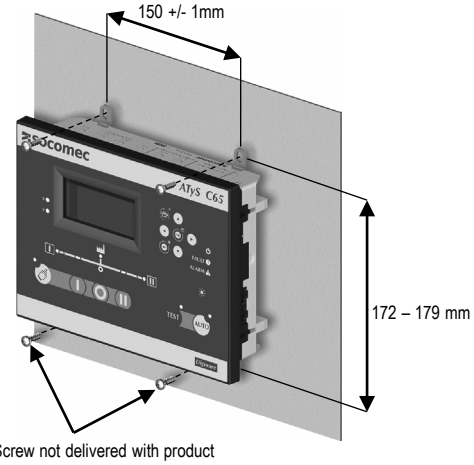


OR

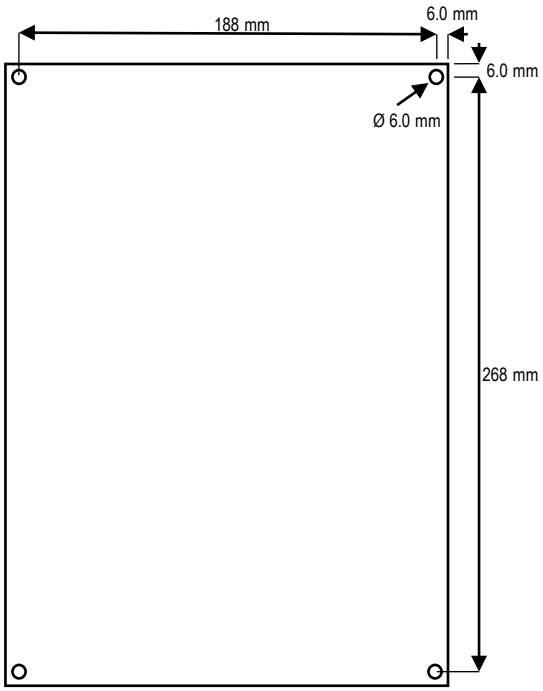
Base







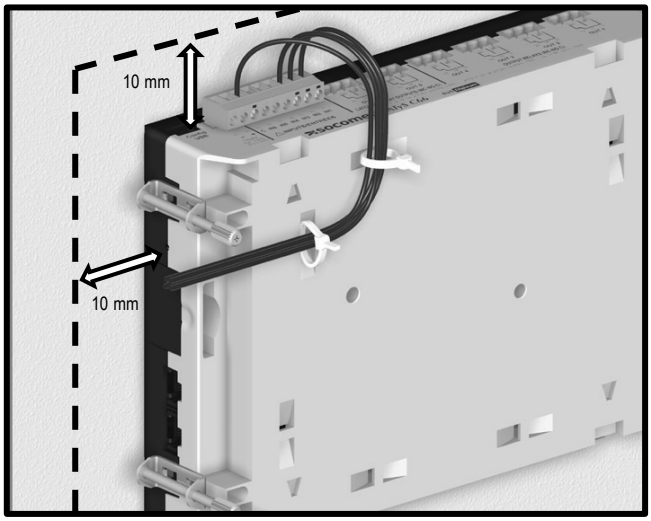
Control Interface Panel



Installer to select appropriate fasters to suit size 6mm mounting holes of unit to mounting material

Controller

Clearances

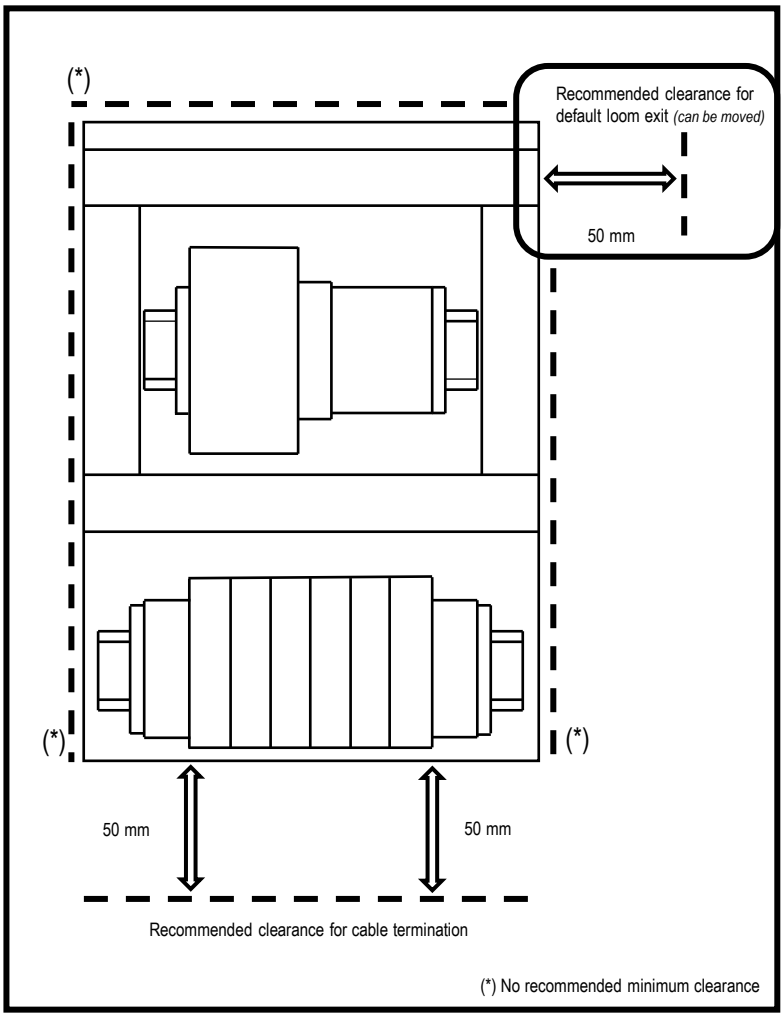


Cable must be more than 10mm away from the RTC battery cover and USB.

Do not drill holes above the controller after it has been mounted, to avoid swarf in terminals

Control Interface Panel

The below clearance are recommendations to allow for easy of wiring to the Control Interface Panel



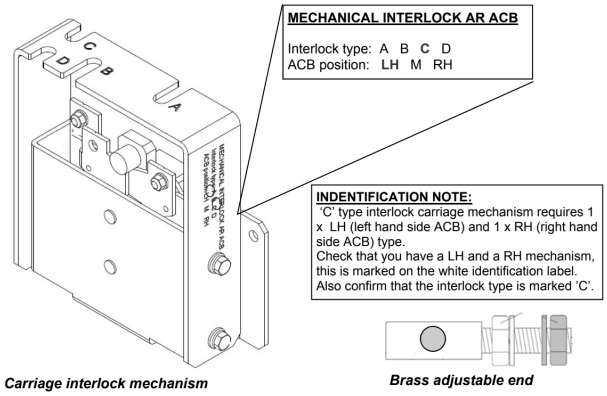
For an ATYSCxxCIPACB and ACB transfer switch to be compliant to 60947.6.1, & AS/NZS 3010 a mechanical interlock shall be installed between the 2 ACBs.

The mechanical interlock on a body of an ACB is a factory fit item and should be specified at the time of ordering the ABCs.
The mechanical interlock on the carriage of an ACB can be fitted on site by qualified personnel.

NHP/Terasaki have a interlock manual for the fitting of the carriage part of the mechanical interlock, the full manual can be found here..

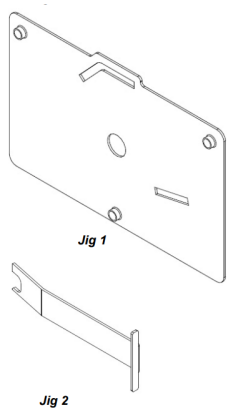
Type “C” Interlock

1. Check all loose items have been provided.
    - 2 x carriage interlock mechanism and 6 x spacers
    - 2 x jig 1 and 1 x jig 2
    - 2 x interlock cable (customer to specify 2.5M or 4.0M length)
    - 2 x brass adjustable end (with 6mm grub screw, adjustment nuts and washers and 1 x allen key)
    - 4 x M6 20mm mounting studs comes with 4 x M6 nuts and 8 x spring washers
    - 2 x M6 12mm (flat and spring washer attached) fixing bolts and 6 x M6 12mm pan head screws



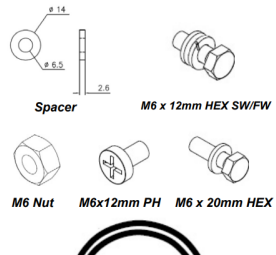
Carriage interlock mechanism

Brass adjustable end



Jig 1

Jig 2



Spacer

M6 x 12mm HEX SW/FW

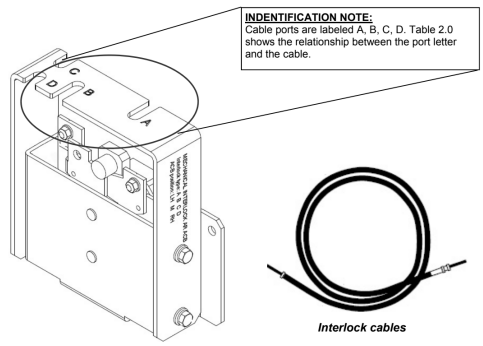
M6 Nut

M6x12mm PH

M6 x 20mm HEX

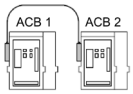
Interlock cables

2. Type ‘C’ interlocks use two interlock cables. Cable ends must be connected to specific letter **labelled ports** on the carriage interlock mechanism. Table 2.0 below shows the interlock connections between the breakers. **A rule of thumb** is to always run the ‘open’ (the end that takes the loose brass adjustable end) cable end to ports ‘A’ and the fixed ends to ports ‘D’. This helps during the final adjustment process. Another recommendation is to label the cable ends with the breaker and port destination. For example ’ACB 1, port A’’ and ’ACB 2, port D” .



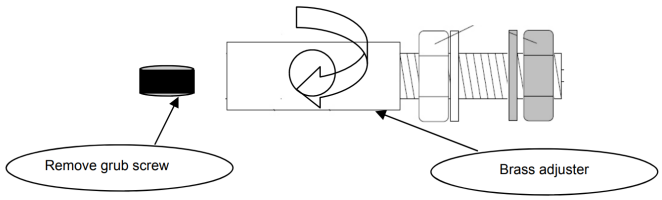
Carriage interlock mechanism

Interlock cables

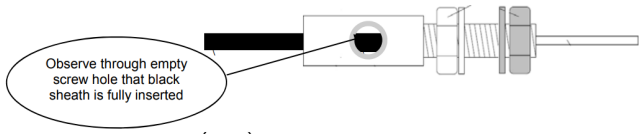
Interlock Type	Cable Qty	ACB Port Connection		Comment
		‘ACB 1’ Port	‘ACB 2’ Port	
 Type C	2pcs	A ◄——►	D	Cable brass end to ‘A’, fixed end to ‘D’
		D ◄——►	A	Cable brass end to ‘A’, fixed end to ‘D’

3. **Remove ACB bodies from their carriages now and covered to avoid arc shoot contamination. Do not insert ACB bodies until final testing stage.** Drill the cable interlock path holes in the switchboard. Conduit or bushing should be used to give the cable a clear path. Sharp cut metal edges may damage the cables! Cable route radius must not be less that 150mm.

4. Remove the grub screw from the brass adjuster and ensure the nuts are as shown below:

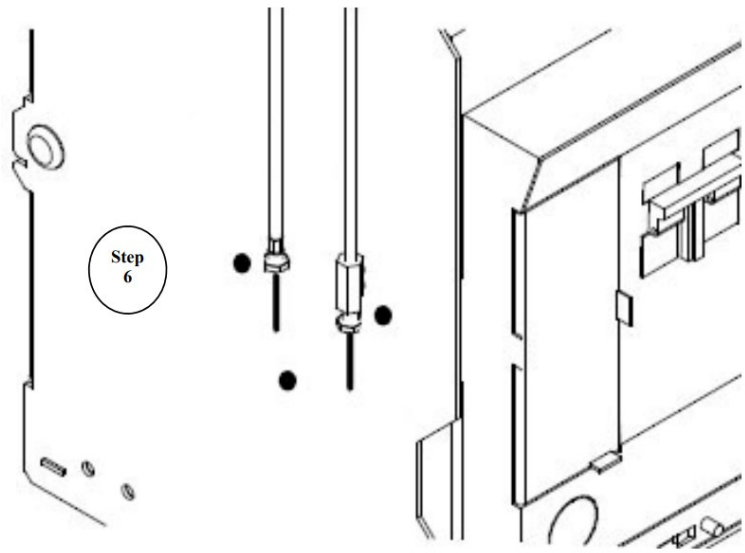


5. Insert the '**open**' end of the cable into the brass adjuster. Observe through the grub screw hole that the black outer sheath of the cable is fully pushed into the brass adapter. The inner core should protrude at least 45mm from the ends of the black outer sheath on both 'open' and 'fixed' cable ends (in other words the total inner core length should be at least 90mm longer than black outer sheath total length after the loose brass adjustment end is fitted).

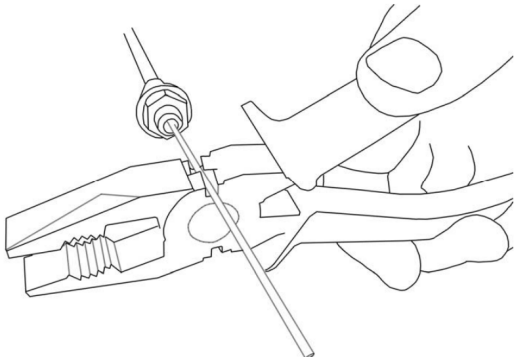


6. Insert the grub screw with fingers until the screw meet the black outer sheath inside the brass adjuster. With the allen key provided perform a further half to three quarter turn to secure the black outer sheath to the brass adjuster. Check the integrity of the fixture by trying to pull the brass adjuster from the interlock cable. **Excessive force is not required, a firm pull is adequate. The grub screw MUST NOT be over tightened. Doing so will restrict the movement of the inner core and compromise the interlock.**

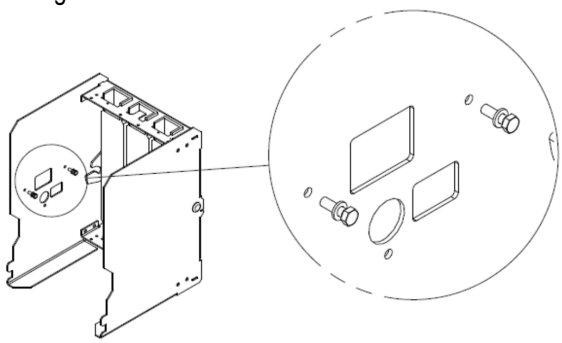
7. Install cables in the path made above in 3). Cables should be secured every 500mm if a continuous conduit has not been used. Cable ends once installed should finish next to the bottom left hand side of each carriage (as shown below). Ensure that an equal number of Cable 'open' and 'fixed ends' are available at each ACB in accordance with table 2.0.



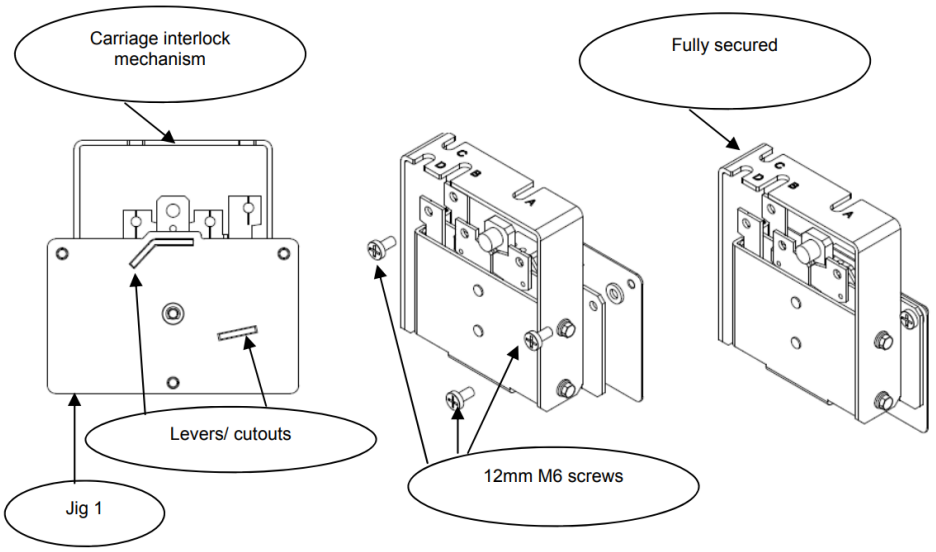
8. If the black outer cable sheath is too long, remove the brass end fixed in step 6 and cut the 'open' end of the cable to the required length. **Remember to retract the inner core first so it is not cut when shortening the black outer sheath. Re-fit the brass end to the trimmed cable.** Ensure that at least 45mm of steel inner core is left protruding from the ends of the black outer sheath on both 'open' and 'fixed' cable ends (as described in step 5).The inner core must be damage free and not containing unravelled steel strands.
   NOTE: The best tool for clipping steel inner cable are the cutters found on the back of quality combination pliers.



9. With the ACB bodies removed from the carriages (as described in step 3) , screw in only finger tight 2 x M6 20mm hex mounting studs with spring washers into each carriage left hand side plate as shown below. The third mounting hole is left empty at this stage. These studs are only finger tight because they require a small degree of play. They will be tightened later.

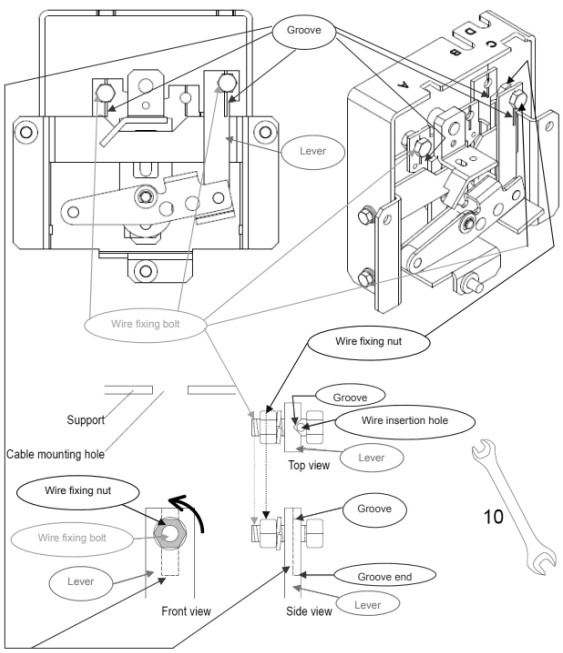


10. Attach the **Jig 1** to both **carriage interlock mechanisms**. The lever protrusions on the carriage interlock mechanisms will with some manual manipulation line up and slot into the cutouts on **jig 1**. Secure with the **three 12mm M6 pan head screws** as shown below.

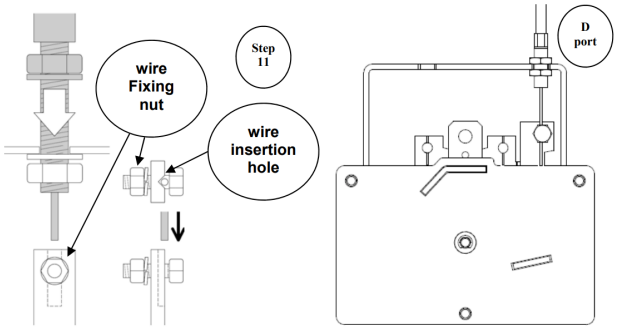


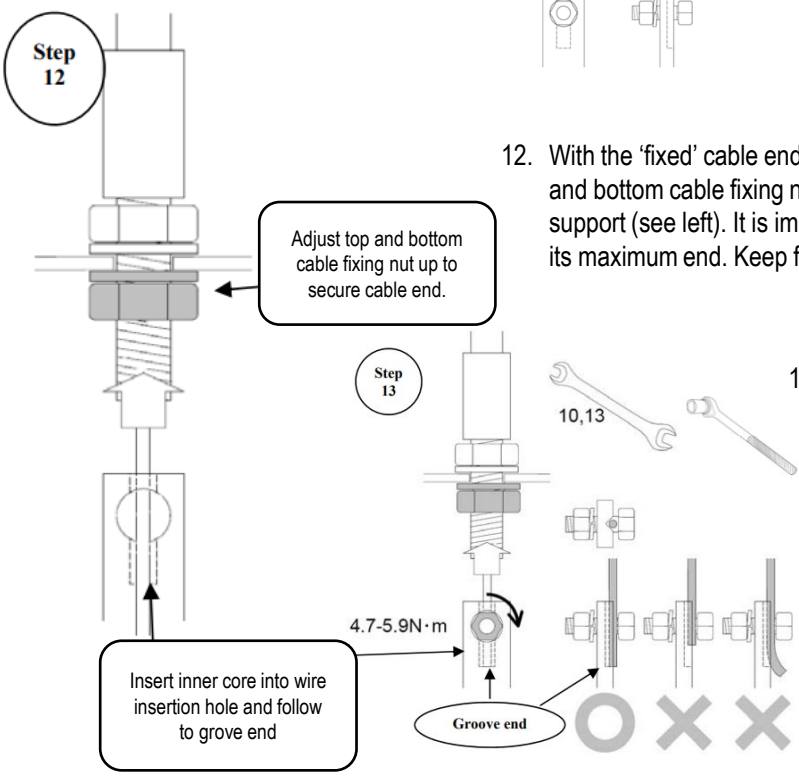
Identify the '**groove**', '**wire fixing nut**', '**wire fixing bolt**', '**lever**' and '**wire insertion hole**' on the mechanical interlock mechanism (see below).

Mechanical interlock mechanism



11. Loosen the ACB 1 port D **wire fixing nut** so that **the wire insertion hole** is exposed. Attach the 'fixed' cable end to ACB 1 port **'D'** on the mechanical interlock mechanism with the jig fitted as shown below.



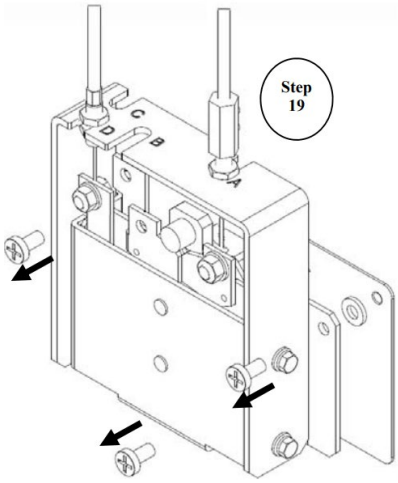


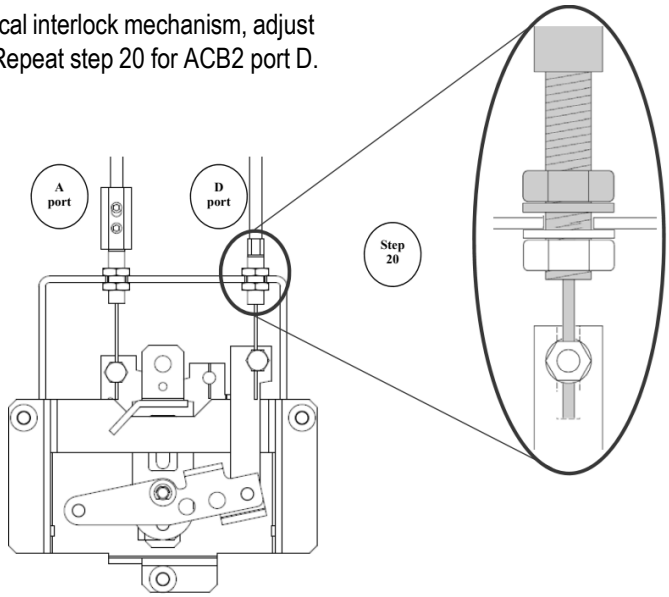
12. With the 'fixed' cable end slotted into ACB 1 port 'D', adjust the top and bottom cable fixing nuts 'up' until it clamps the cable end to the support (see left). It is important that the 'top' cable fixing nut is near its maximum end. Keep finger tight at this stage.

13. Push the inner core through the wire insertion hole. Ensure the inner core follows the 'groove'. The inner core should not extend past the 'grove end'. Tighten the wire fixing nut to 4.7—5.9Nm with 10mm torque wrench. Repeat steps 11- 13 for ACB 2.

19. With the cable ends and inner cores secured on both mechanical interlock mechanisms remove jig 1from both mechanical interlock mechanisms.

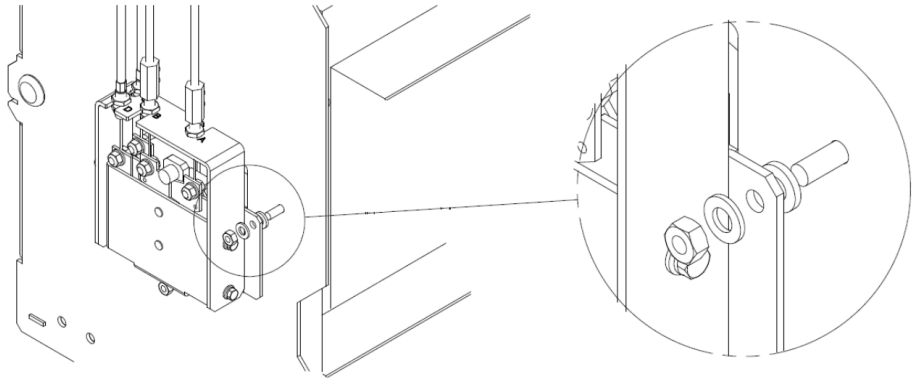
20. With the cable setting jigs removed from the mechanical interlock mechanism, adjust the ACB1 port D fixing nuts ‘down’ as shown below. Repeat step 20 for ACB2 port D.



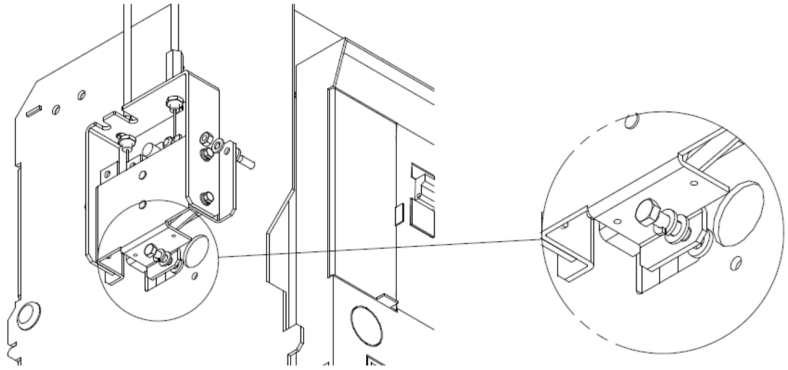


21. Put one spacer on each of the two M6 20mm mounting studs fitted earlier. Mount the ACB1 carriage interlock mechanism onto the studs as shown below. Tighten the 2 x M6 20mm mounting studs until secure from the inside of the ACB carriage with a 10mm spanner. Secure the mechanical interlock mechanism to the mounting studs with spring washer and M6 nut as shown below. Repeat step 21 for ACB 2.

Note: Without the spacers the interlock mechanism will not lay flat against the side plate.



22. Push the third spacer between the carriage side plate and the mechanical interlock mechanism so it lines up with the empty third mounting hole. From The outside of the carriage, screw in the M6 x12mm bolt to secure as shown below. Repeat step 22 for ACB 2.



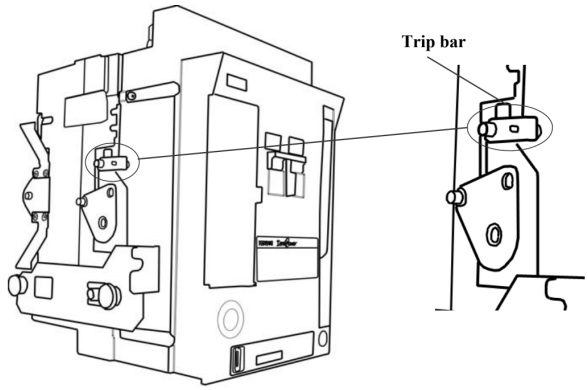
The installation is complete. Now follow the adjustment and test procedure.

WARNING: ADJUSTMENT AND TEST PROCEDURE MUST BE CONDUCTED ON A DE-ENERGISED SWITCHBOARD!

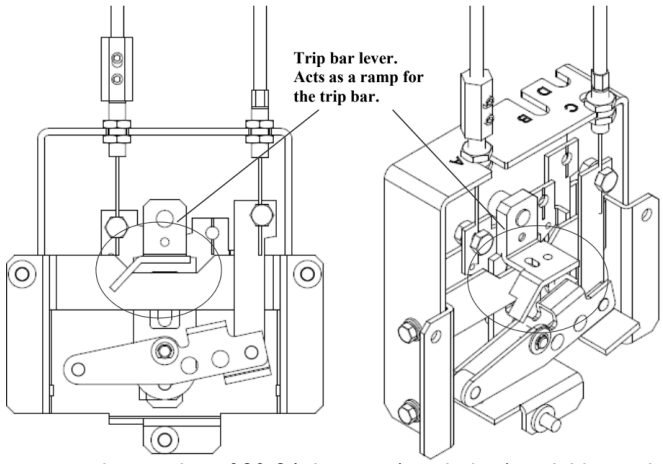
1. Rack ACB 1 into the 'TEST' position. Do not rack ACB 1 into the CONN position at this stage.

2. Rack ACB 2 into the 'CONN' position. Charge closing springs and shut main contacts of ACB 2 and leave closed. Return back to ACB1.

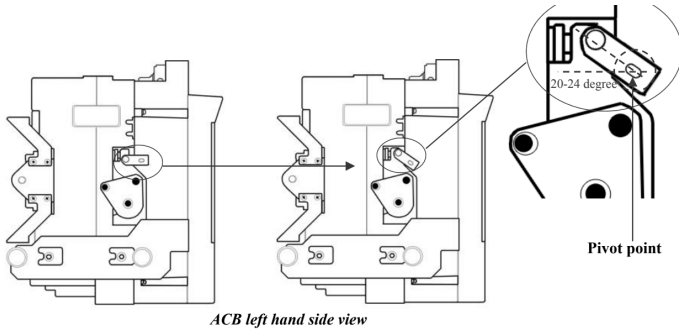
At this stage the cable on port 'A' of ACB 1 will need to be adjusted. The main mechanism used to gauge the level of adjustment is the 'trip bar'. This is located on the left hand side on the ACB body as shown below.



The **trip bar** is moved via the **trip bar lever** which is located on the **mechanical interlock mechanism**. The **trip bar lever** looks like a **ramp**.



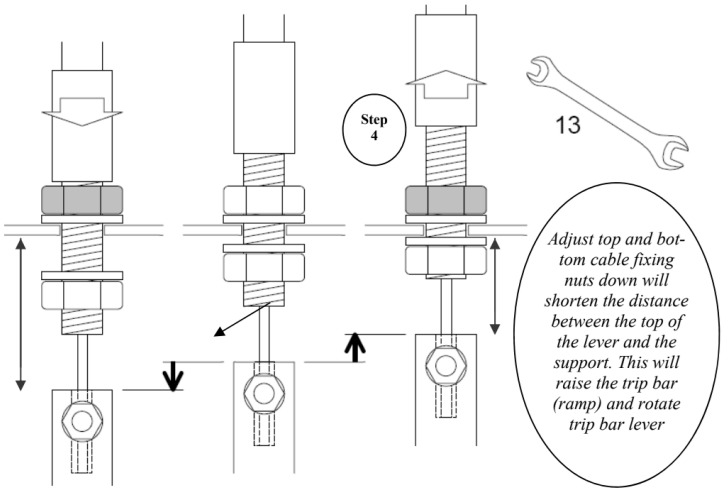
The trip bar has a maximum angular rotation of 20-24 degrees (see below) and this can be moved by pressing down on the pivot point with a finger . When the ACB body is racked into the 'CONN' position the trip bar slowly raises as it travels up the ramp of the trip bar lever. It is important that the trip bar is never at full rotation during the racking in of the ACB as this may stress the internal trip mechanism. If during 'racking in', the trip bar reaches full rotation, the cable length must be increased. If this happens adjust ACB 2 and or ACB 1, port 'D' fixing nuts so that the top nut is at its maximum and the bottom nut is adjusted up to secure the cable end. Refer to step 4 and drawing below for fixing nut adjustment details.



ACB left hand side view

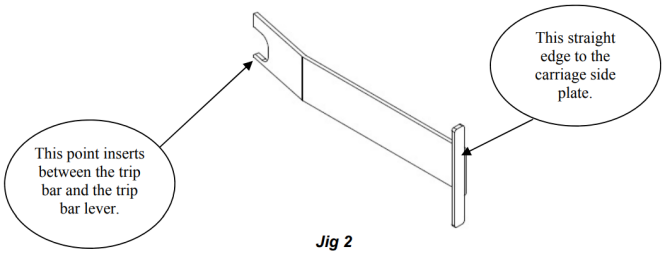
3. Rack ACB 1 into the 'CONN' position. ENSURE that as the trip bar rises during its ascent up the trip bar lever (ramp), the trip bar never reaches full rotation (described above).

4. With ACB 1 in the 'CONN' position, the trip bar should have a degree of 'play' with the trip bar lever. Typically the length of the inner core will need to be shortened at ACB 1, port 'A'. Using the fixing nuts on ACB 1 port 'A' reduce the inner core length by adjusting the top and bottom fixing nuts 'down' as shown below. Adjust until the trip bar play is removed.



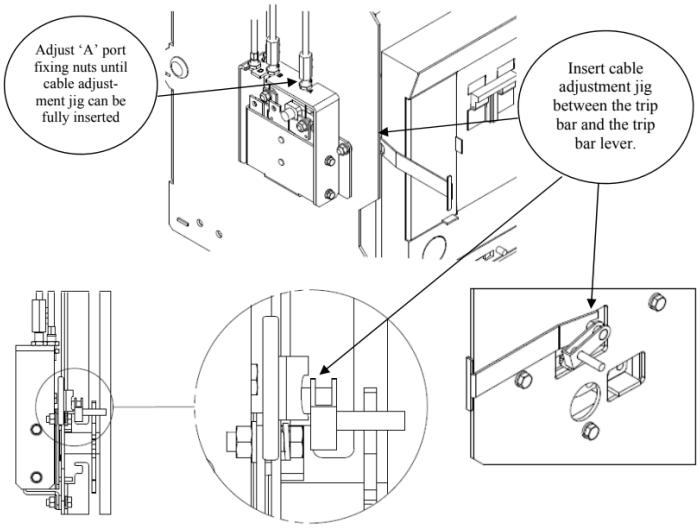
5. With the play now removed, try to insert, but do not force jig 2 in between the trip bar and the trip bar lever of ACB 1 as shown below. Because the play has been removed it should not be possible to fully insert jig 2 with minimal force.

For the mechanical interlock to work correctly a small degree of play is required between the trip bar and the trip bar lever. The cable adjustment jig when fully inserted provides the correct space between the trip bar and the trip bar lever.



Jig 2

6. Slightly lengthen the inner core to allow full insertion of Jig 2. Do this by moving the ACB 1, port A top and bottom fixing nuts 'up'. Adjust the fixing nuts ONLY until Jig 2 can be fully inserted with minimal force as shown below.



7. With the ACB 1, port ‘A’ fixing nuts adjusted only enough to allow Jig 2 to be fully inserted, tighten the fixing nuts to a torque of 12.5Nm. Remove Jig 2.

8. Tighten ACB 2, port ‘D’ fixing nuts to a torque of 12.5Nm.

9. Charge the ACB 1 closing springs if not already charged. With ACB 1 in the ‘charged’ condition press the green ’ON’ button. ACB 1 should not close. Because ACB 2 is closed and in the connected position.

10. Return to ACB 2. Press the RED ‘OFF’ button on ACB 2. A loud noise will be heard. The main contacts should now be in the open state. Confirm this is true.

11. To confirm that the cable has not slipped, re-charge ACB 2 and close the main contacts as described in step 2. Return the ACB 1.

12. Using Jig 2 confirm at ACB 1 that the play between the trip bar and the trip bar lever has not increased (should be 0.5-1.0mm of play). If required adjust ACB 1 port ’A’ fixing nuts to shorten the inner core length and re-secure as per step 7. Repeat steps 9 to 12 three times or until cable integrity is confirmed. ACB 1 cable adjustment is now complete. ACB 2 cable adjustment must now be done. Open main contacts of ACB 2. Go to step 13.

13. Rack ACB 2 into the ‘TEST’ position.

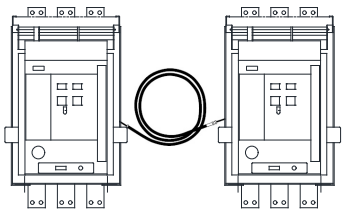
14. Return to ACB 1 and press the GREEN ‘ON’ button. The main contacts of ACB 1 should Close with a loud noise. Confirm this is true.

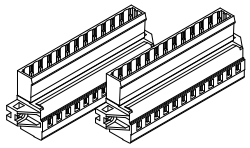
15. Return to ACB 2. Follow the same cable adjustment setting procedure explained in points 3—12, but this time for ACB 2 (all references to ACB 1 will now be ACB 2 and all references to ACB 2 will now be ACB 1).

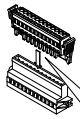
Once the interlock is confirmed to function as per table 1.0, leave ACB 1 and ACB 2 in the ‘OPEN’ state and in the ISOLATED position in preparation for final commissioning at a later date.

END OF TYPE C ADJUSTMENT AND TEST PROCEDURE

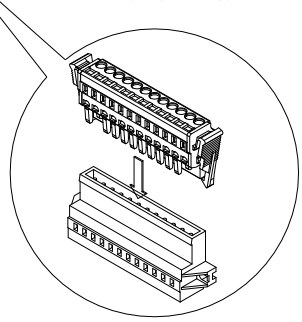
Plugs





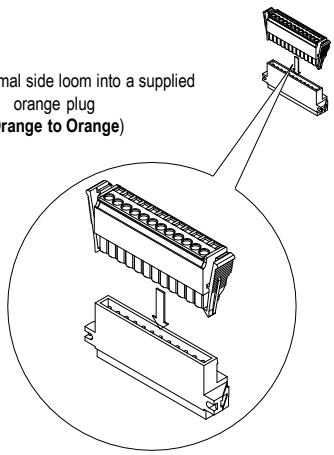


Plug the emergency side loom into a supplied grey plug
(**Grey to Grey**)



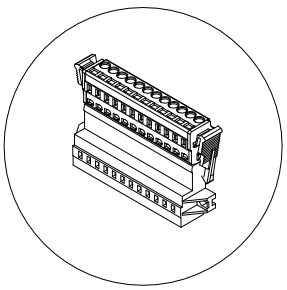
①

Plug the normal side loom into a supplied orange plug
(**Orange to Orange**)

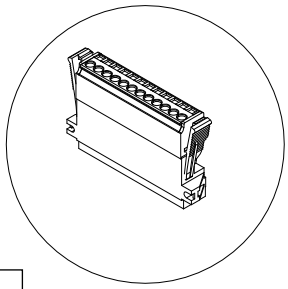


②

snap!



snap!



Both plugs will **SNAP** into place,

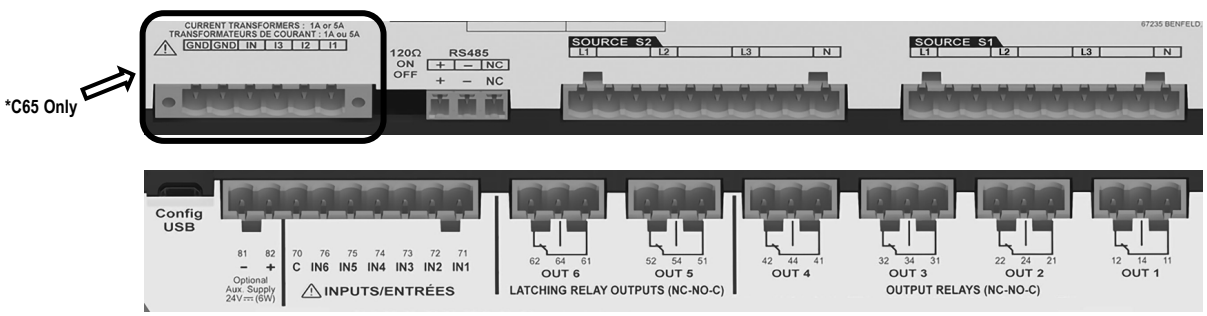
Follow the wiring diagram on page 14 to complete installation

Looms
ATYSLOOMA – Normal Supply – Orange Plug
ATYSLOOMB – Emergency Supply – Grey Plug
ATYSLOOMC – Control Panel

Use the Wiring Terminating Tool to assist with wiring from the ACBs to the Plugs

Controller

Looms A, B, & C will be prewired to their required plugs on the Controller.
Match the plugs with there sockets on the Controller
Wiring to Controller **COMPLETE!**



*use when current sensing is required for current, power and energy measures on the C65 (1A or 5A CTs)

Do not input > 264 VAC (line – neutral) nominal voltage to the Fuse Terminals

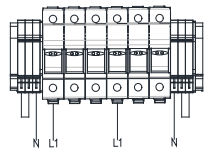
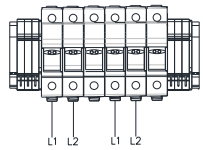
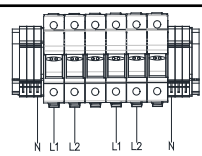
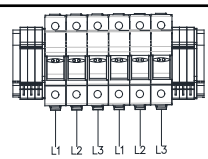
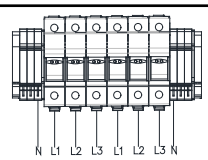
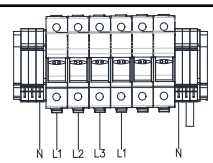
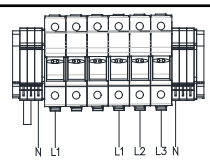
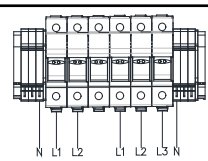
The C55/65 sensing terminals limits are 88 - 576 VAC, however the CPSR's is rated for 204 – 264 VAC.

The below outlines some of the possible wiring combinations for the Control Interface Panel.

L1 and L2 are the power terminals for the ATyS C55 and C65, however when using the ATYSCxxCIP **for single phase applications link N1 to 1P1, and N2 to 1P2 to power the Controller.**

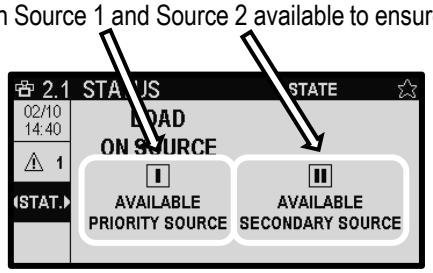
Do not link N1 & 1P1, and N2 & 1P2 if Line power is wired to F2 and F5 respectively.

It will result in a dead short between line and neutral

Application	Fuse Wiring	Network Setting
Single Phase Source 1 Single Phase Source 2		1P + N *N1 to 1P1 & N2 to 1P2 links required
2 Phase Source 1 2 Phase Source 2 *separate voltage version of CIP required		2P
2 Phase + N Source 1 2 Phase + N Source 2		2P + N
3 Phase Source 1 3 Phase Source 2 *separate voltage version of CIP required		3P
3 Phase + N Source 1 3 Phase + N Source 2		3P + N
3 Phase + N Source 1 Single Phase Source 2		3P + N / 1P + N *N2 to 1P2 link required
Single Phase Source 1 3 Phase + N Source 2		3P + N / 1P + N *Source Priority needs to be set to Source 2 *N1 to 1P1 link required
2 Phase + N Source 1 3 Phase + N Source 2		2P + N *Disable phase rotation check

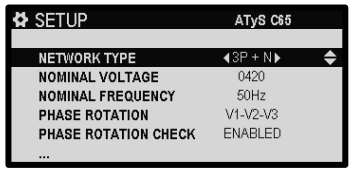
When configuring an ATyS C55/65 it is recommended to have both Source 1 and Source 2 available to ensure settings match the required application.

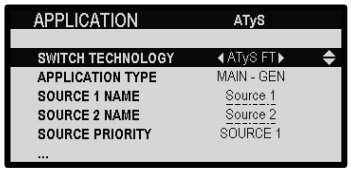
When purchasing a C55 or C65 outside of the ATYSCxxCIPxxxx offerings you will be promoted with the SMART Wizard configuration on first power up. As the ATYSCxxCIPxxxx is tested in house at NHP manufacturing prior to despatch this Wizard would have been preformed and set to:



NHP CIP Factory Settings	
Language	English
Poles & Wires	3P+N
Nominal Voltage	415 V
Nominal Frequency	50 Hz
Phase Rotation	A – B – C
Application Type	MAIN – GEN
Source Priority	Source 1
Switch Technology	Circuit Breaker (Custom)
Tripping Action	Total Inhibition
Date Format	DD/MM/YY
Date and Time	AEDT
Modbus Settings	Baud: 38400 Stop: 1 BIT Parity: None Address: 006

Time settings do not change with daylight savings and will need to be kept up-to-date by the end user





Images are taken from Socomec C55/65 Manual for interface reference and don't reflect the NHP factory settings

NHP Custom Switch Technology Settings	
Input 1	BREAKER 1 CLOSED (N/O)
Input 2	BREAKER 2 CLOSED (N/O)
Input 3	BREAKER 1 TRIPPED (N/O)
Input 4	BREAKER 2 TRIPPED (N/O)

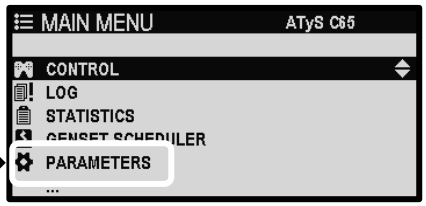
Input 3 and 4 must to be set in I/O settings and can't be set via Wizard or Switch Technology Settings

If you would like another configuration follow the below to get to the SMART Wizard.

Navigate to the Wizard

1. Press the Back/Menu button

2. **Or** Navigate to Parameters Menu



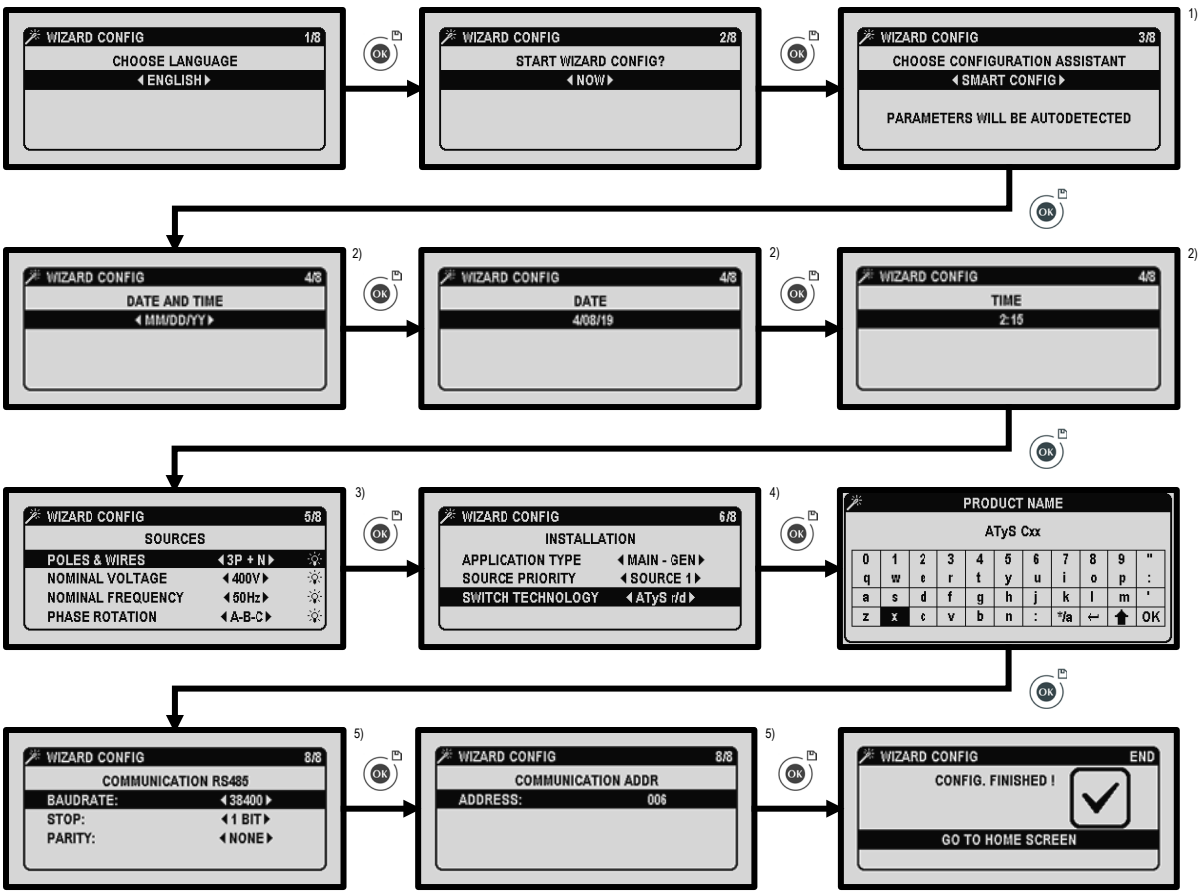
3. Press OK button to enter Parameters

4. Enter the 1000 using the arrows and press OK button to confirm

5. **Or** Navigate to Wizard Menu (*Last option*)

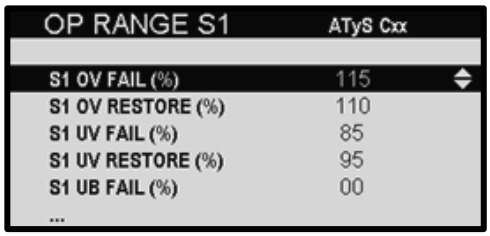
6. Press OK button to enter Wizard

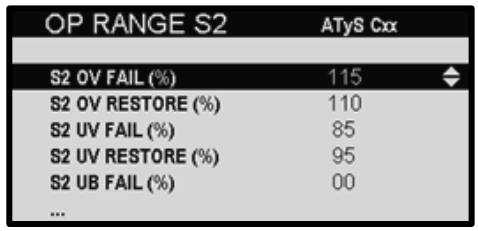
Once you have selected to start the Wizard you will go through the following 12 windows



1) Smart Config and Manual Config option
2) Date and Time will be important for applications where the logging of events, alarms and faults is critical
3) If SMART Config was selected these fields will be auto filled, it is important to have both Source 1 & 2 available during the SMART Config
4) For use with BTS and ACBs the Switch Technology should be set to Circuit Breaker
5) Modbus RTU communications as standard, if not using communications proceed with the OK button

If the ATyS is still not recognising the sources please check the source OP range settings match the application requirements.
Under **Main Menu – Parameters – Network**





Windage generators tend to run at a higher frequency when unloaded.
As a result the **S2 OF Fail %** (Threshold) and **S2 OF RESTORE %** (Hysteresis) settings may need to be increased to allow for higher unloaded running frequency.
The frequency of the generator output should normalise once loaded.

As well as routine inspection it is also important to test the installation when first commissioning.
The below will advise how to perform either a Test On Load (TON) or Test Off Load (TOF).
TON is the recommended option however, due to site requirements at the time a TON may not be possible.

Test On Load (TON)

TEST ON LOAD / LOAD TEST: will perform a full test including all the timers and operating the switch (full cycle).

TEST As default the Test Button will preform a TON.

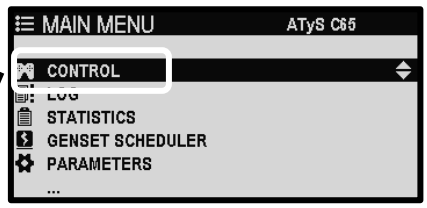
1. TEST Press the Test button
2. ▼ ▲ ◀ ▶ Enter the 1000 using the arrows and press OK button to confirm OK
3. OK Confirm that you wish to preform a TON
4. A TON will start by sending a start-gen signal to the secondary source (if in Main-Gen), and will initiate a transfer to the secondary source.
5. TEST To finish the TON Press the Test Button again and confirm with the OK button, once the test has ended the switch will transfer back to the priority source. OK

TEST ON LOAD will cause a load supply interruption when testing the transfer function as the load will change from one source to another in open transition.

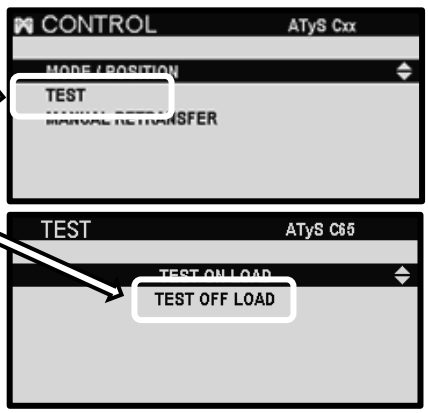
Test On Load (TOF)

TEST OFF LOAD: Initiates starting of the genset but will not give the order to transfer to the secondary source when it becomes available.

1. Press the Back/Menu button
2. ▼ ▲ Navigate to Control and Press OK — OK



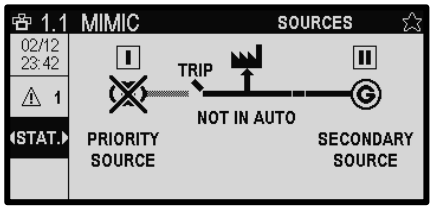
3. ▼ ▲ ◀ ▶ Enter the 1000 using the arrows and press OK button to confirm OK
4. ▼ ▲ Navigate to Test and Press OK — OK
5. ▼ ▲ Navigate to Test OFF Load and Press OK — OK
6. TEST Once Test is complete you can continue to run other checks or finish the Test by the Pressing Test Button



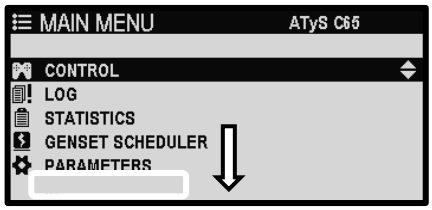
Tripping Action

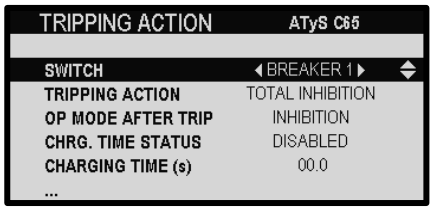
In the event of a trip on breaker 1 or break 2 the controller will enter a trip inhibition mode.
This mode will stop the controller from all automatic transfer functions including Gen start if controller power is still available.
The controller will receive trip feedback from the breakers via inputs 3 and 4, as per NHP factory settings.

When a tripping action is detected the controller will inform the user with a pop-up with the information of which breaker has tripped.



Tripping Action settings are available under **Main Menu – Specific Functions – Tripping Action**





Below are the available settings Tripping Action, including the NHP default factory.

Setting	Option	Description
SWITCH	BREAKER 1, BREAKER 2	Selects on which breaker the configuration applies
TRIP ACTION	TRIP = SOURCE LOST, PARTIAL INHIBITION, INHIBITION, **TOTAL INHIBTION**	This setting defines the action to apply when the trip signal for the corresponding breaker is active.
OP MODE AFTER TRIP	PREVIOUS MODE, AUTOMACTIC, PARTIAL INHIBITION, **INHIBITION**	This setting allows user to select which operating mode the controller will return to after the trip signal has been disabled (input has returned to inactive).
CHRG. TIME STATUS	**DISABLED**, WHEN OPEN, WHEN CLOSED	Allows users to configure a charging time for the breaker to give time to charge the spring mechanism before sending an order. Users can define if the spring is charged after a close order or open order. If a charging time has been configured the controller will wait the specified duration before sending another order. NB: each charging time will be overridden if an input giving the charging status of the breaker is configured.
CHARGING TIME(s)	**0.00**-15.00s	

Bold are NHP default factory settings for ATYSCxxCIP

Resetting a Trip Event

Resetting a trip event shall only be performed by qualified persons.

To reset a trip on the controller follow the below steps:

1. Ensure the trip has not caused damage to the assembly and inspect circuit breaker according to manufactures recommendations.
2. Ensure that the cause of the trip has been addressed.
3. Resetting or replacing of the circuit breaker
4. Clear any faults/warning on the controller's interface
5. Select the operation mode using Auto or Manual mode buttons. (operator code will be required)

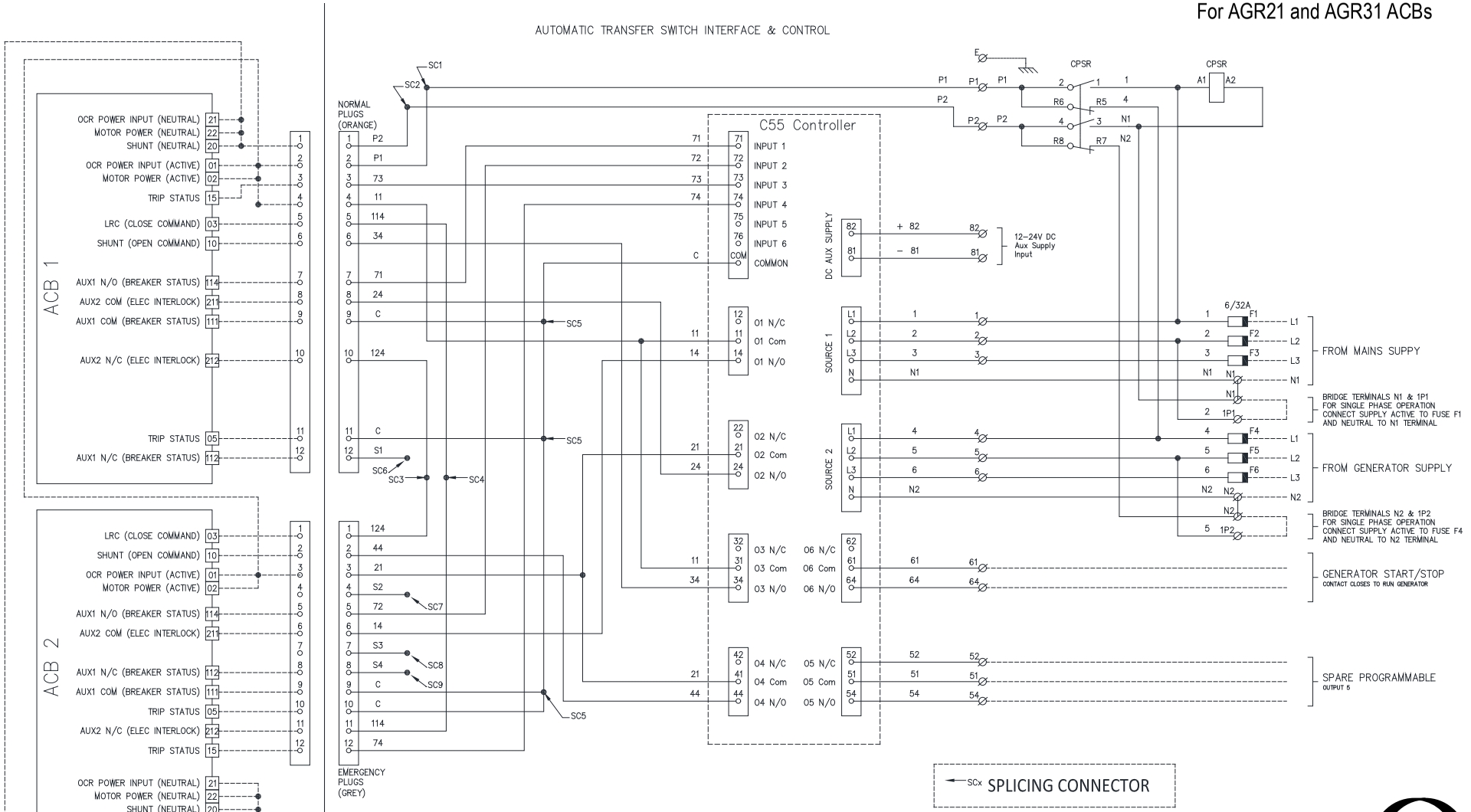
For optimal performance of "Tripping Action" 12-24 AUX power is recommended to be supplied to the controller.

Event	Result	Recommendation
Trip on Source 1	Controller will be advised of the trip and will put controller into Total Inhibition until trip is reset. Source 2 generator will not be advised to start unless power is lost to controller.	No additional recommendation required. *(12-24 AUX power to the controller can ensure generator supply does not start in the event of power lost after a trip.)*
Trip on Source 2	Controller will be advised of the trip and will put controller into Total Inhibition until trip is reset. In the event of Source 1 return, the controller will not return Supply to Source 1 until the trip event has been reset.	No additional recommendation required
Power loss to OCRs and Controller after a trip event.	Tripping Inhibition can reset, leaving the controller in its previous mode. (auto/manual)	12-24 AUX power is recommended to be supplied to the controller.
Return of mains supply, when OCR power is feed from generator, while trip indication is active from an OCR	Can result in OCR trip indication resetting. The controller will still be Total Inhibition and will prompt the operation to confirm reset of the tripping event.	No additional recommendation required
Trip indication was less than 500ms	Can result in a missed trip on the controller	AGR11 OCR **can not** be used in the current ATYSCxxCIPACB offering as its tripping indication last for 40ms. AGR21 and 31 indicate for at least 500ms if no OCR power is supplied. *(OCR power will supplied to AGR21 and AGR31 via F1-N1 & F4-N2 from the CIP (Control Interface Panel) as standard.)*

ATYSC55CIPACB

ATYSC65CIPACB Wiring

For AGR21 and AGR31 ACBs

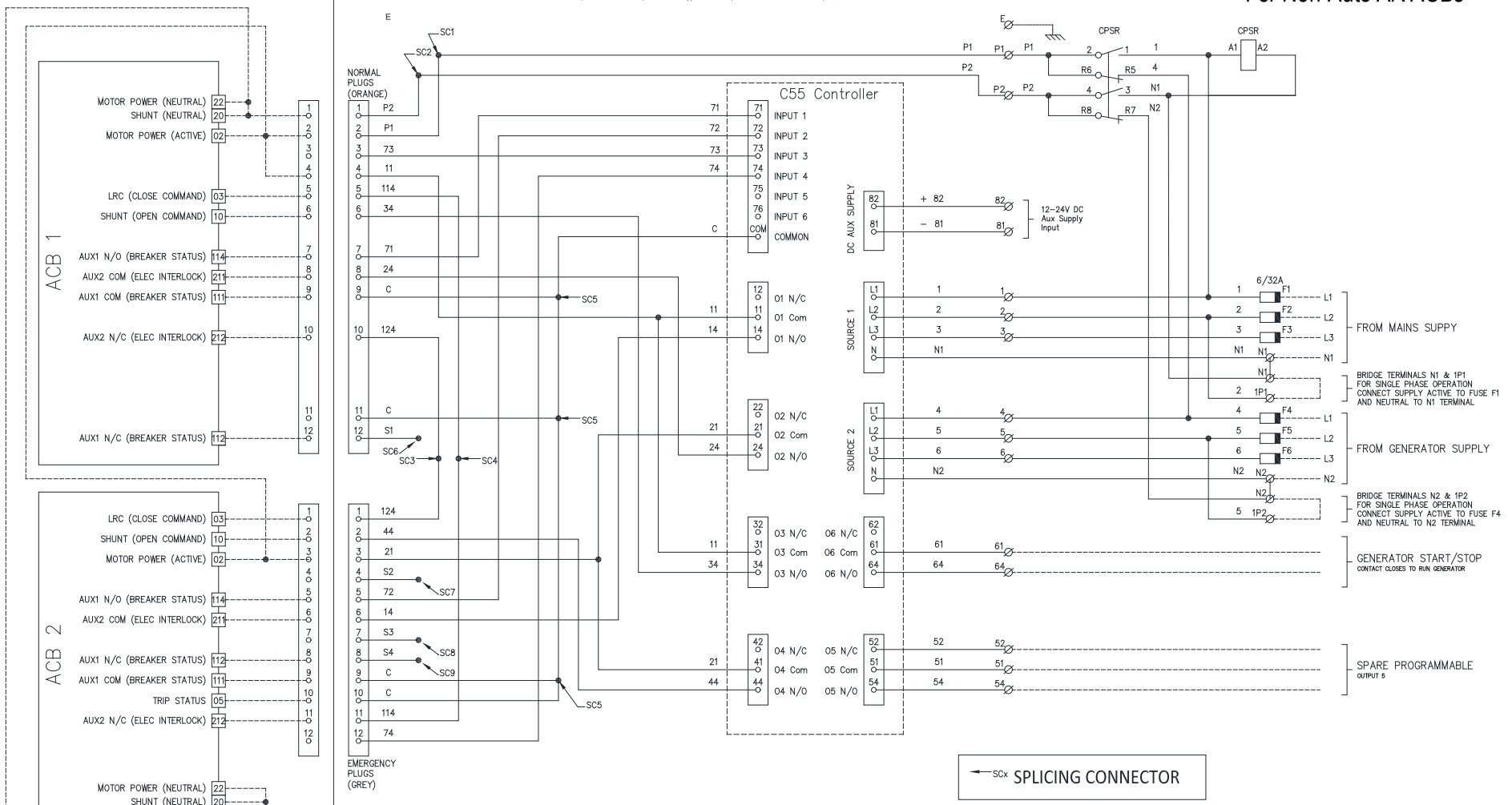


Spare cores will be available in future updates

ATYSC55CIPACB

ATYSC65CIPACB Wiring

For Non-Auto AR ACBs



Spare cores will be available in future updates

Legend

NOTES

CONTROL CIRCUIT CABLING, WHERE NOT PART OF SUPPLIED LOOMS

415VAC SIZE; 0.75mm^2 C/W
BOOT END PINS
COLOURS; RED, WHITE & BLUE – PHASES
BLACK – NEUTRAL

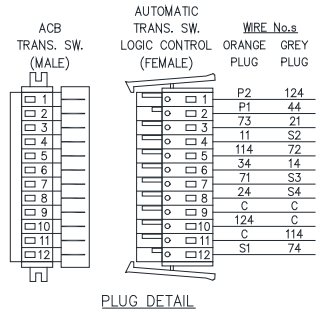
240VAC SIZE; 0.75mm^2 C/W
BOOT END PINS
COLOURS; RED – ACTIVE
BLACK – NEUTRAL

24VDC SIZE; 0.75mm^2 C/W
BOOT END PINS
COLOURS; ORANGE – POSITIVE
PURPLE – NEGATIVE

VOLT FREE SIZE; 0.75mm^2 C/W
BOOT END PINS
COLOUR; PINK

LEGEND

C55	AUTO TRANSFER SWITCH CONTROLLER
CPSR	CONTROL POWER SUPPLY RELAY
F1–6	MAINS & GEN. SUPPLY FUSES
16 ⌀-----	TERMINAL No.16
----------	FIELD WIRING BY CUSTOMER
————	WIRING BY N.H.P.



PLUG DETAIL

Troubleshooting

Problem Description	Possible Cause	Remedial Advice
Will not transfer to source 2	Generator frequency not back within limits	Try adjusting S2 OF Fail & S2 OF RESTORE settings
	Incorrect nominal settings	Preform a auto-detect or Wizard configuration
	Phase Rotation does not match	Preform a auto-detect or Wizard configuration
		Compare wiring for Source 1 and 2 at Fuse Terminals
Will not recognise source 2	Generator frequency not back within limits	Try adjusting S2 OF Fail & S2 OF RESTORE settings
	Incorrect nominal settings	Preform a auto-detect or Wizard configuration
	Phase Rotation does not match	Preform a auto-detect or Wizard configuration
		Compare wiring for Source 1 and 2 at Fuse Terminals
Transfer Switch not Automatically Transferring	Controller is not in Auto Mode	Press the Auto button, a Green LED should light up
		Check that the controller is no receiving a Inhibit Command
	ACB are not responding	Ensure ACB motor terminals have control power
		Check to see if a Fuse has blown
	Controller is Inhibited	Possible Inhibit Inputs: Padlock, Blocked, Emergency Sign, Inhibit S1, Inhibit S2, Inhibition, Partial Inhibition, Total Inhibition
	Fault Present	Check Faults in Log-Fault Log-In Progress
		Possible Faults: Unexpected Transfer, Failed to Transfer, Max operation per minutes reached, Externa fault, Unknown position
		Reset Faults, by hold the **LAMP TEST** button & reset with **OK**

If the above doesn't cover your problem, more information can be found in the C55/C65 User Manual found on the Socomec website or alternatively contact NHP

Passwords

Access Level	Description	Code
User	Requires no password and it permits the visualization of the parameters and values measured by the controller through the dashboards. It is the level by default and if another user stays away from the controller for more than 5 minutes with no actions, the security level will become Standard user automatically.	No password
Operator	It allows changing the operating mode, sending position orders to the switch and setting the engine exerciser parameters and alarms.	4000
Configurator	It allows to change any configuration of the controller (operating range, timers, type of control, display settings, etc)	1000
Maintenance	Is the highest level of security. It permits resetting counters, rebooting the device, changing and restoring passwords of other users and entering inspection date and telephone number	1010

These default passwords can be changed in the Parameters / Passwords menu (Configurator or Maintenance access)