WESTERN POWER DISTRIBUTION

Serving the Midlands, South West and Wales

ST: TP14D/7

PRE-ENERGISATION TEST SHEET

LV COMBINED CUT-OUT, CT & METER CABINET INSTALLATIONS

Summary

This Test Sheet shall be employed during the pre-energisation (depot) testing of LV Combined Cut-Out, CT & Meter Cabinet Installations in accordance with Standard Technique TP14D/7.

This Test Sheet shall be read in conjunction with the associated Guidance Note. The section numbers in this Test Sheet relate to the section numbers in the associated Guidance Note.

This document has been written around the product manufactured by Lucy Electric Ltd.

NOTE FOR WPD EMPLOYEES:

A "CT Metering" iPad Application (App) has been created to expedite the testing process for LV Combined Cut-Out, CT & Meter Cabinet installations. When the App is employed the pre-energisation test results are keyed into the iPad, rather than recorded onto a paper copy of this test sheet. Using the App is a mandatory requirement.

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EVIDENCE OF COMPLIANCE WITH BALANCING & SETTLEMENT CODE: CODE OF PRACTICE 4

CoP 4	Description		Relevant Section On This Test Sheet
5.5.2	Test	That CTs are of the correct ratio	Section 4.7
5.5.2	Test	That CTs are of the correct polarity	Sections 4.4 & 4.6
5.5.2	Test	That the relationships between voltages and currents are correct	Section 4.5 & 5.2
5.5.4	Record	Site name	Section 4.2
5.5.4	Record	Site address	Section 4.2
5.5.4	Record	Metering system identifier (MPAN)	Section 4.2
5.5.4	Record	Date of commissioning	Section 4.2
5.5.4	Record	Name and organisation of person responsible for commissioning	Section 4.2
5.5.4	Record	Current transformer details	Section 4.4
5.5.4	Record	Voltage transformer details	Not Applicable
5.5.4	Record	Results of inspections, tests & observations	Entire Test Sheet

4.2 GENERAL DETAILS

Import MPAN *(Where Applicable)*														
Export MPAN *(Where Applicable)*														
Customer's Name														
Customer's Address														
WPD Enquiry Number *(Where Applicable)*														

Date Of Pre-Energisation (Depot) Testing		
Tested By	Name	
	Company	

4.3 LV COMBINED CUT-OUT, CT & METER CABINET DETAILS

Manufacturer	Lucy Electric		
Rating	200A	400A	600A
Serial Number			
Phase	L1	L2	L3
Cut-Out (J) Fuse Rating	A	A	A
Voltage Fuse Rating	A	A	A
Meter Fuse Rating	A	A	A

4.4 CT DETAILS

Phase	L1	L2	L3
Manufacturer			
Serial Number			
Ratios Available			
Ratio Connected			
Rating (VA)			
Class			
Face P1 Points Towards Incoming Service Cable	[ ]	[ ]	[ ]

4.5 WIRING CHECKS

Phase	L1	L2	L3	N
Colour Of Voltage Wiring	BROWN [ ]	BLACK [ ]	GREY [ ]	BLUE [ ]
Colour Of CT Secondary Wiring	BROWN [ ]	BLACK [ ]	GREY [ ]	
Colour of Test Terminal Block Wiring	BROWN T1 [ ] T2 [ ] T3 [ ] T10 [ ]	BLACK T4 [ ] T5 [ ] T6 [ ] T11 [ ]	GREY T7 [ ] T8 [ ] T9 [ ] T12 [ ]	BLUE T13 [ ]

4.6 CT POLARITY CHECKS

	L1	L2	L3
CT Polarity Correct	[ ]	[ ]	[ ]

4.7 CT RATIO CHECKS

Primary Injection Current	L1		A	[A]
CT Secondary Current	L1	*(Wire D11)*	A	[B]
Calculated CT Ratio	L1	$\frac{[A] \times 5}{[B]}$	/ 5 A	
Ratio On CT Label	L1		/ 5 A	
		L1 CT Ratio Correct	[ ]	

Primary Injection Current	L2		A	[C]
CT Secondary Current	L2	*(Wire D31)*	A	[D]
Calculated CT Ratio	L2	$\frac{[C] \times 5}{[D]}$	/ 5 A	
Ratio On CT Label	L2		/ 5 A	
		L2 CT Ratio Correct	[ ]	

Primary Injection Current	L3		A	[E]
CT Secondary Current	L3	*(Wire D51)*	A	[F]
Calculated CT Ratio	L3	$\frac{[E] \times 5}{[F]}$	/ 5 A	
Ratio On CT Label	L3		/ 5 A	
		L3 CT Ratio Correct	[ ]	

5.2 DC RESISTANCE CHECKS

	L1	L2	L3
DC Resistance of CT secondary circuit	Ω *(Terminals T2-T3)*	Ω *(Terminals T5-T6)*	Ω *(Terminals T8-T9)*
Voltage & Meter Fuses connected in correct phase and in phase conductor only	[ ]	[ ]	[ ]

5.3 INSULATION RESISTANCE CHECKS

	L1	L2	L3
Insulation Resistance of Busbars & Voltage Connections	L1-E MΩ	L2-E MΩ	L3-E MΩ
(ph-ph tests only when meter not fitted)	L1-L2 MΩ	L2-L3 MΩ	L3-L1 MΩ
Insulation Resistance To Earth of CT Secondary Circuit	MΩ		
CT Secondary Circuit Earthed	[ ]	[ ]	[ ]

5.4 BURDEN ON CTs

Burden on L1 CT	0.3VA
Burden on L2 CT	0.3VA
Burden on L3 CT	0.3VA

Burden assumes secondary wiring connections between CT and Test terminal Block are 0.75m long (i.e. 1.5m loop) and 2.5mm^2 conductor is employed.