

**Stage 1 Commissioning Record – installation and functional testing
of Alvin Reclose™ devices**

Substation Ref:		Substation Name:	
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LV Fuse Board Manufacturer & Type:		LV Fuse Board Serial Number:	
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Alvin Reclose™ units FITTED TO:	FEEDER NO	FEEDER NAME

Phase	Alvin Reclose™ Model	Alvin Reclose™ Revision	Alvin Reclose™ Serial No.	Alvin Reclose™ Date of Manufacture
L1				
L2				
L3				

Date of installation	
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Installation of Alvin Reclose™ Devices in an LV Substation

Note: this is a record of commissioning, the method is described in the accompanying method statement.

Ref	Commissioning step	Commissioned item/settings	Tick when completed
1.	Confirm L1, L2 & L3 Alvin Reclose™ devices have in-line fuses removed, and that there is no continuity between rear clamps.	L1	
		L2	
		L3	
2.	Neutral busbar "G-Clamp" installed.		
3.	Confirm links installed at link box to provide LV feeder back feed prior to Alvin Reclose™ devices installation.		
4.	Confirm Alvin Reclose™ devices installed powered up and configured.	L3 Alvin Reclose™ Fuse Setting	
		L2 Alvin Reclose™ Fuse Setting	
		L1 Alvin Reclose™ Fuse Setting	
5.	Confirm communications between Alvin Reclose™ devices and the LV-CAP platform.	L1 Busbar Volts	
		L2 Busbar Volts	
		L3 Busbar Volts	
		L1 Cable Volts	
		L2 Cable Volts	
		L3 Cable Volts	
		L1 Position Indication	
		L2 Position Indication	
L3 Position Indication			

Ref	Commissioning step	Commissioned item/settings	Tick when completed
6.	<p>Confirm L1, L2 and L3 Alvin Reclose™ devices can individually be both opened and closed using ALVIN local control panel.</p> <p>This includes confirmation that local and LV-CAP platform position indications are shown correctly.</p>	L1 CLOSE	
		L1 OPEN	
		L2 CLOSE	
		L2 OPEN	
		L3 CLOSE	
		L3 OPEN	
7.	<p>Confirm L1, L2 and L3 Alvin Reclose™ devices can individually be both opened and closed using LV-CAP platform.</p> <p>Confirm that L1 and L2 and L3 Alvin Reclose™ devices can be simultaneously both opened and closed from the LV-CAP platform.</p> <p>This includes confirmation that local and LV-CAP platform position indications are shown correctly.</p>	L1 CLOSE	
		L1 OPEN	
		L2 CLOSE	
		L2 OPEN	
		L3 CLOSE	
		L3 OPEN	
		L1, L2 & L3 CLOSE	
L1, L2 & L3 OPEN			
8.	<p>Confirm that the OPEN/CLOSE capability of the LV-CAP platform has been disabled.</p>	L1, L2 & L3 do not CLOSE	
		L1, L2 & L3 do not OPEN	
9.	<p>Confirm phasing across L1, L2 and L3 Alvin Reclose™ device fuse stems with Alvin Reclose™ devices in CLOSED position.</p>		
10.	<p>Confirm 83mm JSU fuses in-line fuses have been installed to L1, L2 and L3 Alvin Reclose™ devices, and that current and busbar voltage readings are being received by the LV-CAP platform.</p>	L1 Alvin Reclose™ Current	
		L2 Alvin Reclose™ Current	
		L3 Alvin Reclose™ Current	
		L1 Alvin Reclose™ Busbar Volts	
		L2 Alvin Reclose™ Busbar Volts	
		L3 Alvin Reclose™ Busbar Volts	

Ref	Commissioning step	Commissioned item/settings	Tick when completed
11.	Confirm Commissioning Stage 1 fault restoration instructions have been deployed at both substations.		

Stage 1 commissioning completed by:

WPD Authorised Person (LVSW & LVLK)

Name:

Date:

EA Technology Ltd

Name:

Date:

Stage 2 Commissioning Record – system configuration for control simulation period

“Substation 1”

Substation Ref		Substation Name	
Feeder name:			

“Substation 2”

Substation Ref		Substation Name	
Feeder Name			

“LV Link box”

Name of LV link box interconnecting the above two LV feeders	
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Note: this is a record of commissioning, the method is described in the accompanying method statement.

Ref	Commissioning step	Commissioned item/settings	Tick when completed
1.	Contact established with remote EA Technology team.		
2.	Confirm links installed at link box to interconnect above LV feeders.		
3.	Confirm L1, L2 and L3 Alvin Reclose™ devices at “ Substation 1 ” above have been opened.		
4.	Confirm change in measured current through L1, L2 and L3 Alvin Reclose™ devices at “ Substation 2 ” with remote EA Technology team.	L1 Alvin current A	
		L2 Alvin current A	
		L3 Alvin current A	
5.	Confirm cable voltage measures for L1, L2 and L3 Alvin Reclose™ devices at “ Substation 1 ” with remote EA Technology team.	L1 Alvin busbar voltage V cable voltage V	
		L1 Alvin busbar voltage V cable voltage V	
		L1 Alvin busbar voltage V cable voltage V	
6.	Confirm Commissioning Stage 2 fault restoration instructions have been deployed at both substations.		

Stage 2 commissioning completed by:

WPD Authorised Person (LVSW & LVLK)

Name:

Date:

**Stage 3 Commissioning Record – activate automatic control of
Substation 1 Alvin devices**

“Substation 1”

Substation Ref		Substation Name	
Feeder name:			

“Substation 2”

Substation Ref		Substation Name	
Feeder Name			

“LV Link box”

Name of LV link box interconnecting the above two LV feeders	
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Note: this is a record of commissioning, the method is described in the accompanying method statement.

Ref	Commissioning step	Commissioned item/settings	Tick when completed
1.	Contact established with remote EA Technology team.		
2.	Instruct software to be enabled at “Substation 1” only, to allow LV-CAP platform at “ Substation 1 ” to switch Alvin Reclose™ devices at “ Substation 1 ”.		
3.	Confirm LV-CAP platform at “Substation 1” can CLOSE and OPEN L1, L2 and L3 Alvin Reclose™ devices at “Substation 1”.		
4.	Confirm LV-CAP platform at “Substation 1” has been observed to change “Substation 1” L1, L2 and L3 switch positions at beginning of a half hour period.		
5.	Confirm Commissioning Stage 3 fault restoration instructions have been deployed at both substations.		

Stage 3 commissioning completed by:

WPD Authorised Person (LVSW & LVLK)

Name:

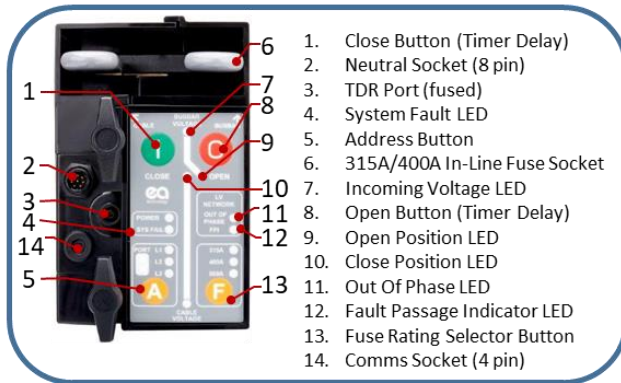
Date:

Appendix 1. Alvin Reclose™ - Quick Installation Guide



Quick Installation Guide

Version 0.1



1. Close Button (Timer Delay)
2. Neutral Socket (8 pin)
3. TDR Port (fused)
4. System Fault LED
5. Address Button
6. 315A/400A In-Line Fuse Socket
7. Incoming Voltage LED
8. Open Button (Timer Delay)
9. Open Position LED
10. Close Position LED
11. Out Of Phase LED
12. Fault Passage Indicator LED
13. Fuse Rating Selector Button
14. Comms Socket (4 pin)

This guide applies to all configurations of ALVIN Reclose and covers the manual operation only

Please make sure at all times you adhere to your Distribution Safety Rules. WHERE A POINT OF ISOLATION IS REQUIRED THE ALVIN RECLOSE UNIT SHALL BE REMOVED COMPLETELY

This is an electronic auto recloser, therefore care must be taken as the operator may not be aware of any preprogramed operating protocols

1

- Secure neutral "G" Clamp to the neutral busbar and connect the neutral reference cable to the "G" Clamp.
- Remove the In-Line fuse from the ALVIN Reclose, confirm rating and continuity.
- Check there is no continuity between top and bottom unit clamps on the rear of the ALVIN Reclose (if any continuity is present the unit **SHALL** be withdrawn from service).

2

- Record the ALVIN Reclose serial number and revision from the name plate before installation.
- Remove the LV fuse from the LV Board and install the ALVIN Reclose unit in its place.
- Secure in place by tightening the clamps.
- Connect the neutral cable to the neutral socket (2).
- ALVIN Reclose status LED's should now illuminate.

3

- Within 30 seconds of power up set the address of the unit by repeatedly pressing to the 'A' button.
- Set Fuse Characteristic to 315A or 400A by pressing the "Fuse Rating Selector Button" 'F'.
- Check unit is in the Open Position and "Open Position LED" is illuminated as shown in stage 4.

4

- If not, Press and hold the "Open Button" for 5 seconds until the flashing frequency of the "Open Position LED" increases, the "Open Button" can then be released.
- Note: There is a pre-set time delay to opening to allow time to move away from the ALVIN Reclose (10secs).
- Insert the In-Line Fuse onto recloser fuse way stalks and tighten clamps.

5

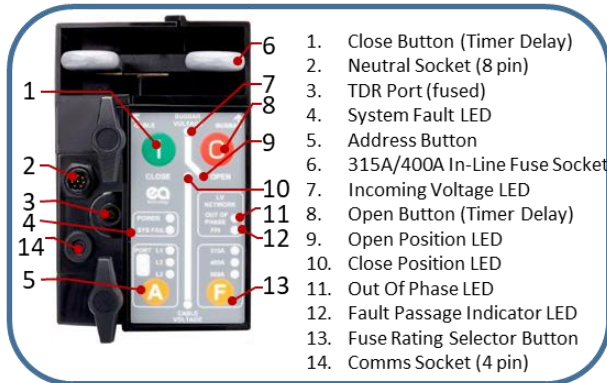
- To Close the unit, press and hold the "Close Button" for 5 Seconds until the flashing Frequency of the "Close Position LED" increases, the "Close Button" can then be released.
- Note: There is a pre-set time delay to closing to allow time to move away from the ALVIN Reclose (10secs).

6

- Check "Close Position LED" is illuminated.
- Confirm that supplies are restored.
- If successful, then the ALVIN Reclose can be left to undertake its duty.
- Install additional units using the daisy chain cable from the previously installed unit to the new unit as the neutral reference.
- Fit the WIFI dongle into socket (14) on the last unit.

Safer, Stronger, Smarter Networks


Appendix 2. Alvin Reclose™ - Quick Removal Guide



This guide applies to all configurations of ALVIN Reclose and covers the manual operation only


Please make sure at all times you adhere to your Distribution Safety Rules. WHERE A POINT OF ISOLATION IS REQUIRED THE ALVIN RECLOSE UNIT SHALL BE REMOVED COMPLETELY

This is an electronic auto recloser, therefore care must be taken as the operator may not be aware of any preprogrammed operating protocols



1

- To Open the unit, press and hold "Open Button" for 5 Seconds until the flashing frequency of the "Open Position LED" increases, the "Open Button" can then be released.
- Note: pre-set time delay to opening to allow time to move away from the recloser (10secs).



2

- Check recloser is Open and "Open Position LED" is illuminated.



3

- Unplug neutral lead or daisy chained cable from recloser being removed.
- Once all units have been removed remove neutral lead and clamp from neutral busbar.



4

- Loosen the ALVIN Reclose clamps and remove the unit from the fuse way.

Appendix 3. Fault restoration instructions – Stage 1

Initial supply restoration steps

(OpenLV Substation 330326 – in commissioning stage 1 with LV NOP OPEN)

NOTE: the ALVIN devices fitted at this substation are inhibited from automatically reclosing after a fault.

1. Confirm if any of the individual phase supplies to this feeder have tripped:



On any of the three single phase ALVIN units:

- Busbar voltage detected; and
- ALVIN circuit breaker is OPEN, and
- No voltage detected on feeder cable; and
- Fault passage indicator is lit.

2. Attempt to reclose the ALVIN circuit breaker on each phase that is tripped – see quick start guide:
 - a) If all phases successfully close AND cable voltages are indicated, follow standard procedures to confirm successful restoration.
 - b) If any phase/ALVIN device closes, but no cable voltage is indicated, re-open the Alvin device, check the ALVIN in-line fuse and replace if necessary.
 - c) If any phase/ALVIN device does not successfully reclose after fuse-check/replacement, this indicates an active fault remains on this feeder:
 - i. Open ALVIN Control Isolation Switch; and
 - ii. Commence standard fault finding procedures (including removal of the ALVIN units).



ALVIN Reclose™ Isolation Switch

3. Once all repairs have been completed and all supplies restored, please contact the OpenLV project team to arrange return to project operating state.

If you are in any doubt, contact local GARY BEASLEY 07961 141271

Appendix 4. Fault restoration instructions – Stage 2

To be appended when it is confirmed if this substation is 1 or 2 or the pair.

Appendix 5. Fault restoration instructions – Stage 3

To be appended when it is confirmed if this substation is 1 or 2 or the pair.