
BE Group
LET'S
POWER
UP TOMORROW
BE BATTERY ELECTRIC
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BE lite Technologies (Pty) Ltd
BE Mobile

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Design for the Future - with alignment to the Global ESG Goals.



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ABOUT US

Underground railway control systems manufacturer Battery Electric is a proudly South African company with a focus on the design and development of microprocessor-controlled underground mine locomotive controllers for battery, overhead trolley line and hydrogen fuel cell powered systems.

Through strategic industry alliances, Battery Electric has developed exciting new technology applications to ensure a safe and eco-friendly underground mining environment.

The company designs and manufactures microprocessor IGBT modular Locomotive controllers that can be integrated with Management Systems, Proximity Detection systems (PDS) and Stored Energy Mechanical Brake (SEMB) systems to enhance safety management in the mining industry.

In addition to the controllers, Battery Electric designs and develops traction battery chargers, traction transformers-rectifier sets with traction trolley line 3-shot auto reclose protection units, including custom designed power electronic equipment.

The SANS and ISO compliant company has an international market footprint, operating in Zambia, Zimbabwe and Botswana, in Africa; Peru, Chile and Mexico, in South America; Canada and Miami, in North America; as well as in Russia and the Philippines.

STRATEGIC PARTNERS

BG Locomotives

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MAXUS X
THE ULTIMATE IN TRACTION CONTROL

Maxus X Handheld



- Battery powered
- Tilt detection ensures that unit turns off when not being used
- Buzzer and vibration for operator feedback.
- E-stop latch safety protocol ensures that the operator clears E-stop command before continuing operation
- Digital Guard Control (DGC) mode — handheld operator gives instruction to vehicle operator
- Control mode — handheld operator can control the vehicle without vehicle operator feedback
- Vandal proof interface buttons
- Interfaces docking plate for easy charging
- In field firmware updates
- Automated power-down to save battery life and increase remote operation time

LOGGING & REPORTING:

1. Maxus X will log each event as its status changes (log-on-change)
2. Maxus X will also log analogue values of:
   - Traction battery voltage
   - Control handle %
   - Supply voltage
   - Internal voltages
   - Armature voltage and current
   - Speed
   - RF Link quality
3. Reporting can help indicate, among others:
   - unsafe driver behaviour
   - machine utilisation
   - the impact of PDS detections on productivity

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MAXUS X

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Maxus X is a 3rd generation management and control system designed for underground rail bound equipment. It is a high-end multifunction man-machine interface that provides critical information in a simple manner to a vehicle operator. The unit controls all aspects around the operation of underground locomotives. The unit is configurable and expandable allowing upgrades at minimal cost.

FEATURES

1. Interface
   - 7" full colour LCD
   - Speaker for audio feedback
   - 2 RGB LED's
   - 4 Buttons
   - 1 Bi-colour LED (Button 1)
2. Connectivity
   - USB
   - Wi-Fi
   - 3x CAN bus
   - Ethernet
3. Licence card reader
4. IP66 Enclosure
5. Expansion bays
6. In-field maintenance:
   - Expansion module replacement
   - USB port replacement
   - Firmware upgrades through USB and Wi-Fi
   - Parameter update through USB and Wi-Fi
   - On-screen parameter configuration

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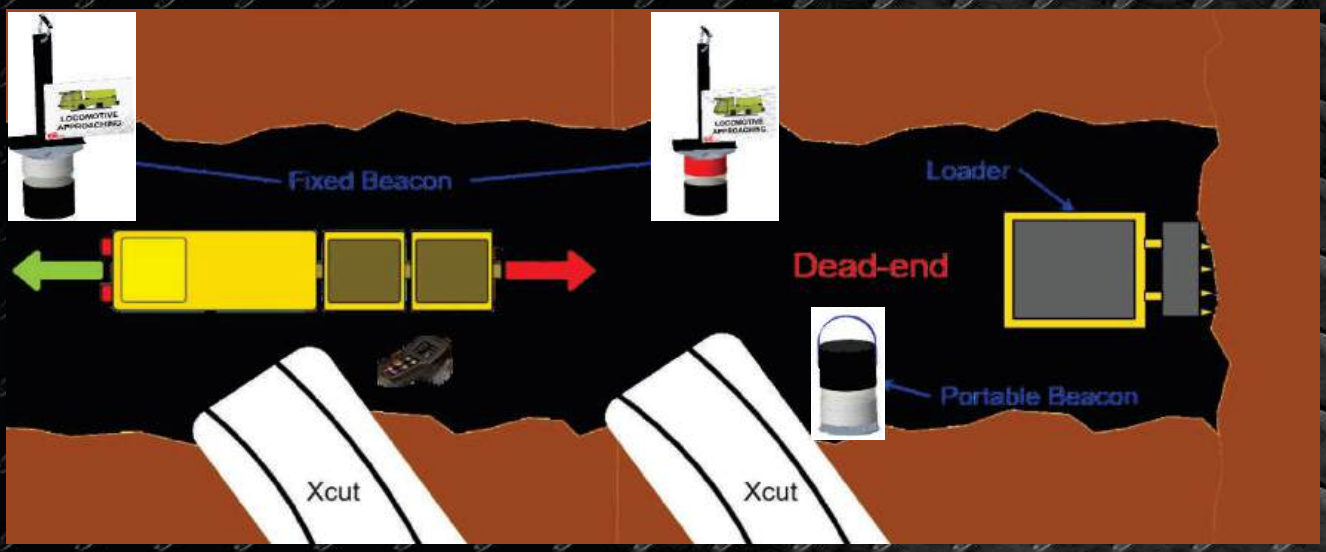
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Development End Detection

When the locomotive is travelling towards the dead end in order to load hoppers, the operator does not have line of sight to the loader operator. This poses a significant risk as the driver will not be able to react to hazardous scenarios, such as a pedestrian being in the way of the travelling locomotive.



The Pulse module sends and receives RF messages from RF tags found in beacons and in the cap lamp of the loader operator and communicates these to the Maxus X unit.

The Maxus X unit analyzes RF messages and enforces rules, based on set parameters, by communicating to the ICON controller.

The loader operator cap lamp turns amber when RF signals are received from fixed or portable beacons. The loader operator cap lamp turns red and sounds a buzzer when receiving RF signals from a beacon and a locomotive
The portable and fixed beacons flash red and sounds a warning siren when RF communication from a locomotive is received.

The Maxus X unit visually displays the RF communication received with a picture illustration on the screen to warn the locomotive driver.

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Vehicle To Pedestrian Detection

The solution provides visual and audible feedback to pedestrians when in proximity of equipped locomotives. The solution forms part of the proximity detection portfolio which provides detection capability between pedestrians and locomotives fitted with a proximity detection system such as the Maxus X.



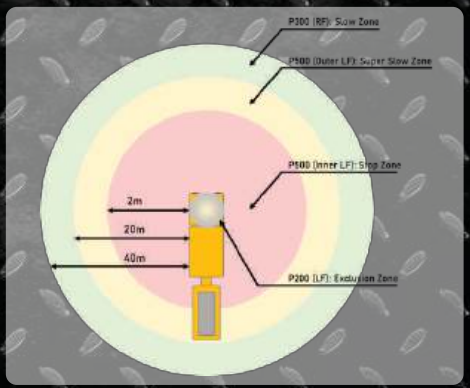


Pulse Tag Range

The pulse range are transponders that can broadcast RFID packets or relay information of nearby devices to a management system such as the Maxus X. It is suitable to be fitted to a locomotive or areas within the mining environment.

The cap-lamp solution is an integrated assembly of the pulse tag range into an existing cap-lamp. It is suitable for pedestrians to use.

By using different products from the proximity detection portfolio unique detection and exclusion zones can be created





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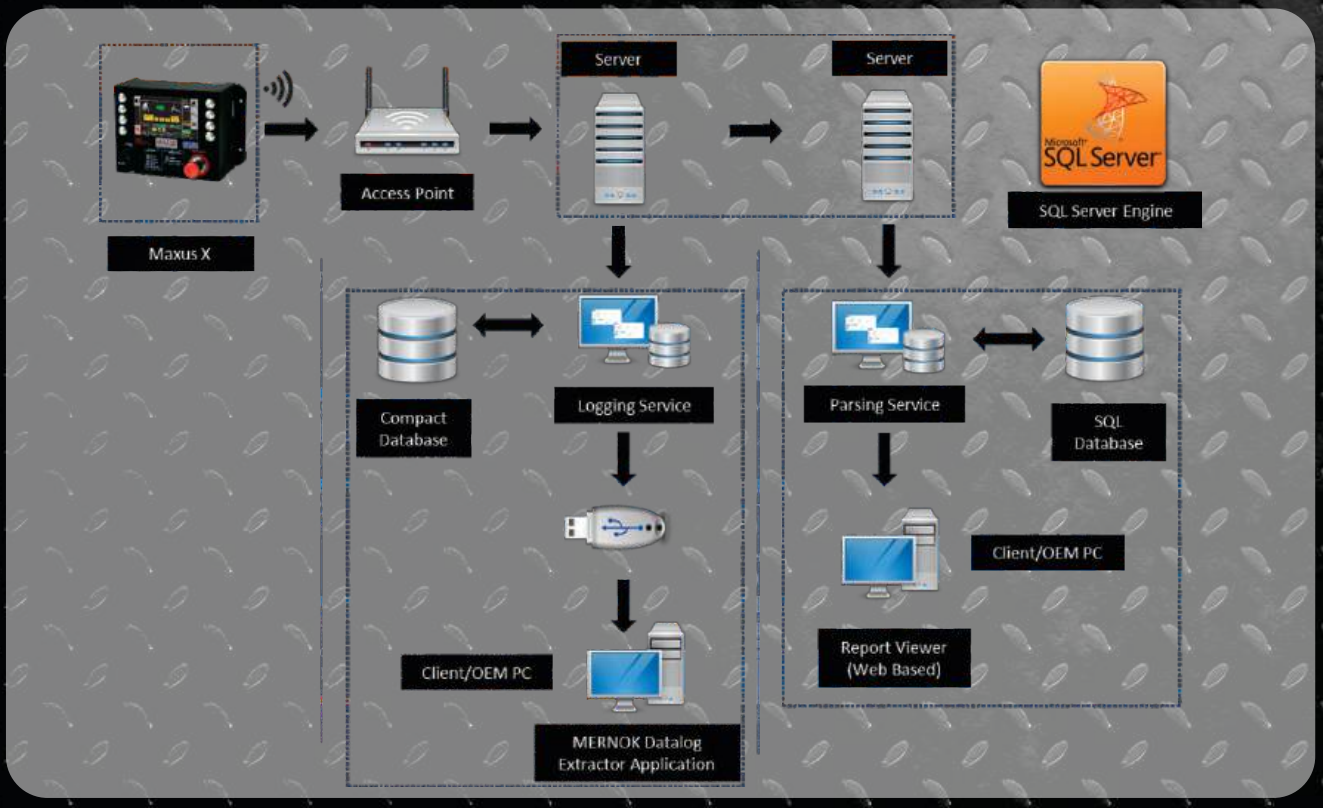
MAXUS X
THE ULTIMATE IN TRACTION CONTROL

Command Suite

The collection and analysis of data is a critical tool in modern mining to better understand operations and improve efficiency and safety. It is also one of the first steps required for the imminent way forward of automation.

Command Suite is a complete client solution from gathering and centralization of fleet (locomotive) data, to automated emailing of specific reports to clients for analysis. The analysis and feedback reports can assist with profiling of operator behavior and determining equipment utilization.

Command Suite can be hosted on a client server or a virtual cloud server. A simple dashboard easily navigates the user to the required information. We offer remote support as well as on site support.



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Card Reader

DESCRIPTION

The Cardreader is an intelligent RFID access control device. Its original design was to allow underground locomotive drivers to access their equipment by means of a 13.5 MHz Mifare 4K Passive smart card. Cardreader-002 is the second generation of this system. Some updates to the system were done to give the user even more control and connectivity. Some of these updates are:

- Addition of CAN bus.
- Addition of Hot card list.
- Addition of Wi-Fi.
- Service interval function.
- Site codes and Machine types.
- License card user name.
- Warning date.
- Expiry date.
- Present to activate time function.

FEATURES

The Reader Unit compares the following to the license card to perform different license limitations:

- License type - Defines the user license i.e. Engineer, Foreman, Electrician, Driver or Temporary card holder.
- Customer code - Unique to individual customer.
- Site code - Specifies the site/work area at which the unit is used and user my access.
- Machine type - Defines the type of machine the reader unit is installed on.
- Unit ID - Limits the user to only access a certain amount of machines of same type.
- Service intervals - Can be enabled to ensure servicing of equipment.
- Warning date - A warn limit provided to ensure that the user renew the license before the Expiry date.
- Expiry date - Expiry date must be set on license card, if license is not renewed the unit will not allow access to this user any more.

Card Reader System provides two types of Data logs:

- Valid Transactions on Unit Last 20 transactions with time stamps and usage time.
- Invalid Transitions on Unit Last 20 transactions with time stamps and reason for no access.
- Valid Transitions on Card - Last 7 Units the card was used on and had access.
- Invalid Transitions on Card - Last 7 Units the card was used on and had no access.







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Icon 3 IGBT-Controller

A Solid State DC Motor Controller based on the IGBT Power Semiconductor Technology, utilizing Microprocessor Control Technology to control the main IGBT power semiconductor.

The ICON 3 contains a unique CAN BUS Data Communication feature for improving control reliability.

ADVANTAGES

· Upgradable to incorporate a PROXIMITY DETECTION SYSTEM (PDS).
· Full remote capabilities for the "New Era" front driven train concept.

The simplified modular concept now comprises a programmable control computer (Logic), IGBT Power Module, a new generation "Pot-block" drivers control handle, a new generation Battery Electric "Driver Interface", Mechanical Brake Interface and Auto Light Switching Interface.

SANS 1809:2012 compliant (Fail-safe underground mine locomotive control systems).

SYSTEM SAFETY

- IGBT Power Semiconductor Technology
- Remote Controllable
- Electric braking:
  - ↑ Emergency braking
  - ↑ Controlled resistive braking
  - ↑ Neutral braking
- SEMB - Stored Energy Mechanical Brake Interface and Monitoring
- Speed limiter
- Safety control handle with return to neutral
- Vigilance control
- Auto shut-down
- Emergency "stop" latching push button
- Access control (Smart card)

System Protection

- Stall protection
- "Thermal" overload protection
- Operator interface with fault indication
- Earth fault protection (di/dt)
- Isolated power supply
- Jogging prevention
- Voltage Range 60 to 400Vdc
- Battery over-discharge protection @ 80% of discharge
- Housing 3CR12 corrosion resistant steel

System Management

- "Pre-use" diagnostics
- In-circuit programming
- Modular construction
- Single and dual locomotive control

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DC⚡AC - Switching Battery

The DC-AC switching battery allows dual operating voltages 120V for traditional DC driven locomotives and 360V for new generation AC driven locomotives. This allows a futureproof and seamless integration into any system configuration.

The DC-AC switching battery charges at higher voltages and lower currents thereby reducing charger sizes and costs.

Designed for resilience and reliability, the DC-AC is operable in harsh mining conditions of extreme temperatures and vibrations. DC-AC switching battery utilises Lithium-ion technology enabling higher power density and minimal condition based maintenance and handling. The battery monitoring system has cell level monitoring to ensure safe and reliable usage. Proactive remote monitoring ensures smooth operation, minimizing downtime and maximizing productivity.

Features:

- Dual operating voltages
- Monitors cell temperature
- Locomotive can be upgraded from diesel to AC without the need for a new battery
- Individual cell monitoring that reports cell voltage and SOC
- Active balancing of cells increasing cell life and capacity
- Reports and analysis live data to a remote monitoring device
- Alert maintenance and reduce downtime.
- Suitable for colder environments
- Earth fault detection
- Dual isolation protection
- No handling or moving of batteries
- No infrastructure required
- Faster charging times maximizing shaft production and optimal economic production

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New Generation AC Locomotive

The modernised control systems significantly improves safety and management of the machines.

The new AC locomotive utilises the existing chassis to unlock the benefits of a futureproof design.

The new AC locomotive is available for all weight classes and reduces carbon emissions and maintenance requirements.

BE Mobile



Advanced Lithium Battery with long-lasting power at a reduced size and faster charging capabilities.

Integrated high frequency onboard charger and no special infrastructure is needed.



Stay connected and informed with real-time data with the integrated data logging and communication.

Our updated controls allow for seamless and safe locomotive control



Maintenance-Free Electric Drivetrain with only a yearly gear box oil inspection.

The AC Loco is optimized for smooth and powerful performance with the reduction gearbox



The AC loco features regenerative braking allowing the battery to charge while braking.

Precision control is achieved with direct speed control

Harnessing a impressive 20% power regeneration, the regenerative braking on the locomotive reduces power consumption and also recharges the battery.

Leading to even greater energy savings, this system will reduce the total energy expenditure while proactively assisting the mine in reaching net-zero status.

By eliminating the traditional diesel engine, production of hazardous CO2 gases is eliminated, and the heat output is also reduced. This twin benefit eases the load on shaft ventilation systems, leading to significant energy savings and fostering a more comfortable work environment underground.

It's a seamless solution that not only protects the environment but also simplifies your processes, enhancing overall efficiency and safety.

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Conversion Locomotive

The conversion AC locomotive replaces existing diesel powered and dc driven machines. With a compatible AC drive the locomotive enables regeneration for increased efficiency.

Modernised control systems significantly improves safety and management of the machines.

The conversion AC locomotive utilises the existing chassis to unlock the benefits of a futureproof design. The new ac locomotive is available for all weight classes and reduces carbon emissions and maintenance requirements.

Features:

- Lithium Battery
- 7" Human Machine Interface
- Key Switch or License Card Activation
- Joystick Controller with Dead-Man switch operation
- 12V Auxiliary Battery
- High Frequency On-Board Charger
- Liquid Cooling System
- Pegasus Vehicle Controller
- Auto-Switching Headlights & Warning Light
- Auto-Switching Siren
- Compact Bosch AC Motor

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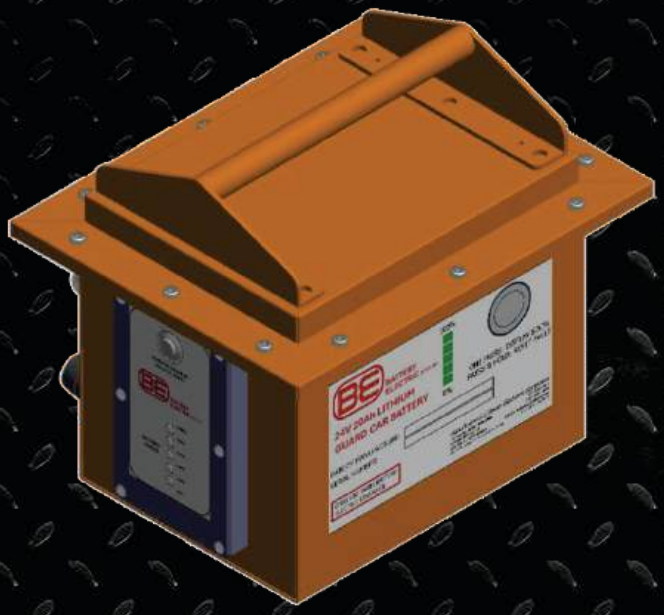
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Lithium Guard Car Battery

The Lithium guard car battery pack, is a powerful 24V, 20Ah battery designed specifically for guard car operations.

Featuring advanced Lithium LiFePO4 chemistry, this battery charges faster and outperforms traditional lead-acid batteries, ensuring your guard cars stay operational longer and more efficiently. SOC monitoring and current protection ensures maximum product life.

Ergonomically designed for weight savings compared to lead-acid, the battery reduces strain on users.

Applications:

- Locomotive guard car battery
- Operation of 24V systems with a load under 8A

Features:

- LED state of charge indicators
- Fuse protection
- State of charge and reset button
- Integrated battery management system and charge controller
- Corrosive resistant sheet metal enclosure
- Increased durability and deep cycle ability for heavy demand applications
- Reduced weight preventing strain on users
- Environmentally friendly and easy to recycle

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BG Locomotives



Braking System



The brake control manifold controls the entire brake system containing all the necessary safety and bleed-down valves, and replacing any outdated systems.

It seamlessly integrates with existing hydraulic systems in diesel locomotives with only an additional pump required in battery locomotives.



Double acting spring applied and hydraulicly released braking cylinder.

Brakes with the force of a coil spring. Comes with the option of bevel type washers or self adjusting and maintains braking force even if the spring collapses. The system additionally includes a mechanical release pump to release the brakes in case of failures.



A hydraulic oil accumulator maintains sufficient system pressure to allow for braking even in the case of pump failure

Expertly designed by BG Locomotives, our locomotive double fail safe braking system ensures safety, reliability and performance.

A trusted system, currently operating on numerous underground locomotives with a proven track record.

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HV Model P33

Features:

- Variable input of 525Vac or 400Vac
- 125kW charging output
- DC to DC optional output for direct fast charging.
- State of charge monitoring for each charging connection.
- 10" HMI user interface
- Various storage options of 192kWh, 214kWh, 259kWh and 288kWh
- Modularly designed for simple installation with restricted hoist gear
- Ground clearance to safeguard against flooding
- IP65 rating for harsh mine conditions
- Option of mild steel or 3CR12

The underground Lithium-ion HV unit is specifically designed to store electrical energy, enabling the rapid charging of Lithium-ion locomotives in under two hours.

This innovative solution eliminates the need to remove batteries for charging.

With efficient energy storage, the HV unit curtails the peak load demands that usually occur during lead-acid charging.

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Battery Electric in Partnership with various roll players presents an electric utility vehicle with a load body that can be adapted for a variety of functions. The vehicle is fully electric with a high-powered electric & mechanical drivetrain. The vehicle can transport a 10 Ton payload and travel at speeds of up to 20km/h.

A full colour dashboard with information allows the driver to stay informed on vehicle health and performance. Brakes are fail-to-safe with hydraulics released operations. Cabin is forward seated for maximum visibility, heavy-duty adjustable suspension seat with 3-point seat belt. All controls and gauges located within easy reach and view of operator.

FEATURES

- All Electric drivetrain
- Lithium Battery
- 7" Human Machine Interface
- High Frequency On-Board Charger
- Integrated Liquid Cooling System
- BEV Vehicle Controller
- Regenerative Braking
- Centralised grease manifold for lubrication
- 2 x Wheel stop blocks with brackets & holders
- 1x Spare wheel assembly
- 1 x 9 Kg Fire extinguisher, chemical dry powder.
- 1 x Combined (Operation/Spares) Manual

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BElite Technologies

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12W LED LOCO HEAD LIGHT



The Locomotive head light is a robust, water resistant luminaire fit for tough, humid and harsh environments. 4-Stage lighting (white spot, red, red flashing, battery back up red flashing) allows the user to use the luminaire in various applications. Applications include underground and above ground locomotives, guard car, mining vehicle, hopper lights and more. Generation 1 and 2 available in either grey or black anodized aluminium housings. Various colour spectrums are available, with or without battery back up and flange. Typical lux levels(Average values); 80 Lux at 10m and 20 Lux at 20m.

POWER: 12W, 24 VDC, 0.5A @ 24 VDC

DIMENSIONS: 114mm (H), 80mm (W), 126mm (D)

LIGHT ANGLE: 8°

TECH: LED's OSRAM, DRIVER BElite

LIFE SPAN: 17500Hr, Ta=30°C @ L70

WEIGHT: 0.9kg

LUMENS: White: 144 lm/W, White: 1600 lm, Red: 104 lm/W, Red: 200 lm

EFFECIENCY: >75%

IP RATING: IP65

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CORRELATED COLOR TEMPERATURE

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72W LED CURVED FLOODLIGHT



This design features an array of anodized aluminium extrusions and UHI with stainless steel side plates and brackets. Multiple optic options are available ranging from 30°/60° or wide angle diffused. Applications include security lighting, perimeter lighting, workplace lighting, outdoor lighting, camp lighting and more. Can be provided as 12/ 24/ 48VDC or 32VAC and 220VAC.

POWER
12,24 & 48 VDC
8.4 A @ 12 VDC
4.2 A @ 24 VDC
2.1 A @ 48 VDC
1A @ 220VAC

DIMENSIONS
300mm (H)
255mm (W)
150mm (D)

LIGHT ANGLE
30°/60°

TECH
LED's
OSRAM

LIFE SPAN
17500Hr
Ta=30°C @
L70

WEIGHT
3.5kg

LUMENS
165 lm/W
11 880 lm

EFFECIENCY
>75%

IP RATING
IP65

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CCT 4000K

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192W LED HIGHMAST



The 192W Highmast is a great replacement for old 400W MV/MH/HPS lighting technologies. With a higher lumen per watt ratio and higher lumen output you can save up to 70% electricity. With a selection of different lenses for different areas and applications it makes a great luminaire that will suit your lighting needs. Applications include factory, warehouse, workplace, outdoor lighting and more.

POWER
192W
100-224 VAC
50hz
2A @ 224 VAC

DIMENSIONS
490mm (H)
470mm (W)
80mm (D)

LIGHT ANGLE
30°/60°

TECH
LED's
OSRAM
DRIVER
MEAN WELL

LIFE SPAN
50000Hr
Ta=30°C @
L70

WEIGHT
11.5kg

LUMENS
165 lm/W
27000 lm

EFFECIENCY
>90%

IP RATING
IP65

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360W LED HIGHMAST



The 360W Highmast Light is a great replacement for old 600W-1000W MV/MH/HPS lighting technologies. With a higher lumen per watt ratio and higher lumen output you can save up to 70% electricity. Optic options are available in 30°/60° or wide angle diffused and the light can be flat or curved 180 degrees for wider light coverage. Applications include factory, warehouse, workplace, outdoor lighting, high mast lighting and more.

POWER: 360W, 100-240 VAC, 50hz, 2A @ 224 VAC

DIMENSIONS: 620mm (H), 490mm (W), 80mm (D)

LIGHT ANGLE: 30°/60°

TECH: LED's OSRAM, DRIVER MEAN WELL

LIFE SPAN: 17500Hr, Ta=30°C @ L70

WEIGHT: 18kg

LUMENS: 165 lm/W, 59000 lm

EFFECIENCY: >90%

IP RATING: IP65

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CCT 4000K

CORRELATED COLOR TEMPERATURE

533 Malcolm Moodie Crescent Jet Park, Boksburg, South Africa
+27 (0)11 397 6190 | battelec@iafrica.com

BElite Technologies

DISTRIBUTED BY BE BATTERY ELECTRIC

192/360W LED DRAGLINE



The 192W and 360W Vibration Proof Light is a great replacement for old 600W-1000W MV/MH/HPS lighting technologies. With a higher lumen per watt ratio and higher lumen output you can save up to 70% electricity. Optic options are available in 30°/60° or wide angle diffused. Applications include factory, warehouse, workplace, outdoor lighting, high mast lighting and more.

POWER
192/360W
100-240 VAC
50hz
2A @ 224 VAC

DIMENSIONS
480/620mm (H)
470/490mm (W)

LIGHT ANGLE
30°/60°

TECH
LED's
OSRAM
DRIVER
MW MEAN WELL

LIFE SPAN
17500Hr
Ta=30°C @
L70

WEIGHT
25/30kg

165 lm/W
31680/59000lm

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12W LED WARNING LIGHT



Multiple colour options are available including, red, amber, white, blue and green. The robust aluminium enclosure makes it suitable for harsh conditions. Single-, Bi-, Tri- and Quad-colour versions are available where different flashing sequences can be programmed. Lights are available with or without sirens. Applications include mining, industrial, construction and any other application where indicative lighting is required.

POWER: 12W, 24 VDC, 0.34A @ 24 VDC

DIMENSIONS: Model-dependent

LIGHT ANGLE: 360°

TECH: LED's, OSRAM, DRIVER, BElite

LIFE SPAN: 17500Hr, Ta=30°C @ L70

WEIGHT: Model-dependent

LUMENS: 104 lm/W, 800 lm

EFFECIENCY: >75%

IP RATING: IP65

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8W LED BEACON LIGHT



Beacon lights are multi colour warning lights used where indicative flashing lights are required. Single-, bi-, tri- and quad-colour versions are available and colours range from red, amber, blue, white or green. Colour spectrums and flash sequences can be programmed according to requirement. Can be used with or without a siren. Applications include security warning lighting, moving machinery lighting, tower and mast lighting as well as indicative lighting in high risk areas or construction sites.

POWER: 110/220 VAC 50Hz 0.05A @ 220 VAC

DIMENSIONS: 130mm (H) 70mm (W)

LIGHT ANGLE: 360°

TECH: LED's OSRAM DRIVER BElite

LIFE SPAN: 8750Hr Ta=30°C @ L70

WEIGHT: 0.80kg

LUMENS: 144lm/W

EFFECIENCY: >75%

IP RATING: IP65

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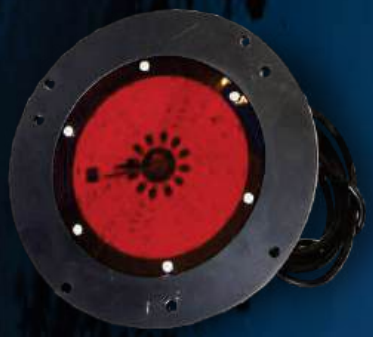
CORRELATED COLOR TEMPERATURE

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BElite Technologies

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4W LED TAILLIGHT



The 4W vehicle taillight features a 10mm anodized aluminium design and receded UHI, allowing for a very robust design and durability. It is ideal for trucks, mining vehicles and large scale machines exposed to harsh conditions. It is available in 12/24/48 VDC. Various colour spectrums available.

POWER
12W
12 VDC
1A @ 12 VDC

DIMENSIONS
190mm (H)
190mm (W)
11mm (D)

LIGHT ANGLE
160°

TECH
LED's
OSRAM
DRIVER
BElite

LIFE SPAN
17500Hr
Ta=30°C @
L70

WEIGHT
0.5kg

LUMENS
144 lm/W
400lm

EFFECIENCY
>75%

IP RATING
IP65

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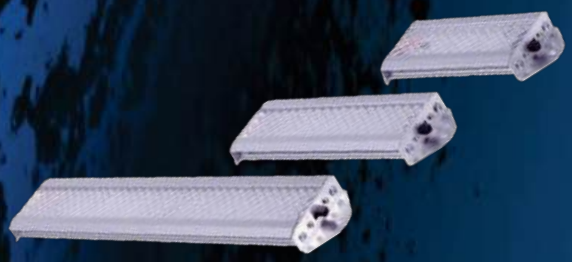
CORRELATED COLOR TEMPERATURE

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BElite Technologies

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LED LOW PROFILE LIGHTS



This design features an anodized aluminium extrusions and a clear, diffused or prismatic lens. Multiple wattage options are available ranging from 24W/42W or 60W. Various voltage supplies are available, including 12/24/48VDC or 220VAC. Applications include workshop lighting, camp lighting, cab lighting, corridor lighting and more. Lights can be supplied as lights with or without drivers

POWER: Model-dependent

DIMENSIONS: Model-dependent

LIGHT ANGLE: 140°

TECH: LED's OSRAM

LIFE SPAN: 17500Hr Ta=30°C @ L70

WEIGHT: Model-dependent

LUMENS: 165lm/W

EFFECIENCY: >80%

IP RATING: IP65

CCT 4000K



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BE lite Technologies

Mobile Light Trailers

Solar/Generator

MOBILE/STATIONARY LIGHT TRAILERS

Light trailers can be equipped with a generator or solar panels. Inverter and batteries included in a sealed metal container with a screen indicating power level. Overcharge protection included on the charger.
Trailer is specified on area of light coverage, duration of operation and area or application of use, Light trailer can be customised to customers unique requirement.
Trailers are durable and solar panels vibration resistant for transport across rugged terrain.
Trailer has a motor controlled telescopic mast.
Ideal for mining, tailings and construction areas where temporary lights are required for long periods without the cost of cabling.
Solar option is an economically efficient and environmentally friendly technology, with minimal maintenance and no fuel costs.



POWER 12, 24, 48VDC Or 220VAC

IP RATING IP65

LUMENS 165 lm/W 59 000 lm

TEC LED's OSRAM DRIVER BE lite

CCT 4000K



CORRELATED COLOR TEMPERATURE

7 AFFORDABLE AND CLEAN ENERGY

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12 RESPONSIBLE CONSUMPTION AND PRODUCTION

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

13 CLIMATE ACTION

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ESG Pillar Summary

BATTERY ELECTRIC PTY LTD

www.batteryelectric.co.za

Economic Pillar



1. NO POVERTY

- Employment within our group of companies and our continuous skills development projects help alleviate poverty.
- Supplier and enterprise development initiatives that we have in place to support small businesses create sustainable employment opportunities for the communities surrounding our business ventures.
- Product design and development considers the ability to upskill employees and create new job opportunities for school leavers.



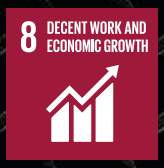
2. ZERO HUNGER

- As a company we support non-government organizations that provide food aid to the most vulnerable communities.
- Through a subsidiary we are also able to assist communities with products that assist them with the growth of their own fruits and vegetables.



3. GOOD HEALTH AND WELL-BEING

- Our business is built on improving the health and safety of underground mine workers, each product we design and supply to our customers is with the aim to make underground mining safer.
- Health and safety audits are done out our operations at least ones a month to ensure our employees operate in the safest environment possible.
- Our technicians working underground go through our mining customers screening on a regular basis to ensure their well-being.



8. DECENT WORK AND ECONOMIC GROWTH

a. Safe work environment and employment conditions are a priority for our company
b. Equal opportunities and treatment of all employees.
c. Well-structured employment policies are in place and communicated with our employees on an ongoing basis.
d. All legislative requirements are adhered to.



9. INDUSTRY, INNOVATION AND INFRASTRUCTURE

a. On going research and development within our organization is a key focus point to incorporate new technologies and to take our business to the next level
b. Our products and services are designed to assist our customer to improve their infrastructure.
c. Ongoing digitalization and automation of equipment to create safer working conditions for our employees and customers and streamline efficiencies.

Environmental Pillar



6. CLEAN WATER AND SANITATION

- To provide clean water and adequate sanitation services to our employees and to ensure that water is used sparingly to avoid unnecessary wastage.
- To dispose of all chemical waste in an environmentally friendly manner to avoid contamination of clean water.



7. AFFORDABLE AND CLEAN ENERGY

a. Our premises are fitted with LED lighting to reduce our energy consumption.
b. We supply solar trailer solutions to our customers to assist with lighting at their remote sites.
c. Provision of safer energy storage for underground power requirements.



12. RESPONSIBLE CONSUMPTION AND PRODUCTION

a. Alignment with all industry standards
b. Responsible consumption and reduction of used chemicals and scrap metals.
c. Site assessments of responsible supply chain.



13. Climate Action

a. Establishment of baseline indicators for scope 1 and scope 2 emissions
b. With our LED and Storage products we assist our customers to lower their consumption to reduce fossil fuel-based energy consumption.



14. Life below water

a. Ongoing assessments and audits to ensure none of our operations or production lines cause any spillage into the underground water supply.



15. Life on Land

a. Reducing the risks associated with contamination of air and water quality by regular assessments and audits of our operations.
b. Responsible disposal of all electronic waste.

Social Pillar



4. Quality Education

- Support of the University of Pretoria, through bursary support for the funding of the next generation of educators and engineers.
- Provision of educational opportunities for learners with disabilities by assisting programs for support of deaf and blind learners.
- In conjunction with our new technology design and development we educate our customers on the use and servicing of new products.
- As a registered MERSETA training office we support and train the next generation of Electronic Equipment Mechanicians
- We provide employee study assistance and support.
- We host learners from various organizations to assist with training and workplace experience.



5. Gender Equality

- Active support of women in industry by providing education and job opportunities for women in manufacturing.
- Our LED lighting solutions and CARD manufacturing processes within our organization are mainly done by women.
- Awareness campaigns to reduce discrimination
- We have strong diversity polices in place to create a company culture of fair job opportunities for all genders
- Full compliance with the South African Employment Equity Act.



10. Reduced inequalities

a. By upskilling and educating people from all walks of life to be able to enter the workforce with the appropriate skills and experience.
b. Fair remuneration policy
c. By taking the bottom-up approach when promoting within the company where possible.
d. Corporate social investment and enterprise development.
e. Compliance with the Broad Based Black Economic Empowerment Act of South Africa.



11. Sustainable cities and communities

a. Enterprise development support and initiatives
b. Supplier development initiatives for small businesses



16. Peace, justice and strong institutions

a. Alignment to the Kind Codes of Corporate Governance
b. Compliance with all labour laws
c. Risk management framework in place
d. Adherence to the Company's Code of Ethical Conduct
e. Compliance with legislation of the countries we export to.



17. Partnerships for the goals

a. Enterprise and supplier development
b. Partnerships with other organizations with similar ESG goals
c. Minerals Council of South Africa
d. Business and community partners
e. Partnerships with universities for support of new entrants into the workforce


Celebrating
36
Years
BE
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ELECTRIC

UNDERGROUND RAILWAY CONTROL SYSTEMS

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