



Product Type Approval Certificate

Restricted

This certificate is issued to:

Supplier name and address:	Optimised Network Equipment Pty Ltd. 41/2 Benson Street, Toowong, QLD 4059
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In respect of:

Manufacturer:	Main capacitor bank – Nokian Capacitors Ltd. (ALSTOM company) Auxiliary capacitor bank - Nokian Capacitors Ltd. (ALSTOM company) Reactor – Nokian Capacitors Ltd. (ALSTOM company) Damping resistor – Microelettrica Scientifica M.S. Resistances
Place of manufacture:	Main capacitor bank - Kaapelikatu 3, 33330 Tampere, Finland Auxiliary capacitor bank - Kaapelikatu 3, 33330 Tampere, Finland Reactor - Kaapelikatu 3, 33330 Tampere, Finland Damping resistor - Zone Industrielle Du Coin, Rue De Cret de la Perdrix, 42400 St. Chamond, France
Product description:	11kV, 2 MVAR, C-type, harmonic filter for use in traction applications to reduce the level of AC harmonics generated to acceptable limits. The harmonic filter is manufactured in accordance with the Novo Rail, Blacktown North SS harmonic filter specification SUB09-SPE-ES-0003, revision 1.3
Use approved for:	Use on the RailCorp 11kV AC network
Conditions of approval:	For use in Blacktown North traction substation. The harmonic filter protection requirements shall comply with the latest approved Blacktown North 11kV Concept Protection Design. The harmonic filter reference drawings: <ul style="list-style-type: none">• EL 0414025, Rev B - Electrical equipment general arrangement• EL 0414026, Rev B - Electrical equipment bill of material

	<ul style="list-style-type: none"> • EL 0414167, Rev E - Earthing and bonding outdoor general arrangement • EL 0590856-64, Rev A - Schneider 11kV ACCB schematic diagrams
Limitations:	This type approval is site specific to Blacktown North SS.

Evaluating rail transport operator

Name:	Terry Niemeier
Position:	Lead Electrical Engineer, Asset Standards Authority, Transport for NSW
Signature:	<i>T Niemeier</i>
Date:	18/12/2020

Product approval pack reference number: qA542112