CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)

CPRI

TEST REPORT

Test Report Number	CPRIBLRSCL19T0125 **Dated**: 25th February, 2019
Name & Address of the Customer	M/s. Uni -Tech Automation Pvt. Ltd., S. No. 79/2, Plot No. 7, Shivane, Pune – 411 023, Maharashtra, India.
Name & Address of the Manufacturer	M/s. Uni – Tech Automation Pvt. Ltd., Gat No. 837, 838, 833, Palshi Road, Off Pune-Bangalore Highway, Shirwal, Taluka: Khandala, Dist: Satara - 412 801, Maharashtra, India.
Particulars of sample tested	Low-voltage switchgear and controlgear assembly – LT Panel
Condition of the sample on Receipt	New
Type	Indoor/Outdoor, cubicle
Description of test sample	2500A, 415V, LT Panel
Serial Number (s)	UAPL/1901551/27005/9398
Number of samples tested	One
Date (s) of test (s)	8th February, 2019
CPRI sample code no(s).	SCL19S0195
Particulars of tests conducted	Verification of the short-circuit withstand strength
Test in accordance with Standard / specification	Sub-clause 8.2.3.2.3 b) & d) of IS 8623 (Part 1):1993 / IEC Pub 439-1 (1985) (Reaffirmed 2018)
Sampling plan	Not applicable
Customer's requirement	50 kA rms for 1.0 s & 105 kA peak on phase bus-bars
Deviations if any	Nil
Name of the witnessing persons	
Customer's representative	Mr. Akash Ramdas Dhumal, Jr. Engineer – Design & Development
Other than customer's representatives	None
Test subcontracted with Address of the laboratory	None
Documents constituting this report (In words)	
Number of sheets	Five
Number of oscillograms	Two
Number of graphs	Nil
Number of photos	Two
Number of test circuit diagrams	Two
Number of drawings	Three

(SAKTHIVEL. P)
TEST ENGINEER

(SWARAJ KUMAR DAS)
HEAD OF DIVISION
Approved by

SHORT CIRCUIT LABORATORY
P.B.NO.8066, SADASHIVANAGAR POST OFFICE
SIR C.V.RAMAN ROAD, BENGALURU - 560 080 (INDIA)
Phone: +91 (0) 80 - 23607824 Fax: +91 (0) 80 – 23607824

CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)

CPRI

TEST REPORT

Test Report Number: CPRIBLRSCL19T0125 **Dated**: 25th February, 2019

Description of sample tested (ratings as assigned by the manufacturer)

Test sample	Low-voltage switchgear and controlgear assembly – LT Panel
Type	Indoor/Outdoor, cubicle
Serial number	UAPL/1901551/27005/9398
Rated voltage	415V
Rated insulation voltage	660V
Rated current	2500A
Rated frequency	50 Hz
Number of phases	Three & neutral
Rated short-time withstand current & peak withstand current	50 kA rms for 1.0 s & 105 kA peak on phase bus-bars & 30 kA rms for 1.0 s & 63 kA peak on neutral bus-bar

Documents attached to this report

Oscillogram number(s)	SC190125.S01 & SC190125.S02
Photo number(s)	CPRIBLRSCL19T0125.PB1 & CPRIBLRSCL19T0125.PA1
Test circuit diagram number(s)	CRTL/SC/STC-04A & CRTL/SC/STC-02A
Drawing number(s)	18CP-UAPL-001 Sheet No. 1OF3 Rev. 00, 18CP-UAPL-001 Sheet No. 2OF3 Rev. 00 & 18CP-UAPL-001 Sheet No. 3OF3 Rev. 00

(SAKTHIVEL.P)
TEST ENGINEER

SHORT CIRCUIT LABORATORY
P.B.NO.8066, SADASHIVANAGAR POST OFFICE
SIR C.V.RAMAN ROAD, BENGALURU - 560 080 (INDIA)
Phone: +91 (0) 80 - 23607824 Fax: +91 (0) 80 – 23607824

TEST REPORT

Test Report Number: CPRIBLRSCL19T0125 **Dated**: 25th February, 2019

TEST RESULTS

VERIFICATION OF THE SHORT-CIRCUIT WITHSTAND STRENGTH [Sub-clause 8.2.3.2.3 b) & d)]

TEST CONDITIONS

Source	Short-circuit generator
Phase	
Test on phase bus-bars	Three
Test on neutral bus-bar	Single
Frequency	50 Hz
Test sample	
Condition before test	In clean & new condition; incoming main bus-bars (copper) connected to source.
Body/Enclosure	2.0 mm thick CRCA MS Sheet; isolated from earth and Connected to the source neutral through a fine-wire fuse (FWF) of diameter 0.1mm and length of 50 mm in series with a 2.0 ohms resistor
Test details	
Test circuit drawing number	
Test on phase bus-bars	CRTL/SC/STC-04A
Test on neutral bus-bar	CRTL/SC/STC-02A
Short-circuit applied	On the end of the vertical main (aluminium) bus-bars
Short-circuit point	Grounded

Test on: Horizontal and vertical phase bus-bars of LT Panel

Oscillogram Number	Current (kA)		Duration (s)	Observations
	Peak	RMS		
SC190125.S01	108.23 (R-phase)	R – 51.61 Y – 50.71 B – 49.85 Average: 50.72	1.09	**During test:** No abnormality **After test:** Fine-wire fuse intact

Test on: Neutral bus-bar of LT Panel with nearest phase bus-bar as return conductor

Oscillogram Number	Current (kA)		Duration (s)	Observations
	Peak	RMS		
SC190125.S02	66.87	31.01	1.09	**During test:** No abnormality **After test:** Fine wire fuse intact

(SAKTHIVEL. P)
TEST ENGINEER

SHORT CIRCUIT LABORATORY
P.B.NO.8066, SADASHIVANAGAR POST OFFICE
SIR C.V.RAMAN ROAD, BENGALURU - 560 080 (INDIA)
Phone: +91 (0) 80 - 23607824 Fax: +91 (0) 80 – 23607824

TEST REPORT

Test Report Number: CPRIBLRSCL19T0125 **Dated**: 25th February, 2019.

TEST RESULTS

VERIFICATION OF THE DIELECTRIC PROPERTIES

Condition of the sample: As after the verification of the short-circuit withstand strength test

Test procedure	Observations
A power frequency voltage of 2.5 kV rms for 60 s was applied between	
1. All live parts connected together and enclosure	Withstood ; No disruptive discharge noticed
2. Each pole and all the other poles connected to enclosure	

Physical Inspection

Bus-bars : No visible external damage or deformation
Supports : Intact

Remarks: The sample tested complies with the sub-clause(s) of the standard referred to.

(SAKTHIVEL. P)
TEST ENGINEER

SHORT CIRCUIT LABORATORY
P.B.NO.8066, SADASHIVANAGAR POST OFFICE
SIR C.V.RAMAN ROAD, BENGALURU - 560 080 (INDIA)
Phone: +91 (0) 80 - 23607824 Fax: +91 (0) 80 – 23607824

TEST REPORT

Test Report Number: CPRIBLRSCL19T0125 **Dated**: 25th February, 2019

NOTE

a) The Test results relate only to the item(s) tested.
b) Publication or reproduction of this report in any form other than by complete set of the whole test report / Certificate and in the language written is not permitted without the written consent of CPRI.
c) Any Corrections / erasure invalidate the test Report/Certificate.
d) NABL has Accredited this laboratory as per ISO/IEC 17025-2005 standard, vide certificate no. TC-5452 for the tests carried out.
e) Any anomaly / discrepancy in the test report / Certificate should be brought to notice of CPRI within 45 days from the date of issue.

(SAKTHIVEL. P)
TEST ENGINEER

SHORT CIRCUIT LABORATORY
P.B.NO.8066, SADASHIVANAGAR POST OFFICE
SIR C.V.RAMAN ROAD, BENGALURU - 560 080 (INDIA)
Phone: +91 (0) 80 - 23607824 Fax: +91 (0) 80 – 23607824