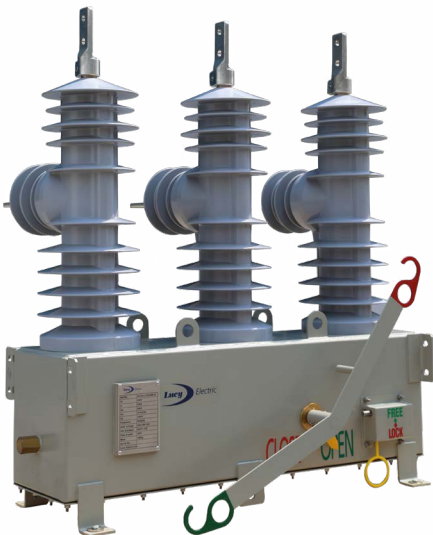




## AirTec LX: Smarter, Safer Distribution Networks

Non-SF6 Load Break Switch for  
Overhead Distribution Networks



# Keeping your network connected in a challenging world

Your network faces mounting pressure. Extreme weather, rising demand, and sustainability goals are testing overhead line infrastructure like never before. Field teams must work in harsh environments with unpredictable faults and rising safety risks – all while managing ageing switches that rely on SF6 gas or adding environmental concerns and maintenance headaches.



You need a robust, future-ready switching solution that:

---

Prevents unplanned downtime

Protects field engineers

Reduces greenhouse gas emissions

Supports smart grid transformation

---



# Introducing AirTec LX

AirTec LX is a pole-mounted solid dielectric vacuum Load Break Switch (LBS), engineered for reliable performance in the world's toughest environments. As a non-SF6, solution for modern overhead line distribution networks, it delivers reliable switching, advanced safety, and seamless smart grid integration.

At its core, AirTec LX uses vacuum interruption technology, enabling significantly higher numbers and frequency of switching operations without maintenance. Encapsulated in Hydrophobic Cycloaliphatic Epoxy (HCEP) insulation, it performs reliably in polluted, high UV, and coastal environments, with superior arc tracking resistance and vandal resistant construction.

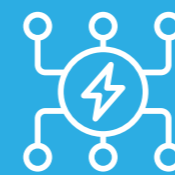
Designed for utility operators worldwide, AirTec LX combines robust engineering with intelligent automation, supporting fault management and strengthening network resilience. When integrated with Lucy Electric's Gemini RTU, it becomes a remotely controlled load break switch or sectionaliser, enabling rapid fault detection, isolation, and restoration for smarter, safer grids.

## Key benefits:

- Available in 12kV, 24kV and 38kV ratings
- SF6-free: Zero climate impact
- Vacuum Interruption (VI) Technology: High switching endurance, minimal maintenance
- HCEP Insulation: Performs reliably in polluted, coastal, and high UV environments
- Built to last: Stainless steel enclosure with corrosion resistance
- Vandal-resistant design for challenging public spaces



# Making your overhead line network greener



## Smarter

A smart-grid-ready load break switch that adapts to manual, local, or remote operation, providing real-time visibility, seamless Gemini RTU integration, and future-proof automation for simpler, smarter real-time network control.



## Safer

Engineered for safer network operation, combining robust insulation, visible indication, and remote control capability to protect personnel, equipment, and the network at every stage.



## Cleaner

Environmentally responsible SF6-free design — eliminating one of the world's most potent greenhouse gases — delivering cleaner, more sustainable switching without compromising performance.



## Cost-efficient

Reduces total cost of ownership through remote operation, fewer site visits, faster fault restoration, and maintenance-free, SF6-free design, saving time, labour, and long-term operating costs.

# Smarter networks, made simple

AirTec LX is smart-grid ready, giving you full control over your network now and in the future. Whether switching is managed manually (via a hookstick), locally, or remotely, it adapts to your operational needs and supports automation upgrades whenever you're ready.

## Operating mechanisms



**Hookstick mechanism**  
Hookstick operated



**Gemini 4 RTU**  
Locally and remotely operated



**Gemini 3 RTU**  
Locally and remotely operated

# Automation





Smart-grid ready from day one.

Gemini RTU enables remote monitoring, automation and intelligent switching control across the network.

### Benefits:

- Embedded sectionalising & change-over functions
- Advanced battery backup ensures operation even under AC power loss
- Seamless integration with your SCADA systems for remote monitoring and control.

### Optional features

			
Communications modem	Pole-mounted VT and bracket	Longer control cable (8 metres standard)	Surge arrester mounting plate

# LV monitoring

See more. Respond faster. Plan smarter.

MCU106 is a pole-mounted low-voltage (LV) monitor that provides real-time visibility of LV circuits on overhead networks. As a complementary solution to medium-voltage switching and automation, it enables proactive asset management, faster operational response and confident integration of low-carbon technologies. Built for rapid deployment in harsh outdoor environments, MCU106 supports smarter, more resilient LV networks.



### Benefits:

- Real-time measurement of current, voltage and power quality for granular visibility of network performance.
- Detect overloads, imbalance and emerging constraints early to improve operational response and asset management.
- Compact pole-mounted design enables fast deployment in outdoor environments without network disruption.



## Safety built in, from design to operation

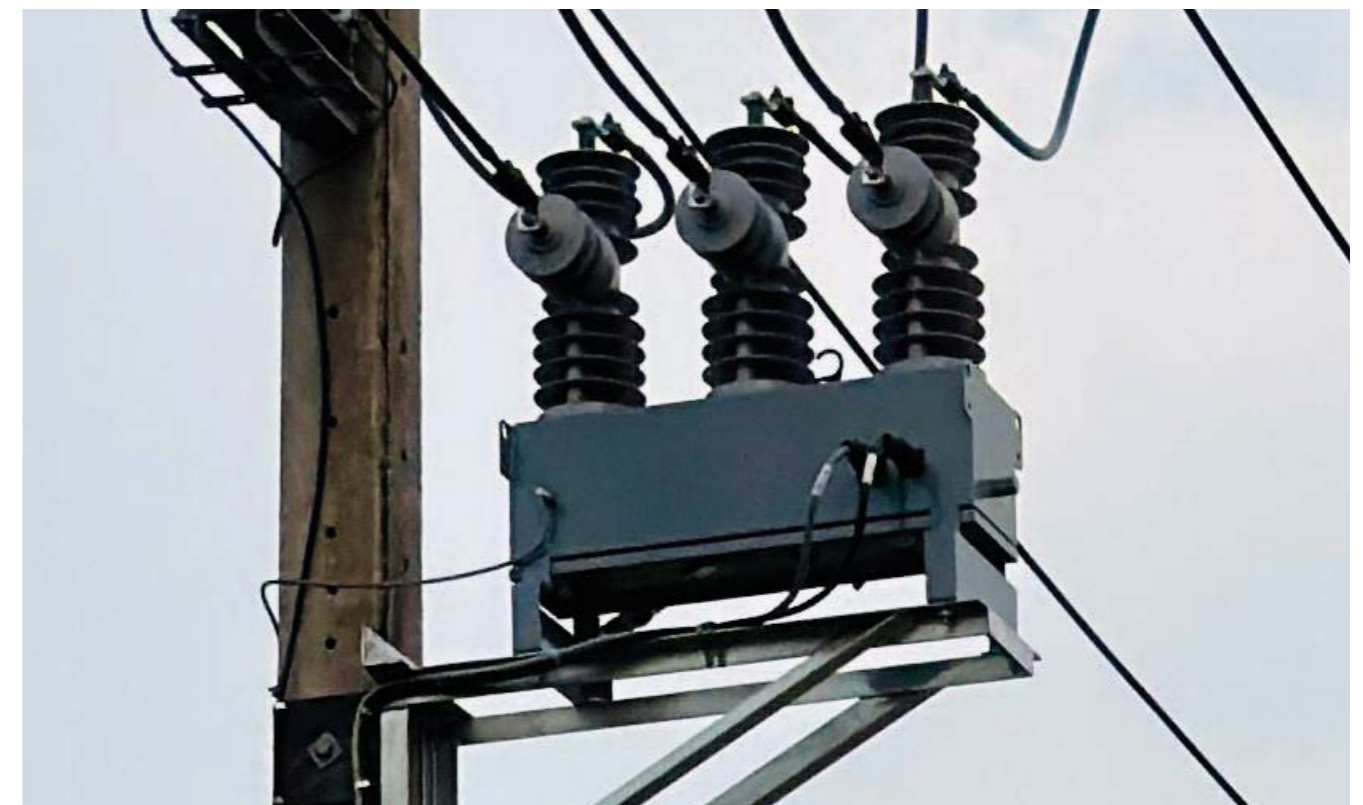
AirTec LX is engineered to keep both your field engineers and your network safe. From robust insulation to intelligent interlocks, every element of its design is built to protect people, assets, and supply continuity.

- **High-voltage safety by design:** Vacuum interrupter technology ensures rapid fault clearance (< 0.5 cycles) and long contact life, with load-break capability up to 800A (38 kV) and 630A (12 kV & 24 kV).
- **Fully type-tested:** Certified to IEC 62271-103 and all leading international safety standards.
- **Vandal-resistant construction:** Stainless steel enclosure and HCEP insulation resist impact, weather, and corrosion.
- **Built-in sensing:** Integrated CTs and encapsulated VT sensors monitor current and voltage on both source and load sides, no external devices required.
- **Fast, reliable operation:** Independent spring and motor drives deliver fast-open, fast-close switching in less than 0.65 seconds.
- **Enhanced operator safety:** From ground level, engineers have clear visibility of switch status under the tank.
- **Secure control mechanisms:** Safety interlocks and lock-off handles prevent unauthorised or unsafe operation; coordination with Gemini RTU ensures controlled local or remote switching.
- **Remote switching capability:** Reduces the need for engineers to work live or at height in hazardous conditions.

## A smarter switch for a cleaner future

AirTec LX delivers reliable switching without SF6 gas — replacing one of the world's most potent greenhouse gases. Designed for utilities looking to cut emissions, it supports sustainability goals without compromising on performance.

- **SF6-free technology:** Eliminates reliance on greenhouse gases for medium-voltage switching.
- **Vacuum interruption technology:** Provides high switching endurance while reducing lifecycle impact.
- **HCEP insulation:** Resists UV, pollution, and moisture, extending equipment life in harsh climates.
- **Sustainable by design:** Long product lifecycle (35+ years) and reduced need for field interventions.



## Engineered for lower total cost of ownership

AirTec LX is designed to reduce operational costs and optimise asset performance over its 35+ year lifecycle. From faster fault detection to minimal maintenance requirements, it helps utilities manage growing demand more cost-effectively.

- Lower maintenance, longer life: Vacuum interrupters handle significantly more operations without servicing.
- Rapid fault isolation: Minimises downtime and improves supply continuity.
- Optimised asset management; Embedded automation functions enable efficient, proactive network control.
- Fewer field visits required → Remote monitoring and switching cut truck rolls and engineer hours.
- Reduced total lifecycle costs → Robust design + fewer interventions = maximum ROI.



# AirTec LX electrical performance

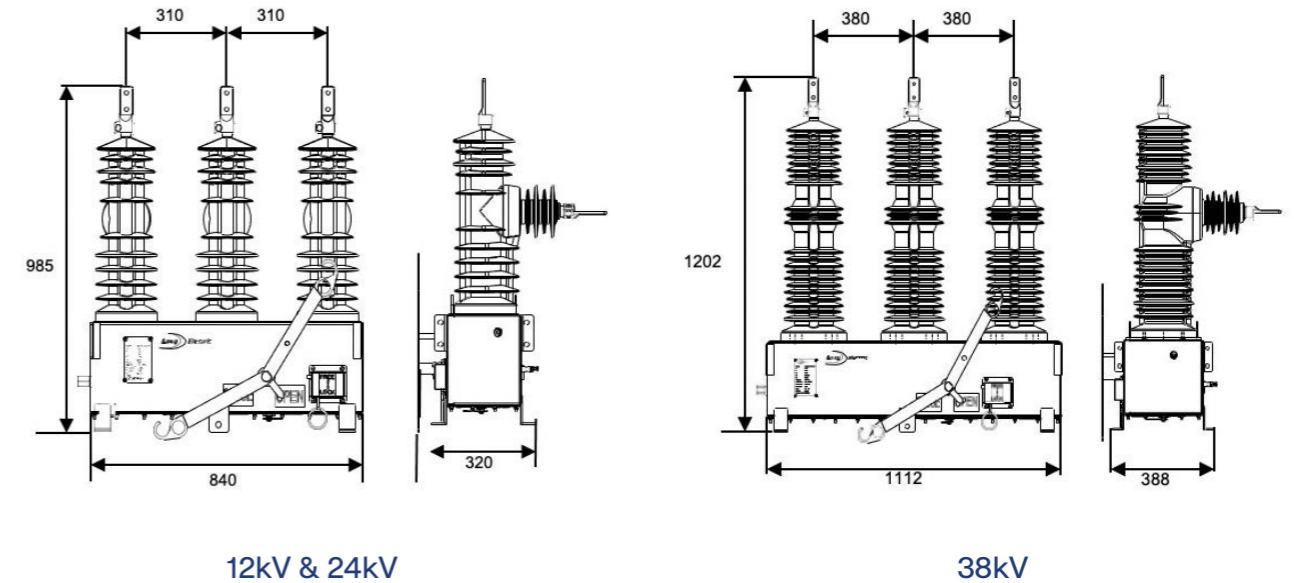
Technical data				
Rated voltage	kV	12kV	24kV	38kV
Frequency	Hz	50/60	50/60	50/60
Rated normal current	A	630	630	800
Lightning Impulse Withstand Voltage (peak)	kV	150	150	170
Power Frequency Withstand Voltage (rms)	kV	60	60	80

Technical data				
Rated short time withstand current (rms), sec	kA	16, 3s	16, 3s	16, 3s
Rated peak withstand current (peak)	kA	41.6	41.6	41.6
Rated short circuit making current (rms)	kA	16	16	16
Rated short circuit making current (peak)	kA	41.6	41.6	41.6

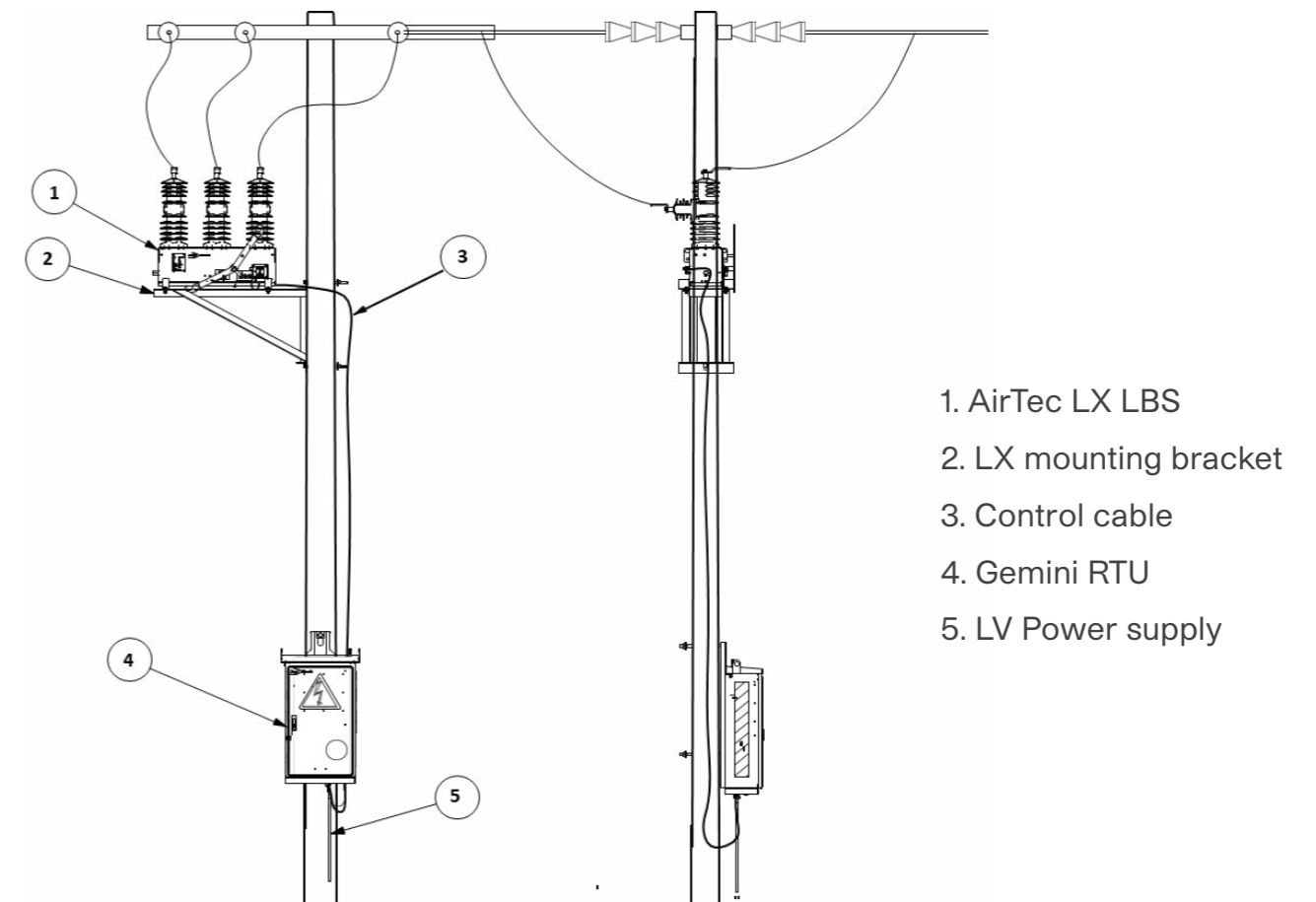
Operation performance				
Operating temperature	°C	-30 to 70	-30 to 70	-30 to 70
Altitude	m	Up to 1000m (without de-rating)		
Relative humidity	%	0 to 100		
Mechanical endurance class	class	2 x M2	2 x M2	2 x M2
Number of mechanical operations	ops.	10,000	10,000	10,000
Number of load-break operations	ops.	400	400	400
Electrical endurance class (Load Break)	class	E3	E3	E3
Number of short-circuit making operations	ops.	5	5	5
Capacitive current class	class	C2	C2	C2
Operating Mechanism		Manual/Motorised		

General information				
Insulator type		Hydrophobic Cycloaliphatic epoxy bushings		
Bushing creepage distance	mm	744	744	1225
Enclosure material		Stainless Steel Housing		
Enclosure ingress protection	Class	IP68		

# LX general arrangement drawing



Measurements in mm.



Every AirTec LX unit is tested in Lucy Electric's accredited facilities and verified by independent laboratories worldwide.



Global footprint



100+ R&D specialists



Two innovation hubs



Dedicated local support

## Designed, tested and certified to international standards

The AirTec LX is fully type tested and certified to meet international standards, ensuring safety, reliability, and performance in the most demanding environments.

- **Standard IEC 62271-1:2017:** High-voltage switchgear and controlgear.
- AirTec LX meets stringent international requirements for design, testing, and performance of medium voltage equipment.
- **Standard IEC 62271-103:2021:** Switches and switch-disconnectors for indoor and outdoor installations (1kV-52kV).
- AirTec LX delivers safe and reliable making and breaking of current for overhead line applications in a wide range of voltage and frequency conditions.
- **Standard IEC 60529:** Degrees of protection provided by enclosures (IP Code).

This certifies the AirTec LX enclosure resists dust and water ingress and protects operators from contact with internal components – critical for ensuring long service life and safe field operation.



## Our offices:

**Lucy Electric:**  
Howland Road  
Thame  
Oxfordshire  
OX9 3UJ. United Kingdom  
t: +44 (0) 1844 267267  
f: +44 (0) 1844 267223

**Lucy Electric Digital Solutions Ltd:**  
Howland Road  
Thame  
Oxfordshire  
OX9 3UJ. United Kingdom  
t: +44 (0) 1268 850000

**Lucy Electric Digital Solutions Ltd:**  
8 Argent Court  
Sylvan Way  
Southfields Business Park  
Basildon  
Essex SS15 6TH  
t: +44 (0) 1268 968922

**Lucy Electric Digital Solutions Ltd:**  
607 Delta  
Welton Road  
Swindon  
SN5 7XF  
t: +44 (0) 1268 850000

**Lucy Middle East FZE:**  
N400 Road, JAFZA North,  
Plot MO 0161, P.O. Box 17335,  
Jebel Ali, Dubai, UAE  
t: 04-8129999  
f: 04-8129900

**Lucy Switchgear (FZE):**  
PO Box 17709, Plot No:  
M00409, Jebel Ali Free  
Zone, Dubai  
United Arab Emirates  
t: +971 @ 8080333 ext. 6261  
f: +971 @ 8080444

**Lucy Electric India Private Ltd:**  
Zone South Sales Office 79/2,  
City Centre, 4th Floor  
Hennur-Bellary Outer Ring  
Road, Opp. Hebbal BMTC  
Bus Depot, Bangalore -  
560024 Karnataka, India

**Lucy Electric India Private Ltd:**  
F-10, MIDC  
Ambad  
Nasik 422010  
India  
t: +91 253 2381603

**Lucy Electric Manufacturing & Technologies Private Ltd:**  
R.S. No: 26-30, Village  
Noorpura Post : Baska  
besides Polycab, Halol  
Baroda Toll Road, Taluka  
Halol, District: Panchmahal,  
GUJARAT 389350. India  
tel/fax: +91 2676 304901/2

**Lucy Electric India Private Ltd:**  
2B - 46 & 47, 2nd Floor,  
Phoenix Paragon Plaza  
LBS Marg, Kurla West  
Mumbai 400070  
Maharashtra, India  
t: +91 22 62366616

**Lucy Electric India Private Ltd:**  
Zone North Sales Office  
4B/06, 4th Floor, Crown Plaza  
27/5 Mathura Road, Sector  
15A Faridabad - 121007  
Near Neelam Chowk Ajrona  
Metro Station, Haryana  
India

**Lucy Electric (Thailand) Ltd:**  
388 Exchange Tower, 37th  
Floor Unit 3702, Sukhumvit  
Road, Klongtoey Sub district,  
Klongtoey District, Bangkok,  
10110, Thailand  
t: +66(02) 663 4290  
Email: salesthailand@  
lucyelectric.com

**Lucy Electric (Thailand) Ltd:**  
500/64 M.3  
Hemaraj Eastern Seaboard  
Industrial Estate, (Free Zone)  
Tasit, Pluakdeang Rayong  
21140  
t: + 66 (0)33 684 333  
Ext. 6000  
Email: salesthailand@  
lucyelectric.com

**Lucy Asia Pacific Sdn Bhd (LAP):**  
L11-07 & L11-08, Level 11  
PJX HM Shah Tower  
No 16A, Persiaran Barat  
46050 Petaling Jaya Selangor  
t: +603 74910700  
Email: salesMalaysia@  
lucygroup.com

**Lucy Switchgear Arabia Co. Ltd:**  
Riyadh Office, Short Address:  
RUQB6171, Building No:6171  
Said Bin Zaid Street  
Secondary No: 2836  
Qurtubah Dist. Postal code:  
13245 First Floor Office No: 21  
City: Riyadh, Kingdom of  
Saudi Arabia

**Lucy Switchgear Arabia Co. Ltd:**  
Dhahran Factory, Short  
Address: ELDA3362  
Building No:3362,  
Al Widad Street  
Secondary No: 7357 Adh  
Dhahran Industrial Dist.  
Postal code: 34521  
City: Dhahran, Kingdom  
of Saudi Arabia

**Lucy Switchgear Arabia Co. Ltd:**  
Jeddah Office,  
Short Address: JERA4039  
Building No:4039 Qasim  
Zinah Street  
Secondary No:8781  
Ar Rawdah Dist.  
Postal code: 23434  
City: Jeddah, Kingdom  
of Saudi Arabia

**Lucy Electric South Africa (Pty) Ltd:**  
3 Sacks Circle,  
Bellville South  
Cape Town 7530,  
South Africa  
t: +27(0)11 0257490

**Lucy Electric East Africa:**  
13th Floor Landmark Plaza  
Argwings Khodhek Road  
PO Box 00606  
Nairobi  
Kenya  
t: +254 (20) 20 3673 927

**Lucy Electric South Africa (Pty) Ltd:**  
Unit 12 & 13, Block C,  
Honeydew Business Park,  
1503 Citrus Street, Laser Park  
Honeydew 2170  
South Africa  
t: +27(0)11 0257490

**Lucy Equipamentos Elétricos Ltda:**  
Av. das Araucárias 2558  
Thomaz Coelho  
CEP 83707-067  
Araucária  
Paraná State, Brazil  
t: +55 (41) 2106 2801

**Lucy Electric Australasia Pty Ltd:**  
Jubilee Place,  
470 Saint Pauls Terrace  
Fortitude Valley, 4006 QLD  
Australia  
t: +61 467 237 879  
Email: salesaustralia@  
lucyelectric.com

**Lucy Electric EV Infrastructure Ltd:**  
Station Road  
Sowerby Bridge  
West Yorkshire, HX6 3AF  
t: +44 (0)1422 553 000

**Lucy Electric Energy Services Ltd:**  
Howland Road  
Thame  
Oxfordshire  
OX9 3UJ. United Kingdom  
t: +44 (0)1844 267 256

### Disclaimer

Lucy Electric has a policy of continuous research and development and accordingly reserves the right to change the design and specification of its products without prior notice.