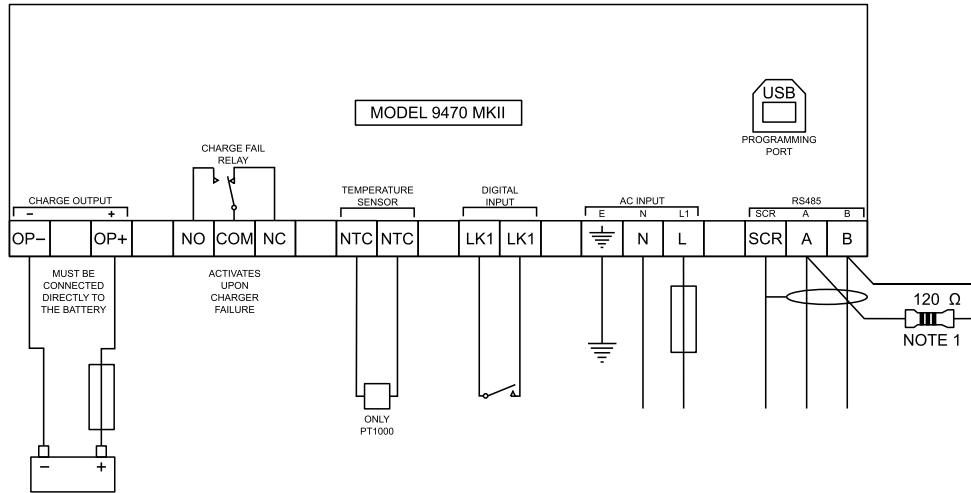


TYPICAL WIRING DIAGRAM

NOTE: A larger version of the Typical Wiring Diagram is available in the product's operator manual, refer to DSE Publication: 057-277 *DSE9470 MKII Operator Manual* available from www.deepseaelectronics.com for more information.



NOTE 1
A 120 OHM TERMINATION RESISTOR MUST BE FITTED IF IT IS THE FIRST OR LAST DEVICE ON AN RS485 LINK

NOTE 2

AC INPUT	ANTI - SURGE FUSE RATING
110V	6.3A
230V	3.5A

WHEN CURRENT LIMIT IS CONFIGURED BELOW 10A, FUSE APPROPRIATELY

NOTE 3
FUSE APPROPRIATELY AND AS CLOSE TO THE BATTERY AS POSSIBLE TO PROTECT THE CABLES AND BATTERY

WARNING: Live parts exist within the enclosure. The enclosure cover must not be removed when connected to an AC supply.

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DEEP SEA ELECTRONICS

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ISSUE 1

DSE 9470 MKII Installation Instructions

INSTALLATION

NOTE: Please refer to DSE Publication: 057-291 *DSE9470 MKII Intelligent Battery Charger Operator Manual* for further details.

WARNING! For safe operation, the charger **MUST** be installed in an enclosure which prevents accidental contact with Hazardous Voltages.

The DSE9470 MKII Intelligent Battery Charger is designed for convenient installation within a control panel, either on the panel DIN rail using the integral mounts or on a chassis using the mounting holes. It can be constantly connected to both the power source and the load, eliminating the need to disable the charger during periods of high load (e.g., engine cranking) or when the generator is operational (even if equipped with a DC charging alternator).

BATTERY SUITABILITY

The default charger is pre-configured by DSE to accommodate Lead Acid batteries, but it can be customized upon request to support other battery types. It is important to verify that the batteries connected to the charger are compatible with its specific settings.

BOOST MODE

The boost feature is controlled automatically without requiring an external connection. Manual boost can be initiated by connecting the boost terminals (triggered manually through a Digital Input) together, such as with an external switch or timer circuit. This will increase the battery charger floating voltage by 0.8V DC. The feature can be configured using the Digital Input feature in the Configuration Suite.

USER CONNECTIONS

NOTE: Where the current rating has been user configured below the rated maximum current, an appropriate fuse size must be selected to match the lower maximum output current.

Parameter	Comment	
Connection Type	Screw terminal, rising clamp, no internal spring	
Min Cable Size	0.5 mm ² (AWG 20)	
Max Cable Size	2.5 mm ² (AWG 10)	
Recommended AC fuse	230 V AC Input	110 V AC Input
	DSE9470 24 V / 12 V 10 A charger	3.5 A anti-surge

INDICATIONS

The DSE9470 MKII Battery Chargers are equipped with LED indicators to provide information about the current status of the charger. If required, a DSE2451 LCD display module can be connected to the RS485 terminals to enable monitoring of different functions such as the charger's operation status, alarm indications, instrumentation, and control.

Condition	LED Designation	
	FAULT 1	FAULT 2
High Output Voltage (DC)	Red Constant	Off
High / Low Input Voltage (AC) or High Output Current (DC)	Red Flashing	Off
High Ambient / Charger Temp, High Battery Temp (if enabled)	Off	Red Constant
Short Circuit/ Reverse Polarity (DC Output Connection)	Off	Red Flashing

Status	LED Designation		
	OPE	FAULT 1	FAULT 2
Charger Off	Off	Off	Off
Battery Not Detected (Battery Detection Mode)	Green Flashing	Red Flashing	Red Flashing
Battery Connected (Battery Detection Mode)	Green Constant	Red Constant	Red Constant
Not Charging (Charger is operating correctly but the output has been disconnected from the battery)	Off	Red Constant	Red Constant

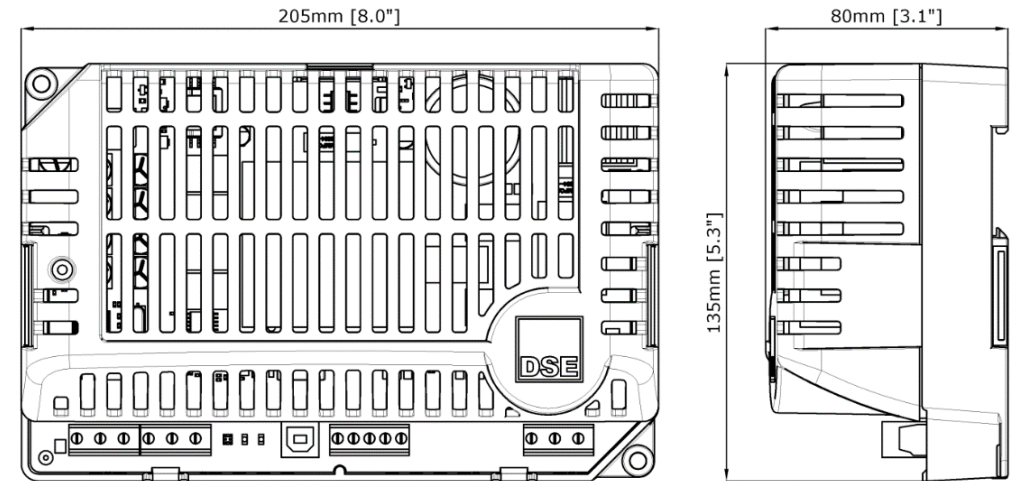
Charge Mode	LED Designation OPE
Bulk Charge In Progress	Yellow Constant
Absorption Charge In Progress	Yellow Flashing
Float Charge In Progress	Green Constant
Storage Charge In Progress	Green Flashing

REQUIREMENTS FOR UL CERTIFICATION

Parameter	Comment
Screw Terminal Tightening Torque	4.4 lb-in (0.4 Nm)
Conductors	<ul style="list-style-type: none"> Terminals suitable for connection of conductor size 20 AWG - 13 AWG (2.0 mm² to 2.5 mm²). Conductor protection must be provided in accordance with NFPA 70, Article 240. Low voltage circuits (35 V or less) must be supplied from the engine starting battery or an isolated secondary circuit. The communication, sensor, and/or battery derived circuit conductors shall be separated and secured to maintain at least ¼" (6 mm) separation from the generator and mains connected circuit conductors unless all conductors are rated 600 V or greater.
Communication Circuits	Must be connected to communication circuits of UL Listed equipment.
Mounting	<ul style="list-style-type: none"> Suitable for use in type 1 Enclosure Type rating with surrounding air temperature -22 °F to +158 °F (-30 °C to +70 °C). Suitable for pollution degree 3 environments when voltage sensing inputs do not exceed 300 V. When used to monitor voltages over 300 V device to be installed in an unventilated or filtered ventilation enclosure to maintain a pollution degree 2 environment.
Operating Temperature	-22 °F to +158 °F (-30 °C to +70 °C)
Storage Temperature	-22 °F to +158 °F (-30 °C to +70 °C)

DIMENSIONS AND MOUNTING

NOTE: This battery charger is designed to be mounted with the base to a vertical surface with the terminal strips at the bottom.



Parameter	Comment
Overall Size (mm)	205 mm x 135 mm x 80 mm (8.0 " x 5.3 " x 3.1 ")
Weight	0.78 kg
Mounting Type	DIN rail or chassis mounting
Din Rail Type	EN 50022 35 mm type only
Mounting Holes	Suitable for M4
Mounting Hole Centres	190 mm x 120 mm (7.5 " x 4.7 ")
Input Voltage (Nominal)	110 V to 277 V
Input Voltage (Absolute Range)	95 V to 305 V
Charge Failure Relay Rating	3 A DC resistive 30 V maximum