

Test report no.: <i>Prüfbericht Nr.:</i>	AU24QO90 001	Order No.: <i>Auftrags-Nr.:</i>	252106509	Page 1 of 30 Seite 1 von 30												
Client Reference No.: <i>Kunden-Referenz-Nr.:</i>	2569280	Order date: <i>Auftragsdatum:</i>	2024-05-15													
Client: <i>Auftraggeber:</i>	LECO Switchgear Ltd 18/24 Westech Place, 0602 Glen Eden, Auckland, New Zealand															
Test item: <i>Prüfgegenstand:</i>	Incoming circuit containing MCCB, 2 Outgoing circuits containing MCCB, all contained in "Quantum Switchboard" ASSEMBLY.															
Identification/ Type No.: <i>Bezeichnung / Typ-Nr.</i>	Drawing no. "00000/QUASB/2", Rev C															
Order content: <i>Auftrags-Inhalt:</i>	Electrical Safety Testing															
Test specification: <i>Prüfgrundlage:</i>	Short-circuit withstand strength testing according to Clauses 10.11.5.3.2& 10.11.5.3.3 of AS/NZS 61439.1:2016															
Date of sample receipt: <i>Wareneingangsdatum:</i>	2024-05-20															
Test sample No.: <i>Prüfmuster-Nr.:</i>	A003725028-001															
Testing period: <i>Prüfzeitraum:</i>	2024-05-06															
Place of testing: <i>Ort der Prüfung:</i>	TÜV Rheinland Australia Pty. Ltd.															
Testing laboratory: <i>Prüflaboratorium:</i>	TÜV Rheinland Australia Pty. Ltd.															
Test result*: <i>Prüfergebnis*:</i>	Pass															
created by: <i>erstellt von:</i>	Gurpreet Singh	authorized by: / <i>genehmigt von:</i>	Shuai Shao													
Date: 2024-07-22 <i>Datum:</i>		Issue Date: 2024-09-06 <i>Ausstellungsdatum:</i>														
Position / Stellung:	Expert	Position / Stellung:	Expert													
Other / <i>Sonstiges:</i>	<table border="1"> <tr> <td>Rated operational voltage (U_e)</td> <td>415 V</td> <td>Rated frequency (f_n)</td> <td>50 Hz</td> </tr> <tr> <td colspan="2">Rated conditional short circuit current (I_{cc}) for Incoming circuit containing Schneider NS800N MCCB</td> <td colspan="2">50 kA</td> </tr> <tr> <td colspan="2">Rated conditional short circuit current (I_{cc}) for 2 Outgoing circuits containing Schneider NSX 400N and Schneider NSX 250N</td> <td colspan="2">50 kA</td> </tr> </table> Note: the test 1 which had an Incoming circuit containing Schneider NS800N MCCB tested, passed for an IP 22 Rating only. Refer to page 3 for more details.				Rated operational voltage (U_e)	415 V	Rated frequency (f_n)	50 Hz	Rated conditional short circuit current (I_{cc}) for Incoming circuit containing Schneider NS800N MCCB		50 kA		Rated conditional short circuit current (I_{cc}) for 2 Outgoing circuits containing Schneider NSX 400N and Schneider NSX 250N		50 kA	
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Condition of the test item at delivery: <i>Zustand des Prüfgegenstandes bei Anlieferung:</i>	Test item complete and undamaged															
* Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested * Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet																
This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark. <i>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</i>																

Test report no.: AU24QO90 001

Page 2 of 30
Seite 2 von 30

Remarks

- | | |
|---|---|
| 1 | The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request. |
| 2 | As contractually agreed, this document has been signed digitally only. TÜV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TÜV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. |
| 3 | Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.
Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report. |
| 4 | The decision rule for statements of conformity in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report |
| 5 | This test report is based on assessment and tests applied to the specific test item(s) as submitted by the client. TÜV Rheinland Australia disclaims any and all responsibility or obligation for any other item. |

History of revision:

N/A

Test report no.: AU24QO90 001

Page 3 of 30
Seite 3 von 30

Product description

1	Product details:	Refer to the test item description below.
2	Dimensions / Weight:	[W x H x D] (mm): Refer to the drawing
3	Operating elements:	N/A
4	Equipment / Accessories:	The equipment was tested without any optional accessory or ancillary equipment installed. Hence, this report does not cover parameters that are influenced by the installation of optional accessory or ancillary equipment that might affect safety in the meaning of this standard.
5	Used materials:	Refer to the drawing for details.
6	Other:	N/A
7	Test sample obtaining:	☒ Sending by customer ☐ Sampling by TÜV Rheinland Group ☐ others:

Description of the test item:

The test sample provided is an ASSEMBLY containing 3 tiers (1 to 3) from left to right. Tier 1 contains an incoming circuit comprising of incoming unit feeding the main busbars on the top segment. Tier 2 consists of several outgoing units connected onto a chassis which is fed via the main busbars located in the top segment. The middle compartment of tier 2 contains another outgoing unit of MCCB. Tier 3 is a cable zone. The assembly has external surface doors and internal polycarbonate shielded cover. The external doors are closed and locked using screws. Refer to the drawing "00000/QUASB/ (1 to 4)", Rev C and photos for more details

Busbars

Test	Test item	Busbars dimensions (per phase)	Busbars centres	Busbars supports*	No. of supports	Support centres
Test 1	Incoming circuit	1 x 42 mm x 12 mm Length: 1 m (W phase)	115 mm	Fiberline Support GRP U-PROFILE -/ Fibrolux –	2	305 mm

*Note: The manufacturer of the supports was no verified by TÜV Rheinland.
For more details refer to the drawings.

Outgoing circuits

Test	Test item	Model name / number	Cell dimensions (mm)
Test 2	Outgoing Circuit	Schneider NSX 400N	2000 (W) x 1850 (H) x 410 (D)
Test 3	Outgoing Circuit	Schneider NSX 250N	2000 (W) x 1850 (H) x 410 (D)