



**DISTRIBUTION COMMISSIONING TEST SHEET – FUSESAVER
HPC-4DL-07-0044-2024**

This commissioning test sheet covers the checking, testing and commissioning of all replacement or new installations of Fusesavers before energisation.

NOTE: Tests must be carried out after the installation, alteration or repair and before putting back to service.
SAFETY: At all times maintain suitable clearance to all other electrical equipment and verify planned escape routes.
 In preparation for the tests, wherever possible, disconnect the conductors from the equipment on both sides and make the area safe.

DATE:		Project No.		Name of Officer	
Fusesaver Location:					

1. FUSESAVER AND TRANSFORMER DESCRIPTION

Fusesaver SWER (1 Ø)/3 Phase (R Ø, W Ø & B Ø)							
Version		Label/GIS ID code		Stock Code		Asset Number	
Serial Number (1Ø)		Serial Number (RØ)		Serial Number (WØ)		Serial Number (BØ)	
Supply Transformer							
Rated kVA	kVA	kV _{MV}	V _{LV}	Stock Code		Serial Number	

2. VISUAL INSPECTION AND SAFETY CHECK

Inspect the following: <ul style="list-style-type: none"> • Structure • RCU • Antenna • Earth connections • Rating plate • Tank and bushings • Tap setting • HV terminations • LV terminations • Neutral connection • MEN/N-E connections 	1	Check that the installation complies with the distribution construction standards and applicable design drawings.	<input type="checkbox"/>
	2	Check that Public Safety has been considered (e.g. cabinets secured and locked, trip hazards removed, anti-climbing devices applied where applicable).	<input type="checkbox"/>


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	3	Check the supply to the Fusesaver and Transformer, that it is switched off and isolated as per switching sheet and permit (this includes the auxiliary power supply to the RCU).			<input type="checkbox"/>
	4	Confirm (with approved testing device) that the Fusesaver and Transformer is de-energised.			<input type="checkbox"/>
	5	Ensure that the earth system is complete, undamaged and bonded to Transformer and RCU.			<input type="checkbox"/>
	6	Check that the nearest conductive material is at least two (2) metres away from the earth system (take a photo if possible)	Measured distance	m	<input type="checkbox"/>
	7	Check the Fusesaver for damage.			<input type="checkbox"/>
	8	Ensure the clamp and holding bolts have the correct torque: For M10 bolts apply 20 Nm For M12 bolts apply 40 Nm			<input type="checkbox"/>
	9	Check rechargeable communications module (RCM), correct batteries with contact nipples.			<input type="checkbox"/>
	10	Transformer voltage rating matches system voltage.			
	11	Transformer tap is at the position of previously installed transformer or per network planning requirements.			
	12	Transformer tank and bushings in good condition (no oil leaks).			
	13	HV cables are properly terminated and connected on transformer bushings (if applicable).			
	14	LV cables are properly terminated and connected on transformer LV bushings (if applicable).			
	15	All labels fitted and numbered correctly.			
	16	LV lead connections to the transformer LV bushing are correct as per construction standards (for new connection).			
	11	Check that auxiliary power supply cable (2.5 mm) has been connected correctly and has suitable surge diverter applied.			<input type="checkbox"/>
	12	Check the control unit and batteries for signs of damage.			<input type="checkbox"/>



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	14	Check RCU voltage set to 240V and wired correctly as per construction drawings.	<input type="checkbox"/>
	15	Attach switch instruction/information including logbook to inside of RCU.	<input type="checkbox"/>
	16	All labels fitted and numbered correctly	<input type="checkbox"/>
	17		<input type="checkbox"/>
	18		<input type="checkbox"/>
	19		<input type="checkbox"/>

3. EARTH RESISTANCE

1	Ensure that the earth resistance has been tested and is acceptable.	<input type="checkbox"/>
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4. INSULATION RESISTANCE

1	Ensure the Fusesaver is opened prior to conducting the IR test		<input type="checkbox"/>	
Insulation resistance test: Use a 5 kV insulation resistance tester. Measure resistance after 1 minute. Discharge after each IR test.		Test Connection	Expected Results	Test Results
		Between contacts (Red phase/Single phase)	>100 MΩ	MΩ
		Between contacts (White phase)	>100 MΩ	MΩ
		Between contacts (Blue phase)	>100 MΩ	MΩ
Confirm recloser has been discharged after each IR test.			<input type="checkbox"/>	

5. CONTINUITY TEST

1	Ensure the Fusesaver is closed prior to conducting the test		<input type="checkbox"/>								
Continuity test: Use a standard DC resistance tester with a minimum 10 A capacity.		Test Connection	Test Results								
		Between contacts (Red phase/Single phase)	MΩ								
		Between contacts (White phase)	MΩ								
		Between contacts (Blue phase)	MΩ								
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:25%; text-align: center;">Model</td> <td style="width:25%; text-align: center;">Low Range</td> <td style="width:25%; text-align: center;">Standard Range</td> <td style="width:25%; text-align: center;">High Range</td> </tr> <tr> <td style="text-align: center;">DC Resistance (μΩ)</td> <td style="text-align: center;"><8070</td> <td style="text-align: center;"><1350</td> <td style="text-align: center;"><390</td> </tr> </table>		Model	Low Range	Standard Range	High Range	DC Resistance (μΩ)	<8070	<1350	<390		
Model	Low Range	Standard Range	High Range								
DC Resistance (μΩ)	<8070	<1350	<390								

6. PRE-COMMISSIONING TESTS

1	Test to settings provided.		<input type="checkbox"/>
2	Energise AC supply and confirm AC voltage at AC Box.		<input type="checkbox"/>
3	Energise RCU from AC Box.		<input type="checkbox"/>
4	Operate Fusesaver/s from RCU.		<input type="checkbox"/>
5	De-energise RCU, isolate LV supply.		<input type="checkbox"/>
6	Check that OT Commissioning Sheet is available for network synchronisation and has been completed.		<input type="checkbox"/>
7	Is Fusesaver ready for service?	YES <input type="checkbox"/>	NO <input type="checkbox"/>



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7. HANDOVER OF RESPONSIBILITY FOR THE COMPLETION OF SECTIONS 1 TO 6

I hereby certify that sections 1 to 6 have been completed with satisfactory results and transfer control to the commissioning officer.

Commissioning Officer: _____ Pay Number: _____
 Signature: _____ Date: DD/MM/YY Time: HH:MM

1. Lock the control unit door using approved (NMK2) Western Power padlocks. NK6 padlocks must not be reused.
2. Attach an “Out of Service (Warning)” tag to the padlock on the front of the control cabinet.
3. Ensure that the work area is left tidy with no hazards to the public.

8. ALARM AND CONTROL TESTING

The Field Services Officer shall conduct test of the alarms and control appropriate for the unit.

I hereby certify that alarm and control testing been completed with satisfactory results.
 (This equipment is ready for operational service).

Field Services Officer: _____ Pay Number: _____
 Signature: _____ Date: DD/MM/YY Time: HH:MM

Notes:

9. COMMISSIONING AND ENERGISATION

		Resistance Value	Ω	<input type="checkbox"/>
1	Ensure that the earth test result is available and that the results are acceptable.			<input type="checkbox"/>
2	The switching operator must ensure that the Fusesaver labels match the POA or GIS diagrams.			<input type="checkbox"/>
3	Record switching program.			<input type="checkbox"/>
4	Energise RCU via AC Box and conduct an insulation/polarity test on the 240 V supply and the 240 V surge arrester.			<input type="checkbox"/>
5	Ensure that all working earths and programmed earths are removed (if applicable)			<input type="checkbox"/>



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6	Energise Fusesaver by closing Isolator's or from remote location as per switching program.	<input type="checkbox"/>
7	Confirm with HPCC as per OT commissioning requirements operation of RCU/Fusesaver.	<input type="checkbox"/>
8	Ensure that all equipment is locked, numbered and labelled correctly, and secure from unauthorized entry.	<input type="checkbox"/>

10. OPERATIONAL HANDOVER

The commissioning officer must ensure that all checks are completed and the test results comply with the minimum standards.

I hereby certify that all sections have been completed with satisfactory results and transfer responsibility to the network operating authority.
(This equipment is ready for operational service).

Commissioning Officer: _____ Pay Number: _____
 Signature: _____ Date: DD/MM/YY Time: HH:MM

1. Ensure the work area is left tidy with no hazards to the public.
2. Hand over responsibility to the operating authority
3. Return this sheet to the project/working file as a record of commissioning and as a document required for the Handover Certificate.