

Specification Document

Package Substation for J Murphy and Sons Limited

Transformer: Custom Transformer RMU: UKPN 14950F, VRN2a TM, TLF 100/50/5A CT's LV: ACULOK
TMO 7W 1600A (7 x 630A Fuseways) Double Gen Sockets

Lucy Reference No: 119737

Technical Data Sheet For Package Substation

Ring Main Unit

UKPN 14950F, VRN2a TM, TLF 100/50/5A CT's

Technical Data – General	
Rated Voltage	12kV
Impulse Voltage	95kV
Frequency	50Hz
Circuit Breaker	T-Off Vacuum Circuit Breaker rated at 250A
Circuit Breaker Protection	TLF with 100/50/5A CTs, secondary injection test points and tripped on fault indication
Low Gas Alarm	Fitted
Shunt Trip	Multi-voltage shunt-trip; 24-110v DC - 10 - 240v ac
Ring Switch	Left and Right hand, fault-making load break, rated at 630A
Motorisation	Actuators fitted to ring switches. Circuit reaker pre-wired for Automation
VPIs	4mm Sockets and neon lamps for phase comparison and indication on ring switches
FPI	600/1A CTs fitted to ring switch bushings
MV Sensors	Fitted to ring switches
Cable Boxes	Bottom entry cable boxes rated at 12.5 kA, 1 sec fitted to ring switches
Gland Plates	Single hole
Glands	'Y' Tube gland
Others	Indication and control signals wired to socket at the bottom of the marshalling box
RTU Supplied	Yes

RTU Details

RTU Mounting Bracket	Mounting Bracket Required
RTU Umbilical	Umbilical Required
RTU Battery	Battery Required
RTU Ethercon Cable	No Ethercon Cable

Transformer

Custom Tranformer

Technical Data

No Transformer Data Available

Low Voltage Distribution Cabinet

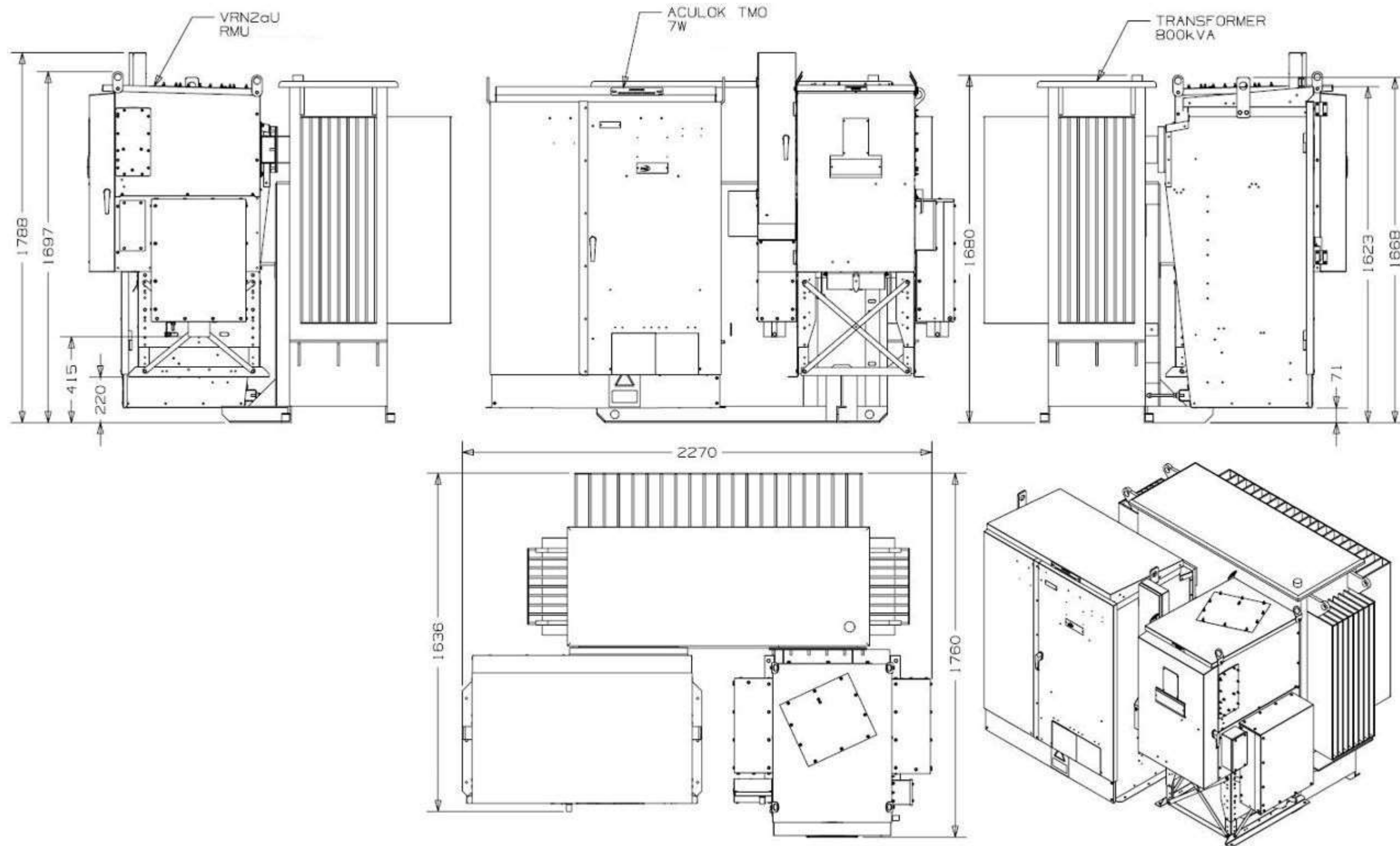
ACULOK TMO 7W 1600A (7 x 630A Fuseways) Double Gen Sockets

Technical Data – General

IP Rating	
• Door Closed	<i>IP34D</i>
• Door Open – All Shrouds Fitted	<i>IP2XB</i>
Cabling	<i>Bottom Exit – 1 cable/phase on standard fuseways</i>
Transformer Connection	<i>EA35-1 'F' type flange</i>
MDI	<i>Nemo 72b</i>
Ancillary Equipment	<i>13A RCB protected socket</i>
Fuses (not included)	<i>Fuse handles accept BS88 J type 92mm fuse links up to 630A rating</i>
Generator Sockets (rated at 660v)	<i>Double Socket</i>
Metering CT Specification	<i>N/A</i>
Cable Cleats	<i>Load bearing cleats - 1 per standard fuseway</i>

Selected Features

Rating	<i>1600A</i>
No Of Standard Fuseways	<i>7</i>
No Of Ganged Fuseways	<i>0</i>
ACB	<i>No ACB</i>
MCCB	<i>No MCCB</i>
Generator Sockets	<i>Double</i>
Full Cabinet Metering	<i>No</i>
Standard Fuseway Metering	<i>No</i>
Ganged Fuseway Metering	<i>No</i>
ACB/MCCB Metering	<i>No</i>
Core Cabling	<i>3</i>
SWA Cable Kit	<i>No</i>
Phase Reversal	<i>No</i>
Auxilliary Supply Wiring	<i>Yes</i>
Cabinet Light	<i>Yes</i>



Quote ID: 0200518011
 Project Name: Package substation pricing request

Package Substation - Transformer:Custom Tranformer RMU:UKPN 14950F,
 VRN2a TM, TLF 100/50/5A CT's LV:ACULOK TMO 7W 1600A (7 x 630A
 Fuseways) Double Gen Sockets



Energy Services

Complete Life Cycle Management



Lucy Electric is an expert in secondary distribution networks, with an extensive product range for underground and overhead networks and over 100 years' industry experience. Our Energy Services team works with our customers to help them make the most of their network assets across the whole product life cycle, to meet today's and tomorrow's challenges.

End to end solutions

We offer our customers end to end solutions, from design and specification of projects through installation and commissioning, to whole life maintenance and product support.

Maximising the value of assets

From a simple service up to a fully outsourced turnkey solution, our complete life cycle management approach ensures customers can maximise the value of their assets and make the most of their internal resources.

Planning for the future

Whatever the market or commercial challenges we work closely with the customer to find the right solution for the job to help plan for future challenges and opportunities. Our range of services includes all aspects of consulting design and engineering, equipment supply, implementation and installation, operations and maintenance, data management and customer care.

Tel: +44 (0)1844 267 267

Email: energyservices@lucyelectric.com

Web: www.lucyelectric.com

engineering intelligent solutions

Products & Solutions

Lifecycle management value chain	Service/ product	Benefits to customer
Customer engagement	<ul style="list-style-type: none"> Account management (already provided as standard) 	<ul style="list-style-type: none"> Achievement of cost benefits for both our customers and Lucy Electric One point of contact for all products and services into Lucy Electric Improved customer satisfaction
Consulting design and engineering	<ul style="list-style-type: none"> Professional services Automation 	<ul style="list-style-type: none"> Lucy Electric is able to advise on all aspects of an electrical distribution project, including product specification, retrofit options and automation Lucy Electric is able to provide consultancy, technical support, installation and project management on all aspects of distribution network automation and optimisation
Equipment supply	<ul style="list-style-type: none"> Ring main units LV cabinets and cut outs RTUs Package substations 	<ul style="list-style-type: none"> Lucy Electric is able to offer a range of products designed to our customers specification Many items can be held in stock either at our head office in Thame or through a bonded customer store
Implementation and installation	<ul style="list-style-type: none"> Site services <ul style="list-style-type: none"> Transport Placement Installation Commissioning Testing Project management 	<ul style="list-style-type: none"> As Lucy Electric is both a manufacturer and supplier of equipment, we are best placed to offer our customers a full end-to-end solution Lucy Electric is able to ensure projects are delivered on time and on budget
Finance	<ul style="list-style-type: none"> 3rd Party finance options 	<ul style="list-style-type: none"> Lucy Electric can provide 3rd party finance and leasing arrangements if required
Operations & maintenance	<ul style="list-style-type: none"> Maintenance (preventative & corrective) Actuator retrofit solution Spares Technical support 	<ul style="list-style-type: none"> Lucy Electric is able to undertake preventative and corrective maintenance on all makes of MV equipment We are able to provide and install actuators for all Lucy Electric equipment as well as Alstom, Reyrolle and Schneider amongst others Lucy Electric can offer remote technical support to our customers to complement your own on-site engineering team
Data management (measurement, benchmarking & reporting)	<ul style="list-style-type: none"> LV monitoring/ diagnostics 	<ul style="list-style-type: none"> Lucy Electric is able to provide a LV substation monitoring solution that provides continuous remote monitoring of substations on all feeders
Customer care	<ul style="list-style-type: none"> Training 24/7/365 Emergency cover 	<ul style="list-style-type: none"> Lucy Electric offers a range of training courses on all aspects of our equipment. We would be pleased to discuss any requirements you may have Initially, for our UK customers we are able to offer emergency cover/ response providing real-time access to our experienced support engineers

Gemini 3 platform



Gemini 3 is a flexible platform for advanced feeder automation on electrical distribution networks. It offers a comprehensive solution for measurement fault-location, automation and remote monitoring and control to help utilities better manage their power distribution networks.

Utilities benefit from:

- Improved network reliability
- Improved network efficiency and utilisation
- Improved safety

The Gemini 3 platform offers:

- Common HMI and user experience
- Wide range of communication protocols
- Security compliance
- Advanced analogue measurement
- Automation schemes

With the growth in renewables and other forms of low carbon technologies, Gemini 3 is smart grid ready providing additional network management functions including:

- Fault detection, isolation and restoration and other forms of self-healing
- Automated load transfer schemes to maintain essential supplies
- Import / export limit management and interfacing to active network management systems
- Extensive asset monitoring including cable pressure monitoring

Together with the ability to measure MV & LV power quality, Gemini 3 will improve the customer perception of the utility being an energy supplier