

**PRO**  
**ENERGY  
PACK**

**For Commercial, Service and Utility Vehicles**



## INTRODUCTION

The Pro Energy Pack System is designed for professional vehicle applications as an alternative power solution to replace traditional PTO generators. Utilising green energy that's proven to reduce engine idle times, reduce CO2 emissions and reduce your ongoing fuel costs.

The Pro Energy Pack enables fleets to carry out their work without engine idling and promotes a climate positive solution that's futureproof and makes an impact. Complete with high power output, reliable LFP battery technology and fast in-vehicle charging on the go.

Designed for any application and scaled exactly to your needs, the Pro Energy Pack offers flexibility and industrial reliability with no compromises. Ideal for applications that require the use of demanding loads such as air compressors, power tools, refrigerators and even welders.



## **48V SYSTEM ARCHITECTURE**

The Pro Energy Pack adopts a 48V system architecture to minimise energy losses and increase efficiency up to 75% when compared to a 12V-based system. The M48 series of Lithium battery modules prioritise the safe delivery of stored energy and ensure you'll always have access to your system, even in extremely cold temperatures.

## **MAINTENANCE FREE**

All elements of the Pro Energy Pack connect through a central PCU module that allows for complete internal monitoring of the system. This works to automatically optimise performance and always deliver an efficient, hassle-free operation. Complete with sophisticated error protocols to quickly diagnose problems should they arise.

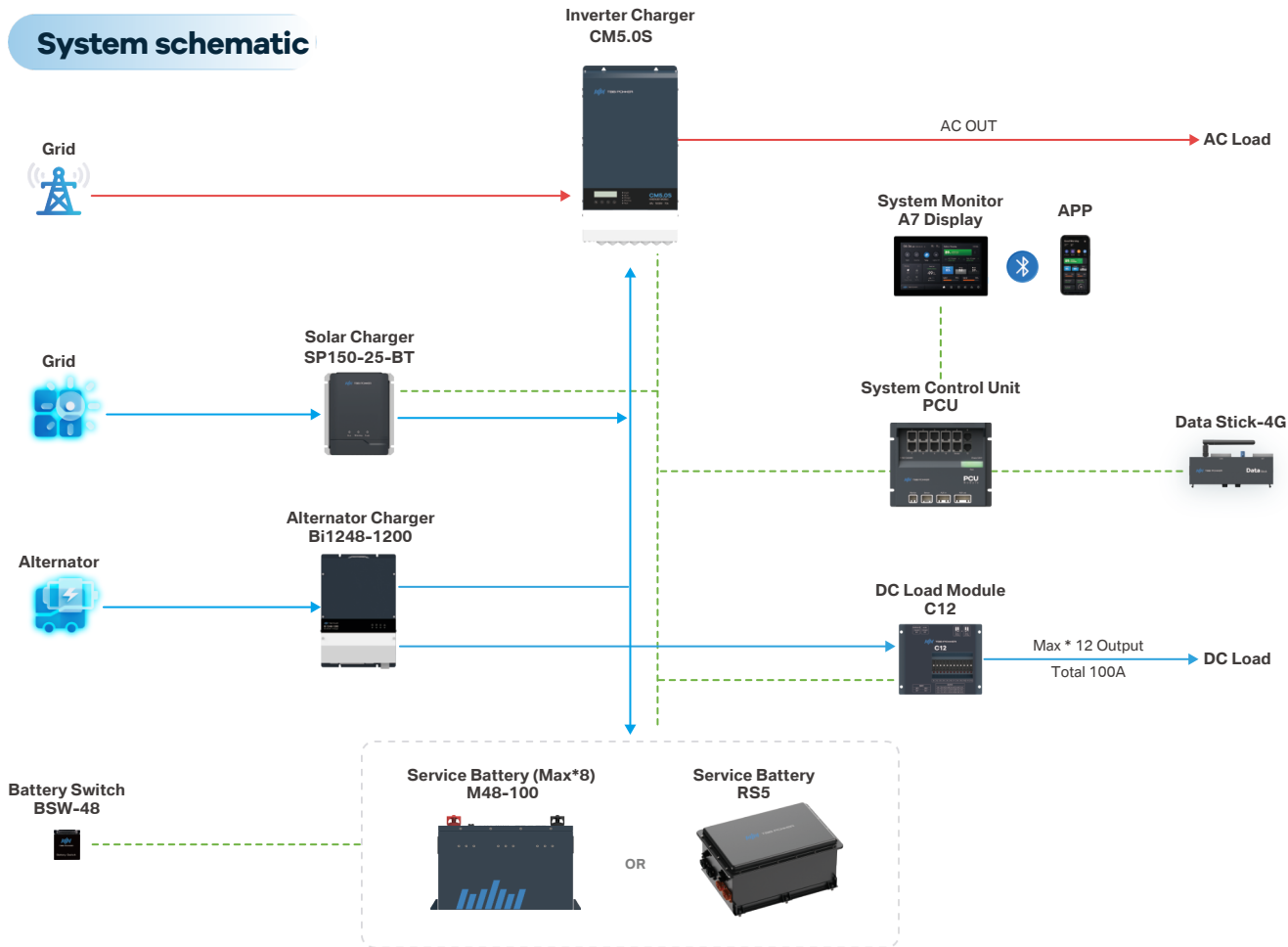
## **EASY TO USE**

The system requires no training to use and is controlled using the A7 touchscreen display. Providing quick access to critical data at a glance and powering loads with a simple button press. You can also connect to the system directly with the Bluetooth companion APP, allowing you to have full functionality of your system entirely from your phone.

## **REMOTE MONITORING**

Every Pro Energy Pack comes equipped with a 4G Data Stick allowing you to view the ongoings of your entire power system, no matter where you are. Using the integrated TBB Fleet platform you'll have live and historic data from every single system and can manage entire vehicle fleets with ease, giving you and your fleet managers total control and peace of mind.

# System schematic





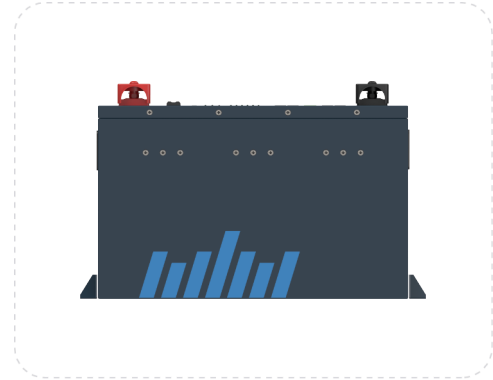
## Kinergier Mobile Inverter-Charger | 48V DC to 230VAC CM3.0S / CM5.0S

- High rated power : 3KW (CM3.0S) or 5KW (CM5.0S)
- Outstanding overload capability to power all types of loads: Compressors, tyre changing equipment, welders, heat guns, power tools, cleaners, microwave ovens etc.
- Extremely low power consumption of just 13W for the CM3.0S and 18W for the CM5.0S
- Integrated fast charger ensures high speed recharging of the lithium modules when connected to shoreline
- Power control and Power assist features
- Very low harmonic distortion of >2% makes it ideal for even the most sensitive of loads
- Fully programmable via TBB Link software
- 8KW option now available with the CC8.0S!



## M Series Lithium Battery M48-100

- High capacity 48V 105Ah 5KWh module
- Long life cycle, over 3000 cycles at 100% DOD at 25°C
- Supports high continuous discharge current (100A Max)
- Built-in BMS with automatic balancing and protection against over-charging, over-discharging, and over-temperature.
- Low weight and space saving design for safe and reliable deployment inside a vehicle
- Built-in heater element powered from charging source supports low temperature charging
- Parallel capability of up to 8 units providing 40KWh of energy storage



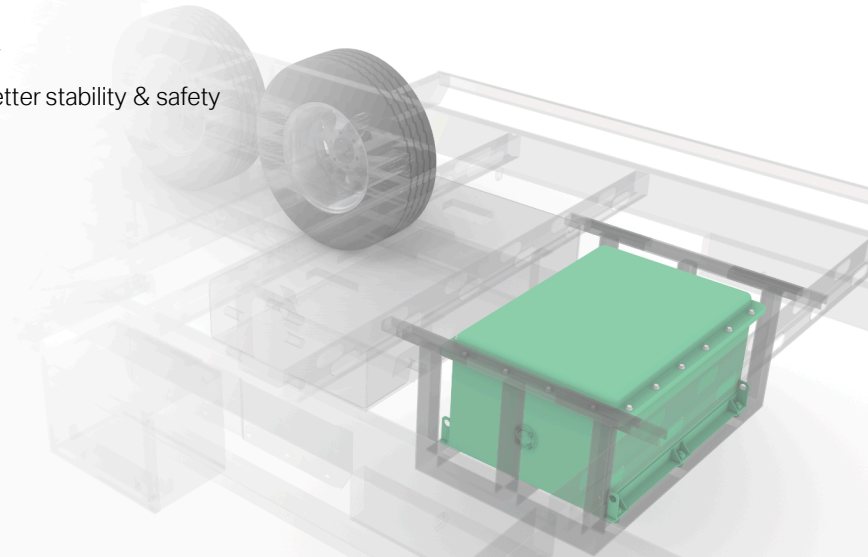
## Programmable DC Load Module C12 / C13

- Rated current is 100A (C12) or 150A (C13)
- Dedicated high-current DC output up to 80A (C13 only)
- Dry contact input control to cut off loads at selected voltages or battery state of charge



## R Series Lithium Battery RS5

- Rated capacity 48V 5KWh
- Long cycle life, over 3000 cycles at 100% DOD at 25°C
- Supports high discharge current up to 100A
- Built-in BMS with automatic balancing and protection against over-charging, over-discharging, over-temperature, etc.
- Built-in heater element to support battery to work at low temperature -30°C
- Built-in IP67 quick connector
- Supports parallel connection to expand capacity
- Chassis-mounted & separated placement for better stability & safety





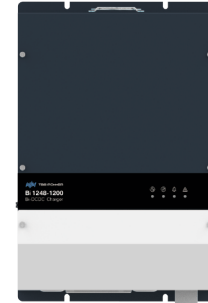
## System Monitor Display A7

- The A7 is a touch screen monitor displaying system information and provides easy control of your loads
- 7" TFT display with a 1024 x 600 resolution
- Visualised graphics for live data analysis and historic records
- Built in Bluetooth support for mobile companion app
- Spring feature for easy mounting and installation
- Multiple communication ports: USB, RS485 and CAN
- Micro SD Card included for expanded data storage



## Sword Series DC-DC Charger BI1248-1200

- Powerful and fast DC-DC charging of 1.2KW
- Bi-directional design - 12V to 48V DC for charging lithium modules and 48V to 12V DC @ 100A to power DC loads when the engine is off
- Compatible with all Euro 6 / Smart alternators
- Non-isolated and high efficiency design of up to 94%
- Automatic wake up function to charge when the engine is started



## Solar Mate MPPT charge controller SP150-25-BT

- Max. PV Open circuit voltage 150Vdc
- Charge current 28V 25A
- High MPPT efficiency up to  $\geq 99.9\%$
- Low idle power consumption at 1.35W
- Fanless and silent design
- Bluetooth APP compatibility for custom programming and monitoring



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# REMOTE MONITORING

## TBB FLEET

TBB Fleet is a centralised, power focused management portal for your fleet operation and included with every Pro Energy Pack System. Providing live and historical data, on an easy to use platform, to keep you informed and in control 24/7.

Access granular data such as battery state of charge, energy consumption and time to go as well as the detailed event log for remote troubleshooting.

Save costs on engineer callouts and routine vehicle maintenance with the integrated warning systems and prevent problems before they arise.

Global 4G connectivity with the 4G Data stick gives you access to your entire fleet from anywhere in the world





## 09 4G DATA STICK

The 4G data stick enables data from the Pro Energy Pack to connect to TBB Fleet, a cloud-based solution for remote monitoring of your system from both a web portal or mobile phone.



## 10 Power Control Unit PCU

- Central control unit to co-ordinate and intelligently manage all the components within the system
- Automatically manages multiple input sources and prioritises charging from green energy
- Collects and compiles all data within the Pro Energy Pack for accurate and consistent records across the A7 display and TBB Fleet platform
- Dry contact for programmable start signal





## Not found what you're looking for?

To find out more about the Pro Energy Pack or to get in touch with us directly, please scan here.



### TBB Power Co., Ltd

[sales@tbbpower.com](mailto:sales@tbbpower.com)

[www.tbbpowermobile.com](http://www.tbbpowermobile.com)

#15, North Shishan Road, Dongfu, Xiamen, China



### Portable Power Technology Ltd

[sales@portablepowertech.com](mailto:sales@portablepowertech.com)

<https://www.portablepowertech.com>

Unit 2 Meadow House Business Centre,  
West Kingsdown, Kent TN15 6ER