DSEPower®

DSE

BATTERY CHARGERS FOR
MULTIPLE APPLICATIONS

UKMADE

OUR MISSION STATEMENT

WE ARE DEDICATED TO BUILDING SUCCESSFUL LONG-TERM RELATIONSHIPS WITH OUR CUSTOMERS AND PARTNERS BY UNDERSTANDING THEIR NEEDS, DELIVERING ADVANCED **CHARGING SOLUTIONS** AND PROVIDING UNRIVALLED SUPPORT SERVICES.

CONTENTS

DSE Battery Charger Technology

DSE**Power® incorporates advanced technologies within the battery charger range: Switch Mode or Switch Mode Intelligent. Chargers are available in 12 and 24-volt variants with a wide number of current output options. This makes the chargers suitable for multiple applications across different industries.**

Switch Mode Battery Chargers SM

Our SM battery chargers deliver a number of advanced features**, including:

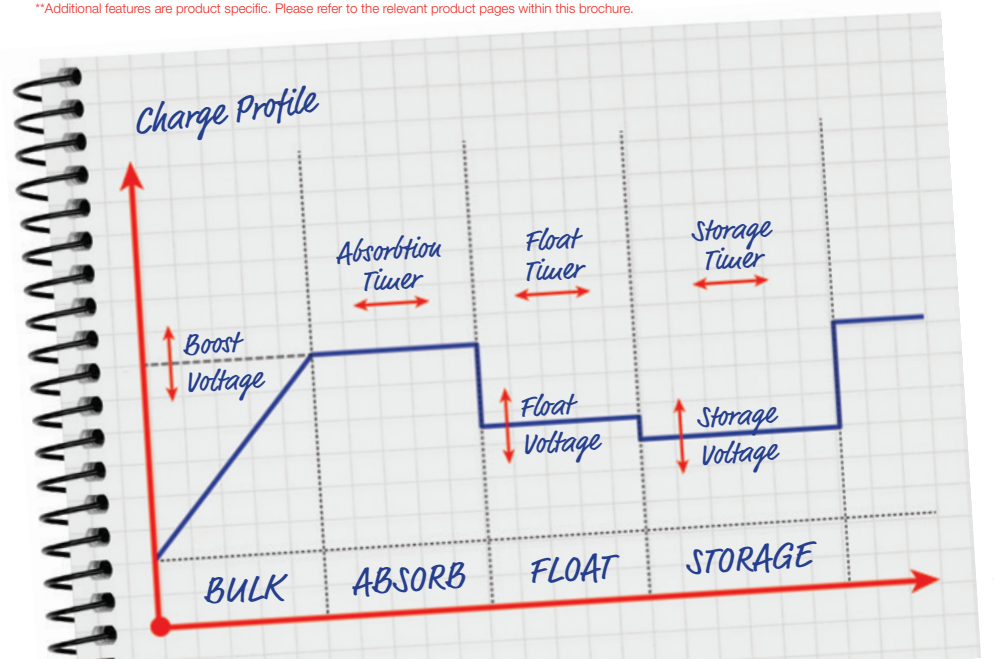
- Float voltage configurable via on-board pot
- Automatic temperature compensation
- High AC input range (90 – 305VAC)
- Automatic and manual boost
- Charge fail relays

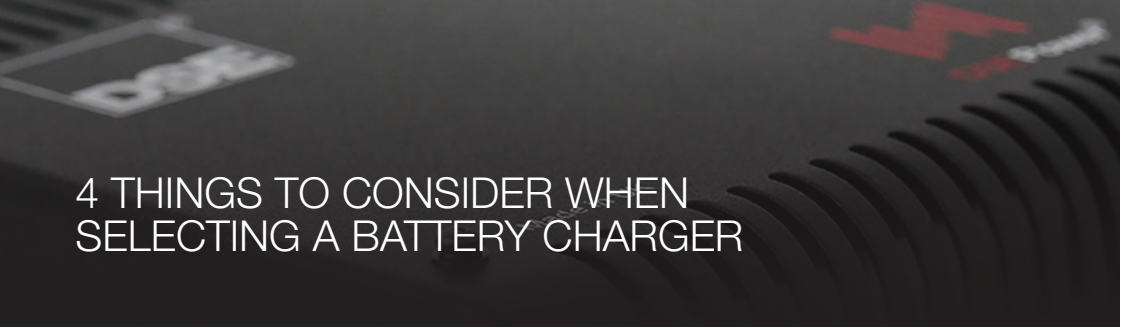
Switch Mode Intelligent Battery Chargers SMi

Our SMi battery chargers feature microprocessor technology for premium charging functionality. Each charger includes all standard features of the SM range*, plus additional features** for enhanced functionality and performance, including:

- DSE Configuration Suite software configuration
- Fully configurable charging curves
- Current limiting capabilities
- External temperature compensation
- RS485 Modbus communications

*Excludes float voltage configurable via on-board pot
**Additional features are product specific. Please refer to the relevant product pages within this brochure.





4 THINGS TO CONSIDER WHEN SELECTING A BATTERY CHARGER

Battery Type

SM Our battery chargers have a configurable float voltage making them suitable for most battery types (ie NiCd, Lead Acid, Gel type).

SMi If your battery manufacturer has specific charging requirements, these settings can be matched within our DSE Configuration Suite PC software and uploaded to your charger.

Voltage

SM Both AC and DC voltages in and out of the battery charger must be considered. Our battery chargers are designed with a wide AC voltage input range of 90 – 305VAC for use all over the world. In addition to this, the DC output of the charger can be put in series or parallel.

SM Float voltage can be changed via an onboard pot to allow adjustments for specific battery requirements.

SMi Each charging stage's output voltage can be changed using our DSE Configuration Suite PC software.

Current Output

It is advisable to use a battery charger with a current rating of 1:10 of the Ah capacity of the battery. For example a 100 Ah battery would need a 10A battery charger.

This varies between battery chemistries and if you want to charge at a higher rate, your battery manufacturer will be able to advise you.

SMi The DSE Configuration Suite PC software can be used to limit the maximum current output of your battery charger to perfectly suit your battery.

Standing Load

The standing load on a battery is the main requirement for the charge current. The battery charger must be able to supply this current, with the remaining capacity used to charge the battery.

Battery charging top-up requires only a small amount above this, as bulk charging.

Example: for a 2A standing load, a 5 A or 10 A battery charger is considered suitable for the majority of applications.

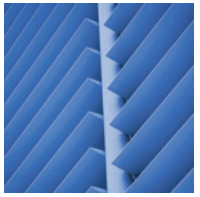
SM DSE chargers can be used as battery chargers, power supplies or both simultaneously.

Applications

Mobile CCTV And Light Towers SMi

Many on-site security and temporary lighting applications employ the use of mobile light towers and CCTV cameras.

The battery is a vital component within these mobile systems and applications across the UK and Europe use DSE**9470 MKII** to remotely monitor battery status using the built-in RS485 MODBUS feature.



Smoke AOV Applications SM SMi

Fire safety within commercial and multi-occupancy buildings is of paramount importance. The requirement to keep escape routes free from smoke often leads to the installation of Automatic Opening Ventilation (AOV). DSE battery chargers are used in AOV applications across the UK and Europe due to their dual functionality as a battery charger and a power supply. DSE chargers supply the full load needed to open the smoke vents in the event of a power failure, and also keep the battery fully charged.

Fishing Barges SMi

Fishing barges contain large sophisticated battery back up systems. The DSE Switch Mode Intelligent Battery Charger range is used to reliably charge and provide vital instrumentation for these battery types. Utilising the battery chargers' Modbus feature allows battery and charger status information to be viewed from a remote location. This would typically be viewed on a control panel on the bridge.

Emergency Vehicles SMi

Leading manufacturers of fire and rescue vehicles have integrated the DSE**9462** intelligent dual output charger into their vehicle designs.

The DSE**9462** dual output charger gives vehicle manufacturers the flexibility to power 12V ancillaries and charge a 24V battery simultaneously. With a minimum operating efficiency of 90% and onboard CAN communication, the DSE**9462** is ideally suited for integration into a vehicles CANbus communications system.

Gensets SMi

Gensets all over the world are operating with DSE battery chargers. The standing load of a panel is the main requirement for the charge current. DSE battery chargers are able to supply the panel load current, with remaining capacity used to charge the battery. After an engine start, bulk charging is usually performed by the DC charging alternator and the battery charger is used to keep the battery full.

Rail Services SM

Used across the UK and Europe, DSE battery chargers can be found in a cross section of areas within the rail network industry. They are typically used on digital platform signage and onboard within train carriages.

12 Volt SM

5 Amp (Vertical) Order no: 9702-01

5 Amp Order no: 9130-00

KEY FEATURES

- Automatic float mode return
- Low output ripple
- Reverse polarity, short-circuit and current limiting protection
- Auto recovery on fault condition removal
- Cell charge boost and equalizing
- Power save mode
- No moving parts – convection cooled
- Chargers can be linked together in parallel or series
- Charge fail output
- 80% operating efficiency
- Dedicated manual boost connection terminals

12 Volt SMi

30 Amp Order no: 9484-01

5 Amp Order no: 9481-01
10 Amp Order no: 9480-01
15 Amp Order No: 9483-01

KEY FEATURES

- Intelligent two, three and four stage charging profiles
- Adjustable current limit
- Digital microprocessor technology
- Low output ripple and tight load & line regulation
- Customisable charging curves
- AC input under/over voltage alarms
- Battery charger over voltage protection
- Battery charger over current protection
- Battery under voltage alarm
- Auto battery detection
- Auto self-test function
- Output short circuit and inversion polarity with auto recovery
- Auto power de-rating at high ambient temperatures
- Optional battery temperature compensation using a PT1000 temperature sensor
- Cell charge boost and equalizing
- External system integration via MODBUS RTU using RS485
- DSE Configuration Suite PC Software
- External remote display option (DSE**2541**)
- 86% operating efficiency

5 AMP & 10 AMP ONLY

- Configurable soft start feature using configuration suite software
- View remaining charge time via SCADA
- Digital input within SCADA
- Configurable bulk to absorption transmission
- Lithium-ion charging profile
- Auto voltage detection. Detects if a 12 or 24 volt battery is connected
- Configurable charge termination

24 Volt SM

5 Amp (Vertical) Order no: 9701-01

5 Amp Order no: 9255-00

KEY FEATURES

- Automatic float mode return
- Low output ripple
- Reverse polarity, short-circuit and current limiting protection
- Auto recovery on fault condition removal
- Cell charge boost and equalizing
- Power save mode
- No moving parts - convection cooled
- Chargers can be linked together in parallel or series
- Charge fail output
- 80% operating efficiency
- Dedicated manual boost connection terminals

24 Volt SMi

30 Amp Order no: 9474-01

5 Amp Order no: 9472-01
10 Amp Order no: 9470-01
15 Amp Order no: 9473-01

20 Amp Order no: 9476-01

KEY FEATURES

- Intelligent two, three and four stage charging profiles
- Adjustable current limit
- Digital microprocessor technology
- Low output ripple and tight load & line regulation
- Customisable charging curves
- AC input under/over voltage
- Battery charger over voltage protection
- Battery charger over current protection
- Battery under voltage alarm
- Auto battery detection
- Auto self-test function
- Output short circuit and inversion polarity with auto recovery
- Auto power de-rating at high ambient temperatures
- Optional battery temperature compensation using a PT1000 temperature sensor
- Cell charge boost and equalizing
- External system integration via MODBUS RTU using RS485
- DSE Configuration Suite PC Software
- External remote display option (DSE**2541**)
- 86% operating efficiency

5 AMP & 10 AMP ONLY

- Configurable soft start feature using configuration suite software View remaining charge time via SCADA
- Digital input within SCADA
- Configurable bulk to absorption transmission
- Lithium-ion charging profile
- Auto voltage detection. Detects if a 12 or 24 volt battery is connected
- Configurable charge termination

Enclosed SMi

12 Volt
5 Amp Order no: 9460-01
10 Amp Order no: 9461-01

12 Volt with Meters
5 Amp Order no: 9460-02
10 Amp Order no: 9461-02

24 Volt
5 Amp Order no: 9460-11
10 Amp Order no: 9461-11

24 Volt with Meters
5 Amp Order no: 9460-12
10 Amp Order no: 9461-12

KEY FEATURES

- Intelligent two, three and four stage charging profiles
- Front panel control with multiple display variants
- 12-volt and 24-volt configurable
- Adjustable current limit
- Battery charger and power supply
- Manual and automatic boost
- Digital microprocessor technology
- Battery charging temperature compensation
- Low output ripple/excellent line regulation
- Customisable charging curves
- AC input under/over voltage
- Battery charger over voltage protection
- Battery charger over current protection
- Battery under voltage alarm
- Auto battery detection
- Auto self-test function
- Output short circuit and inversion polarity with auto recovery
- Auto power de-rating at high ambient temperatures
- Optional battery temperature compensation using a PT1000 temperature sensor
- Power save mode
- External system integration via MODBUS RTU using RS485
- DSE Configuration Suite PC software
- External remote display option (DSE**2541**)
- 86% operating efficiency

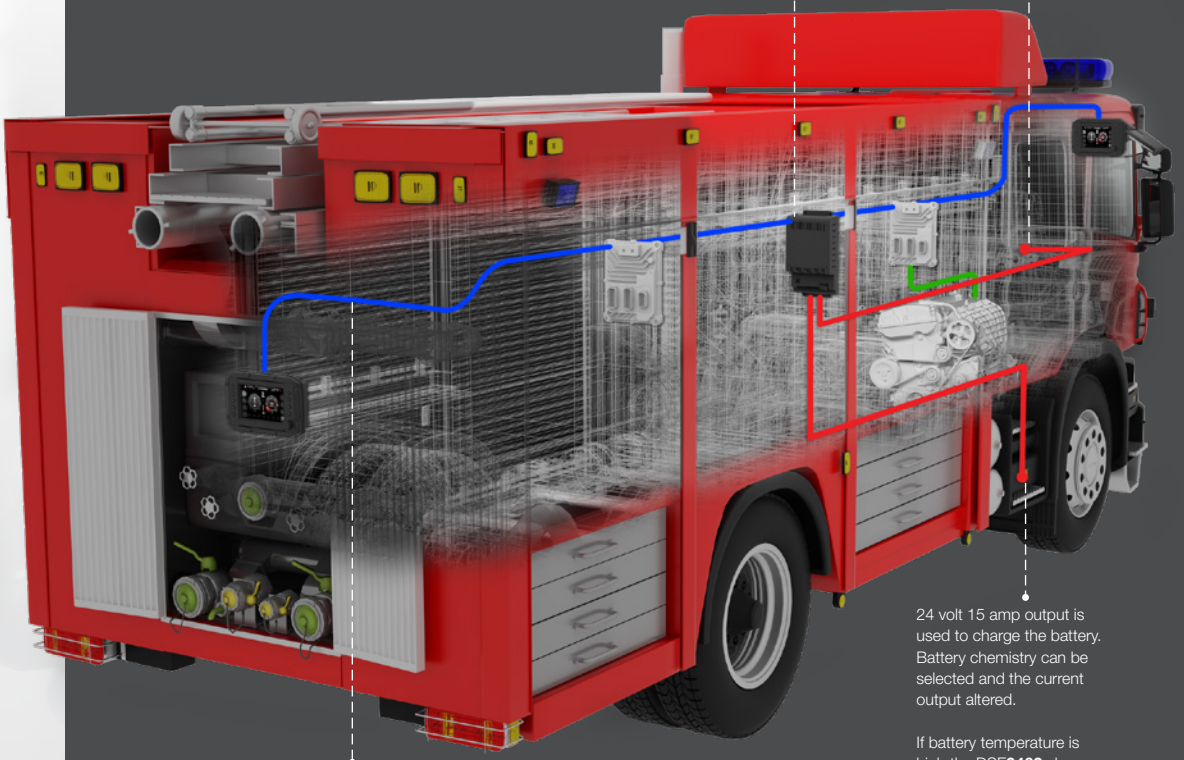
Dual Output SMi

Dual Output Intelligent Battery Charger
12/24 Volt
10/15 Amp Order no: 9462-01

Leading manufacturers of fire and rescue vehicles across the world have integrated the DSE**9462** intelligent dual output charger into their vehicle designs.

The DSE**9462** provides the ability to simultaneously power 12 volt ancillary equipment and charge a 24 volt battery. With a minimum 90% operating efficiency and onboard CAN communication, the charger is an outstanding choice for emergency vehicle integration.

12 volt 10 amp output is used to power ancilliaries onboard. Long cable lengths can be overcome by connecting sensing wires to compensate for any drop in voltage. This can be configured using the DSE Configuration Suite software.

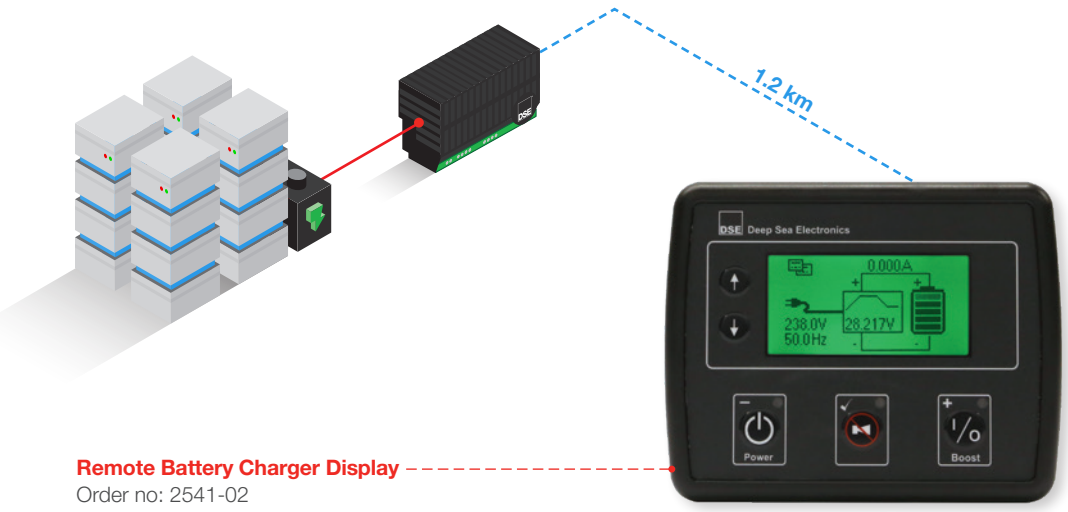


CAN communications utilised to get key information from the charger.

24 volt 15 amp output is used to charge the battery. Battery chemistry can be selected and the current output altered.

If battery temperature is high the DSE**9462** charger output can be reduced based on the external temperature.

Remote Battery Charger Display SMi

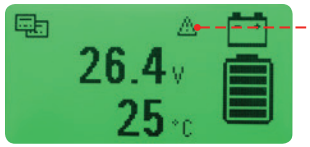


Remote Battery Charger Display
Order no: 2541-02

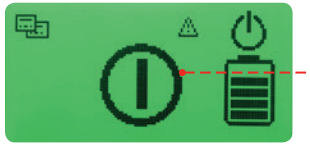
The DSE**2541** remote bwattery charger display has been designed to work with our full range of intelligent and enclosed battery chargers. The display presents information to the operator on charge output, charge cycle, mains (utility) supply status and indicates when fault conditions are present.

Key Features

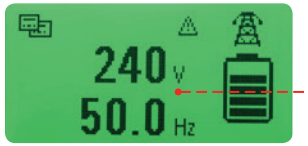
Battery charger power and temperature monitoring



Alarm indication



Remote boost and battery charger output control



Mains AC voltage and frequency monitoring

Testing

DSE battery chargers deliver outstanding performance and reliability in the most extreme conditions.

VIBRATION

ELECTRICAL SAFETY

TEMPERATURE

ELECTRO-MAGNETIC COMPATIBILITY

HUMIDITY

SHOCK

Setting High Standards For Over Forty Years
We design, manufacture and test all products to the highest possible standards. We know, when our customers need us the most, we never let them down.

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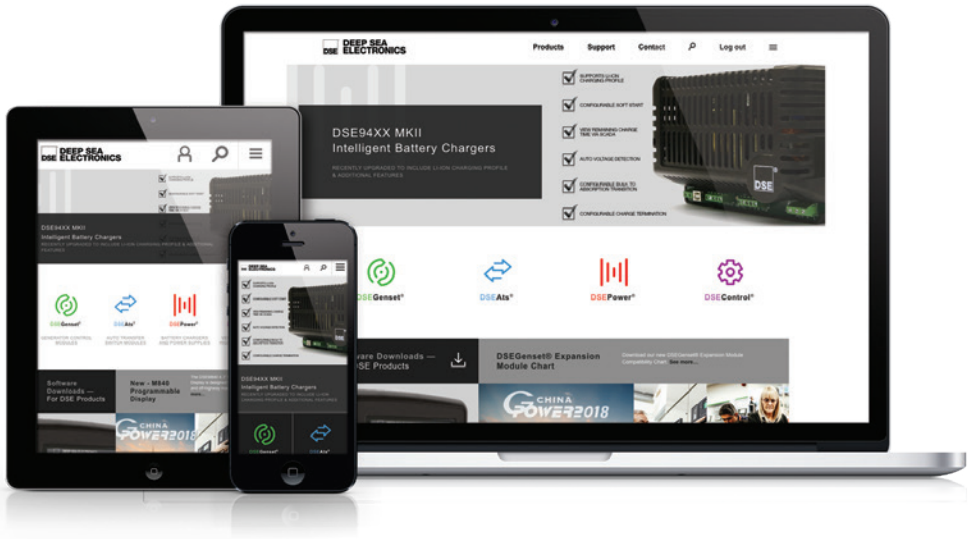

UK Manufacturing

We have over 40 years experience of designing and manufacturing market-leading battery chargers and power supplies.

We supply high volumes of chargers each year into multiple markets around the world and are proud of our reputation for supplying world-class reliable solutions.

All our battery chargers are designed and manufactured in our state-of-the-art UK manufacturing facility using the highest grade materials. Every charger is tested throughout the manufacturing process, giving customers confidence their charger will perform to highest possible standards at all times.

UKMADE

View the complete DSE product range

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