

DSEBC2410Ei

Enclosed Intelligent Battery Charger - 10 Amp 12 Volt / 24 Volt



Display & Meters Variant



Display Variant

The DSEBC2410Ei is an enclosed intelligent battery charger designed to work with multiple battery types across a wide range of applications.

The advanced technology has been developed to automatically detect system settings and charging profiles including cell voltage and boost voltage to provide high-levels of charging support.

Additional high-level features include external system integration via Modbus RS485, remote temperature compensation, short-circuit and reverse polarity protection, multi-stage charging regimes, configurable charging curves and battery life optimisation.

The DSEBC2410Ei has been extensively tested and can withstand high levels of vibration to operate within industrial environments.

The DSEBC2410Ei is UL listed for use on emergency generators and is fully compliant to NFPA110.

The lightweight enclosed design allows the charger to be installed in multiple environments simply and quickly.

The charger can be used as a power supply and multiple chargers can be installed in parallel to achieve higher charging / power supply currents.

Compatible Battery Profiles

- Lead Acid
- Lead Crystal
- Ni-Cad 18 Cell
- Ni-Cad 20 Cell
- Calcium
- Lithium Phosphate
- VRLA-AGM
- VRLA-GEL

Charger Variants

- BC2410Ei-01**
12/24 Volt 10 Amp Enclosed Battery Charger (Display)
- BC2410Ei-02**
12/24 Volt 10 Amp Enclosed Battery Charger (Display & Meters)
- BC2410Ei-03**
12/24 Volt 10 Amp Enclosed Battery Charger (Meters)

SPECIFICATIONS

AC SUPPLY
VOLTAGE RANGE
90 V to 305 V (L to N)

FREQUENCY RANGE
48 Hz to 64 Hz (L to N)

DC OUTPUT
OUTPUT
10 A DC at 12 V & 24 V DC

RIPPLE AND NOISE
<1%

EFFICIENCY
>86%

REGULATION
LINE
<0.5%

LOAD
2%

TEMPERATURE SENSOR INPUT
PT1000

PROTECTIONS
Short circuit
DC over voltage
DC over current
Reverse polarity
Over temperature
AC under & over voltage
Battery charger failure

CHARGE FAILURE RELAY
3 A at 30 V DC volt free relay

DIMENSIONS
OVERALL
170 mm x 305 mm x 116 mm
6.7" x 12" x 4.6"

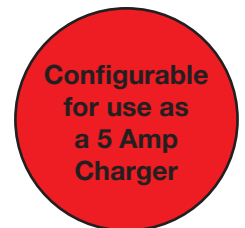
WEIGHT
2.3 kg

OPERATING TEMPERATURE RANGE
-30 °C to +55 °C
-22 °F to +131 °F

OPERATING TEMPERATURE RANGE (DE-RATE TO OUTPUT)
-30 °C to +80 °C
-22 °F to +176 °F

RELATED MATERIALS

TITLE	PART NO.
BC2410Ei Configuration Suite PC Software Manual	057-315
BC2410Ei Installation Instructions	053-251
BC2410Ei Operators Manual	057-316
DSE2541 Installation Instructions	053-154
DSE2541 Data Sheet	055-160





DSEBC2410Ei

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ADVANCED FEATURES

- Intelligent two, three and four stage charging profiles
- Configurable charging curves
- 12 V / 24 V auto voltage detection for multiple battery types
- Short-circuit & reverse polarity protection
- Multi-stage charging regimes
- Adjustable current limit
- Battery life optimisation
- Option to be used as a battery charger, power supply or both
- Automatic / manual boost and storage charge functionality to help maintain battery condition
- Digital micro-processor technology
- Remote temperature compensation for battery charging
- Low output ripple and superb line regulation
- Maximum 91% operating efficiency
- Deep-sleep mode

Full Protection

- AC input under / over voltage
- Battery charger output over voltage
- Battery charger output over current
- Automatic power de-rating at high ambient temperatures
- Battery charger failure indication

Automatic Boost Mode

- Timed boost to equalise cells and improve battery performance and life

Power Save Mode

- Eco mode automatically activates when battery reaches full charge

Communication

- RS485 Modbus RTU external system integration
- DSE Configuration Suite software
- DSE2541 external remote display option

KEY BENEFITS

- Multiple chargers can be connected in parallel to achieve higher charging / power supply currents
- Can be permanently connected to a battery and a mains (utility) supply
- UL listed
- NFPA110 compliant
- Tested to industrial standards
- Flexible installation options
- Energy efficient design
- Withstands harsh operating environments
- Next generation charging technology
- Deep-sleep mode reduces current consumption from the battery down to below 10mA when mains is not present.

ENVIRONMENTAL TESTING STANDARDS

ELECTRO-MAGNETIC COMPATIBILITY

BS EN 61000-6-2
EMC Generic Immunity Standard for the Industrial Environment
BS EN 61000-6-4
EMC Generic Emission Standard for the Industrial Environment

OPERATING TEMPERATURE RANGE

BS EN 60068-2-1
Ab/Ae Cold Test -30 °C
BS EN 60068-2-2
Bb/Be Dry Heat +80 °C
* Refer to de-rating curve in the DSE9000 Operator Manual

VIBRATION

BS EN 60068-2-6
Ten sweeps in each of three major axes
5 Hz to 8 Hz @ +/-7.5 mm,
8 Hz to 500 Hz @ 2 gn

HUMIDITY

BS EN 60068-2-30
Db Damp Heat Cyclic 20/55 oC
@ 95% RH 48 Hours
BS EN 60068-2-78
Cab Damp Heat Static 40 oC
@ 93% RH 48 Hours

SHOCK

BS EN 60068-2-27
Three shocks in each of three major axes
15 gn in 11 ms

COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF BATTERY CHARGER APPLICATIONS

