



# ***AMPCONTROL ELECTRIC VEHICLE PACKAGES***

# **ADVANCING BATTERY TECHNOLOGY TO ELECTRIFY UNDERGROUND VEHICLES**

Through radical thinking and collaboration, we've developed the world's first IECEx Group 1 certified electric vehicle, using an Intrinsically Safe traction battery.

Ampcontrol IECEx certified electric vehicle drive systems:

- Are available from Ampcontrol as DRIFTEX an overhaul package, developed in collaboration with Solitech
- For new personnel carrier enquiries please contact Ampcontrol to discuss available options

## **BENEFITS**

- No diesel emissions, in particular no Diesel Particulate Matter (DPM) – an identified Group 2A carcinogen
- Supports site environmental emissions reductions and improvements in social licence
- Heat reduction. Less demand on mine site ventilation
- Noise reduction
- IoT capability
- User customisation available
- Fast charging. Flat to full in 10 minutes, a similar time to refuelling a diesel
- Extensive monitoring
- Zone control
- Speed adjustments configurability





# **WORLD FIRST**

**IECEx GROUP I CERTIFIED ELECTRIC  
VEHICLE, USING AN INTRINSICALLY  
SAFE TRACTION BATTERY**



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## AWARD WINNING

### HEALTH

In recognition of the industry-wide health benefits associated with the removal of diesel particulate matter, DRIFTEX has been awarded for Health Excellence at the NSW Mining HSEC Awards in 2023.

### INNOVATION

Ampcontrol has been named one of Australia's Most Innovative Companies for 2023 by the Australian Financial Review (AFR) for its advanced Australian manufacturing of energy solutions.

The accolade was attributed to the innovation of DRIFTEX, helping to decarbonise and electrify the mining industry.



## CERTIFICATION



Ampcontrol's IECEx Group 1 certified electric vehicle is covered by the following certifications

| Item   | Protection technique | Certificate number  |
|--|----------------------|---------------------|
| Intrinsically Safe Battery Module (ISBM)                       | Ex ia ib             | IECEx ExTC 22.0029X |
| Battery management and interface between the EV Guard and ISBM | Ex ia                | IECEx ExTC 22.0028X |
| Ev guard - battery interface with tripping circuits            | Ex ia                | IECEx ExTC 22.0027X |
| Drain for Ex enclosures that contain fluids                    | Ex d                 | IECEx ExTC 22.0022U |
| Enclosure for battery isolation, control and oil cooling pump  | Ex d s               | IECEx ExTC 21.0006X |
| Enclosure for motor, guards and dashboard                      | Ex d s               | IECEx ExTC 22.0013X |
| Enclosure for Foot pedal interface                             | Ex d                 | IECEx ExTC 22.0001X |

## WORLD FIRST

### IECEx CERTIFIED INTRINSICALLY SAFE TRACTION BATTERY

Certified to operate and remain in Group I hazardous areas. The battery chemistry is designed to be fundamentally stable and is not susceptible to a thermal runaway. Every cell in the battery pack is continuously monitored even when not in use by an Ex ia BMS to ensure safety.

| IECEx Certificate of Conformity   |  |
|---|--|
| INTERNATIONAL ELECTROTECHNICAL COMMISSION<br>IEC Certification System for Explosive Atmospheres<br><small>for rules and details of the IECEx Scheme visit <a href="http://www.iecex.com">www.iecex.com</a></small>  |  |
| Certificate No.:  | IECEx ExTC 22.0029X  |
| Status:   | Current  |
| Date of Issue:  | 2023-09-21   |
| Applicant:  | AmpControl SWG Pty Ltd<br>6 Martin Drive<br>Tomago NSW 2322<br>Australia |
| Equipment:  | Intrinsically Safe Battery Module ISBM                                   |
| Optional accessory:   |  |
| Type of Protection:   | Intrinsic safety 'i'   |
| Marking:  | State A : Ex ia I Ma<br>State B : Ex ib I Mb                             |
| Approved for issue on behalf of the IECEx Certification Body:   | James Bes  |
| Position:   | Certification Authority  |
| Signature:<br>(for printed version)   |  |
| Date:<br>(for printed version)  |  |
| <small>1. This certificate and schedule may only be reproduced in full.<br/>2. This certificate is not transferable and remains the property of the issuing body.<br/>3. The Status and authenticity of this certificate may be verified by visiting <a href="http://www.iecex.com">www.iecex.com</a> or use of this QR Code.</small> |  |
| Certificate issued by:<br><b>Ex Testing and Certification Pty Ltd</b><br>130 Kennington Drive<br>Tomago NSW 2322<br>Australia   |  |
|    |  |
|    |  |



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# DRIFTEX

## MADE TOUGH FOR TOUGH ENVIRONMENTS

Built from a solid, trusted foundation, DRIFTEX our retrofit package re-uses existing assets and offers several benefits over maintaining existing or purchasing new diesel-powered vehicles.

### UPGRADED VEHICLE FEATURES

- Ex ia methane monitor shutdown system
- Extensive system monitoring
- Data logging
- Optional IS WiFi connectivity
- Elimination of diesel particulates
- Lower sound levels dB
- Battery tested to IEC62133-2 for "no fire" and "no explosion"
- IECEx certified battery

### PEAK POWER

Constant 4WD with a total peak power of 200kW distributed evenly across rear and front axles

### PEAK TORQUE

Maximum tractive effort approx. 4500kg

### TOP SPEED

35km/hr at 9,500kg GVM

## SAFETY FIRST

### BRAKES

- Dual braking systems (redundancy)
- Regenerative braking
- Additional layers of protection on Emergency breaks



### PERSONAL IDENTIFICATION SYSTEM

- Safe, secure designated NFC card system



### INTRINSICALLY SAFE (IS) HEADLIGHTS

- Exia
- Hi-low beam
- Multiple colours





## ELECTRIC VEHICLE CHARGING SOLUTIONS

- DC Fast Charging
- Manufactured by Ampcontrol, incorporating world class Tritium and Danfoss technologies
- Standard industry charging protocol
- DRIFTEX flat to full charge in 10 minutes
- Built for any environment, thriving in temperatures from  $-35^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$
- Durable low maintenance design
- CCS2, MCS and mining bespoke connection solutions

Battery electric charging solutions with surface and QDS underground options, from 75kW through to multi megawatt, supplied from 415V AC through to customer specific high voltage options.

Our fixed and relocatable charging solutions offer standard industry charging communication protocol ensuring they're capable of charging your entire electric vehicle fleet.



▲ Surface charger



QDS underground charger on skid



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