



NORDELETRONICA

KIT 2006

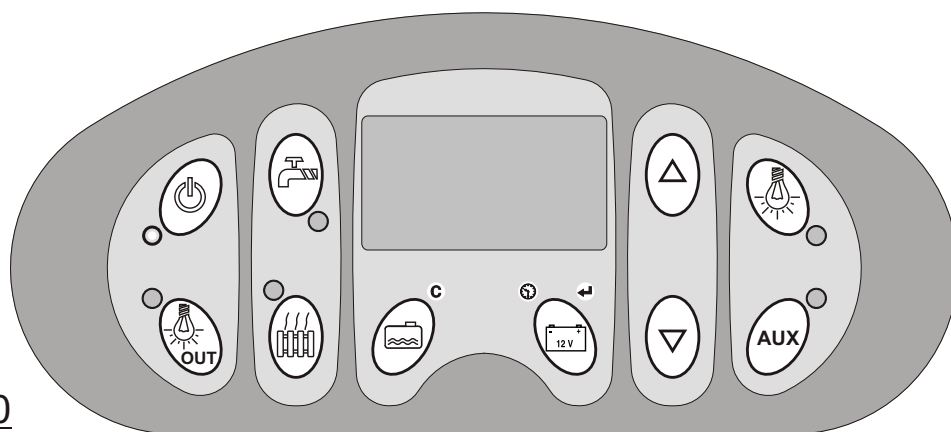
NE150

NE172L

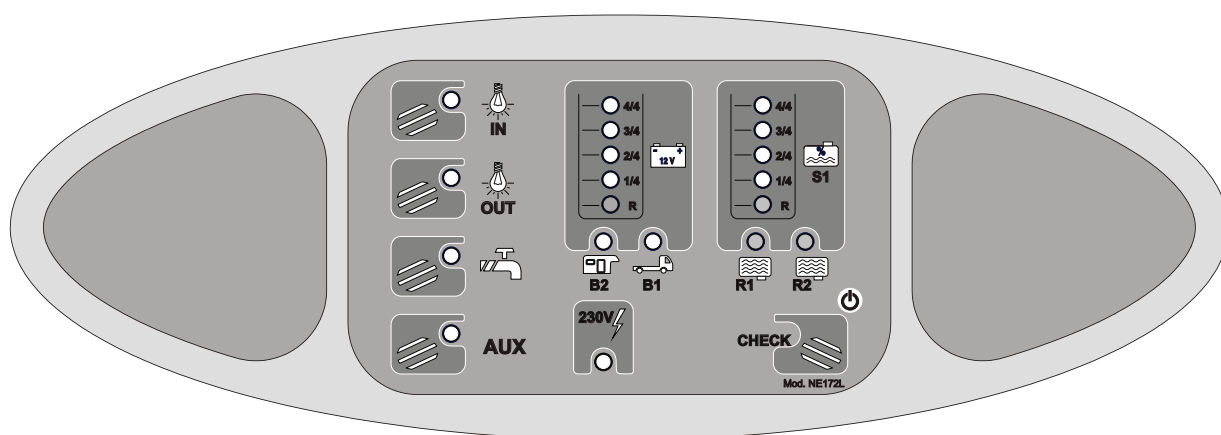
NE148-s

NE185-s

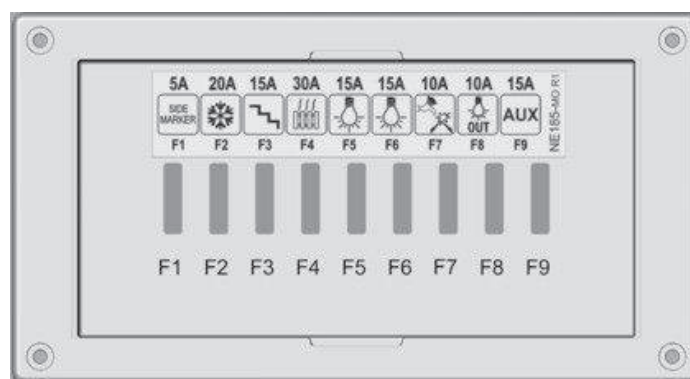
- I** ISTRUZIONI D'USO
- GB** INSTRUCTIONS MANUAL
- F** INSTRUCTIONS D'EMPLOI
- D** BEDIENUNGSANLEITUNG
- E** INSTRUCCIONES PARA EL USO



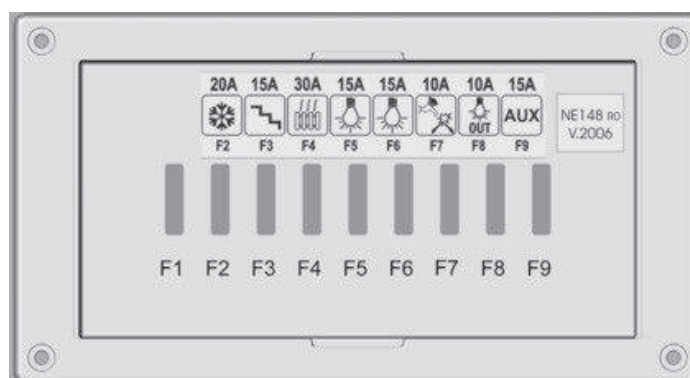
mod. NE150



mod. NE172L



mod. NE185

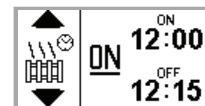


mod. NE148 2006

CONTROLS:

-  Push button with warning light for turning AUX on or off
-  Push button with warning light for turning PUMP on or off
-  Push button with warning light for turning INTERNAL LIGHTS on or off
-  Push button with warning light for turning EXTERNAL LIGHTS on or off

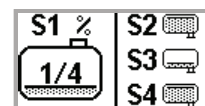
-  Push button to enter heater programming. Press the enter key (↵) repeatedly from this screen to enable and disable the heater and program the time for turning on or off. Use the arrow keys to increase or decrease the selected value and the cancel (C) key to exit. When the heater is working the warning light on the key is illuminated.

**SCREENS:**

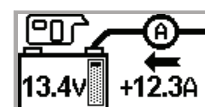
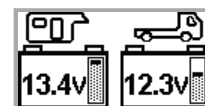
The main screen always shows the date, time, internal and external temperatures. If there is no temperature probe, or the existing one is faulty, three dashes are displayed instead of the temperature reading. If the network is connected, the display shows the (🌐) symbol. Display contrast can be adjusted by turning the white pin located on the back of the panel.



-  Key for viewing the level of drinking water in tank S1 and the recovery tanks R1-R2-R3. Optional: If the "litre probe" (mod. NE131) is used on the S1 tank the measurement is no longer indicated as level, but is linear with an indication of the litres. The screen remains active for approx. 30 seconds.



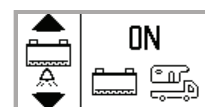
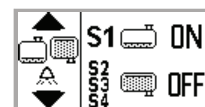
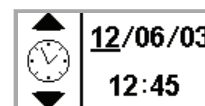
-  Key for viewing the service battery and start battery voltage. Optional: If the amperometric shunt accessory is used, press the key twice to see the screen for reading the service battery loading voltage or discharge. The screens remain active for approx. 30 seconds.

**PROGRAMMING:**

-  Hold this key down for over two seconds to enter the programming menu. Use the arrow keys to change pages. Press the enter key (↵) repeatedly to enter the page and select the value to be edited.
-  Use the arrow keys to increase or decrease the selected value, and the cancel (C) key to exit the function and save the value.

The pages available are:

- Regulation of time and date
- Regulation and enabling of alarm clock. When the alarm clock is enabled a bell appears on the screen. The alarm clock rings for 30 seconds. Strike any key to stop it ringing.
- Alarm enabling: drinking water tank is empty, recovery tanks are full. This situation generates an alarm that sounds intermittently for 5 seconds. At the same time the display shows the tank-viewing window.
- Alarm enabling: service and auto batteries discharged. Whenever the auto battery goes below 11V or the service battery goes below 10V it generates an alarm that sounds intermittently for 5 seconds. At the same time the display shows the battery voltage-viewing window.
- Key beep enabling.
- Programming of hours of operation for the heater. Rapid access with the (🔥) key.

**CONSUMPTION:**

Press the (🔥) key to turn on the control panel. In the stand-by mode (controls not active) the control panel with the NE148/NE185 shunt consumes a total of approx. 36mA. When the (🔥) key is held down for over 3 seconds, total consumption can be reduced to just 11mA. If the service battery voltage drops below 9.5V the control panel automatically turns itself off.

MEMORY BATTERY:

A buffer battery (LITHIUM 3V CR2032) is located on the back of the panel to maintain the time and various program settings in the event of a power breakdown.

DIMENSIONS: (L x H) 250 x 120 mm

CONTROLS:

Push button with warning light for turning INTERNAL LIGHTS on or off



Push button with warning light for turning EXTERNAL LIGHTS on or off



Push button with warning light for turning PUMP on or off



AUX

Push button with warning light for turning AUX on or off

SCREENS:

If there is a network the led illuminates ^{230V} .
When the R1 or R2 recovery tanks are full, the corresponding LED illuminates.



Press this key to view the voltage on the service battery (B2) and the level of the drinking water tank (S1)

When there is a network the LEDs for the B2 voltmeter illuminate in sequence (up to that corresponding to the battery value) to inform that the B2 service battery is being charged. The correspondence between LED and voltage values is as follows:

Flashing red led	<10V
Red led on	10÷10,8V
Green led 1/4 on	10,8÷11,5V
Green led 2/4 on	11,5÷12,2V
Green led 3/4 on	12,2÷12,6V
Green led 4/4 on	>12,6V

If the S1 4/4 LED flashes during viewing, the connections to the tanks are wrong.
The visualization remains active for approx. 30 seconds.

Press the button again to view the starter battery (B1) voltage, then again to view the level of the drinking water tank (S1).
The visualization remains active for approx. 30 seconds.

ALARMS:

Batteries: Car battery (B1) less than 11V or Service battery (B2) less than 10V.
In this case an alarm goes off and the corresponding LED flashes.

Tanks: Drinking water tank S1 empty or recovery tanks R1, R2 full.
In this case an alarm goes off and the corresponding LED flashes.

CONSUMPTION:

Press the key to turn on the control panel. In the stand-by mode (controls not active) the control panel with the NE148/NE185 shunt consumes a total of approx. 26mA. If the key is held down for over 3 seconds the control panel turns off, reducing total consumption to just 12mA. If the service battery voltage drops below 9.5V the control panel automatically turns itself off.

DIMENSIONS: (L x H) 344 x 120 mm

LEGEND:

- F1: 5A fuse connected to the vehicle battery to power the side marker lights (only with NE185 shunt)
 F2: 20A fuse connected to the vehicle battery to power the fridge
 F3: 15A fuse connected directly to the service battery to power the step
 F4: 30A fuse connected directly to the service battery to power the Webasto / Auxiliary
 F5: 15A fuse connected to lights master switch to power the group of lights_1
 F6: 15A fuse connected to lights master switch to power the group of lights_2
 F7: 10A fuse connected directly to the service battery to turn on the fridge and heater and to the pump switch to power the water pump
 F8: 10A fuse connected directly to the service battery to the external light and courtesy light switch
 F9: 15A fuse connected to the AUX switch

OPERATION:**Power activated from control panel:**

The outputs for internal lights (lights_1 and lights_2), external light, pump, aux. and heater control are activated directly by the relevant keys on the control panel.

- The external light goes out automatically when the engine is running
- If the service battery voltage remains under 10V for over a minute, the NE148/NE185 shunt automatically turns off all the power for lights, pump, aux. and heater. To recharge press the relevant keys on the control panel. If the battery is still under 10V, it will be deactivated again after one minute.

Services activated by D+: with NE148 shunt

The coupler relay and fridge relay are enabled only if there is the +Key signal (or +alternator) and if the starter battery exceeds 13.0 V. They are automatically disabled by turning off the engine or when the starter battery voltage is below 12.0 V.

JP6 pin1	+vehicle battery
+12V	>13V

The coupler relay recharges the service battery with the alternator when the engine is running.
 The fridge relay powers the three-purpose fridge at 12V when the engine is running.
 - If an external battery charger is used, remove the J5 bond.

Services activated by D+: with NE185 shunt

The coupler relay and fridge relay are enabled immediately in one of these two conditions:

 +Alternator JP6 pin1	or	 +key JP13 pin 3	 D+ JP13 pin 2
+12V		+12V	on

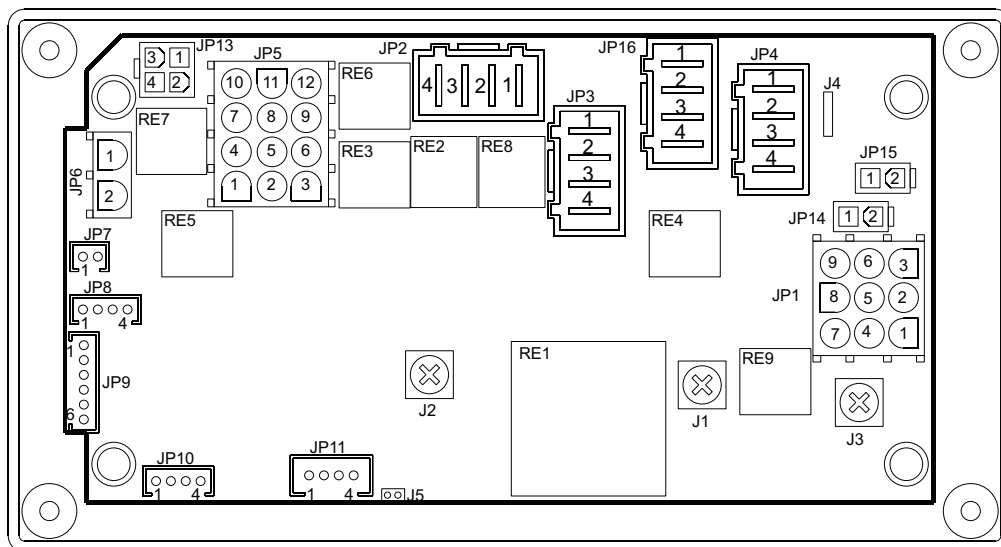
The coupler relay recharges the service battery with the alternator when the engine is running.
 The fridge relay powers the three-purpose fridge at 12V when the engine is running.
 - If an external battery charger is used, remove the J5 bond.

Side marker signal: with NE185 shunt

The side-marker output can be activated with a negative control (negative) on the JP13 block, pin 4, or with a positive control (+12V) on the JP13 block, pin 1.

DIMENSIONS:

Wall-fitted box only: (L x H) 183 x 98 mm
 Full upright container: (L x H x P) 215 x 102 x 186 mm

**JP11: CONTROL PANEL**

4-pole connector to connect the control panel with the cable provided.

JP9: TANKS (S1)

1. NEGATIVE
2. 1/4 drinking water tank S1
3. 2/4 drinking water tank S1
4. 3/4 drinking water tank S1
5. 4/4 drinking water tank S1
6. N.c.

JP7: RECYCLE TANKS (R1)

1. NEGATIVE
2. FULL recycle tanks R1

JP8: RECYCLE TANKS (R2-R3)

1. NEGATIVE
2. FULL recycle tanks R2
3. NEGATIVE
4. FULL recycle tanks R3 (Not run from the NE172L control panel)

JP10: AMPEROMETRIC SHUNT

(Not run from the NE172L control panel)

JP2: LIGHT OUTPUT (BLACK)

1. NEGATIVE
2. NEGATIVE
3. LIGHTS_1 (+) (F5 15A)
4. LIGHTS_2 (+) (F6 15A)

JP4: FRIDGE OUTPUT (WHITE)

1. NEGATIVE
2. Gas ignitin power supply (+) (F7 10A)
3. Fridge output (+) activated by relay (F2 20A)
4. Direct fridge output (+) (F2 20A)

JP6: D+ INPUT, POWER MAINS ON

1. D+ input from alternator
2. POWER MAINS ON input from battery charger

JP5: POWER OUTPUTS

9. Valve output (+) (F7 10A)
- 7,10. Heater control contact (Not run from the NE172L control panel)
- 1,4,5,8. AUX output (+) (F9 15A)
12. PUMP output (+) (F7 10A)
6. External light output (+) (F8 10A)
- 2,3. Courtesy light output (+) (F8 10A)
11. output step in (max 1A)

JP3: STEP OUT, TRUMA (RED)

1. NEGATIVE
2. NEGATIVE
3. STEP output (+) (F3 15A)
4. Webasto / Auxiliary output (+) (F4 30A)

JP16: PREPARATION OF SOLAR PANEL (GREEN)

1. NEGATIVE
2. Ignition (F7 10A)
3. Service BATTERY (F3 15A)
4. Auto BATTERY (F2 20A)

JP1 : NEGATIVE

- 1.2.3.4.5.6.7.8.9: NEGATIVE

J1: AUTO BATTERY INPUT

1. Input + AUTO battery (B1)

J2: SERVICE BATTERY INPUT

1. Input + SERVICE battery (B2)

J3 : NEGATIVE

1. NEGATIVE

J4 : D+ OUTPUT

Positive output (max. 0.5A) to activate all charges operating with engine running (e.g. fridge AES, aerial entry, discharge valves, etc.)

J5 : COUPLER RELAY ENABLING

When the bond is removed the shunt no longer couples the batteries with the engine running.

Additional connections on shunt version NE185**JP13: D+ CONTROL INPUT, SIDE MARKER**

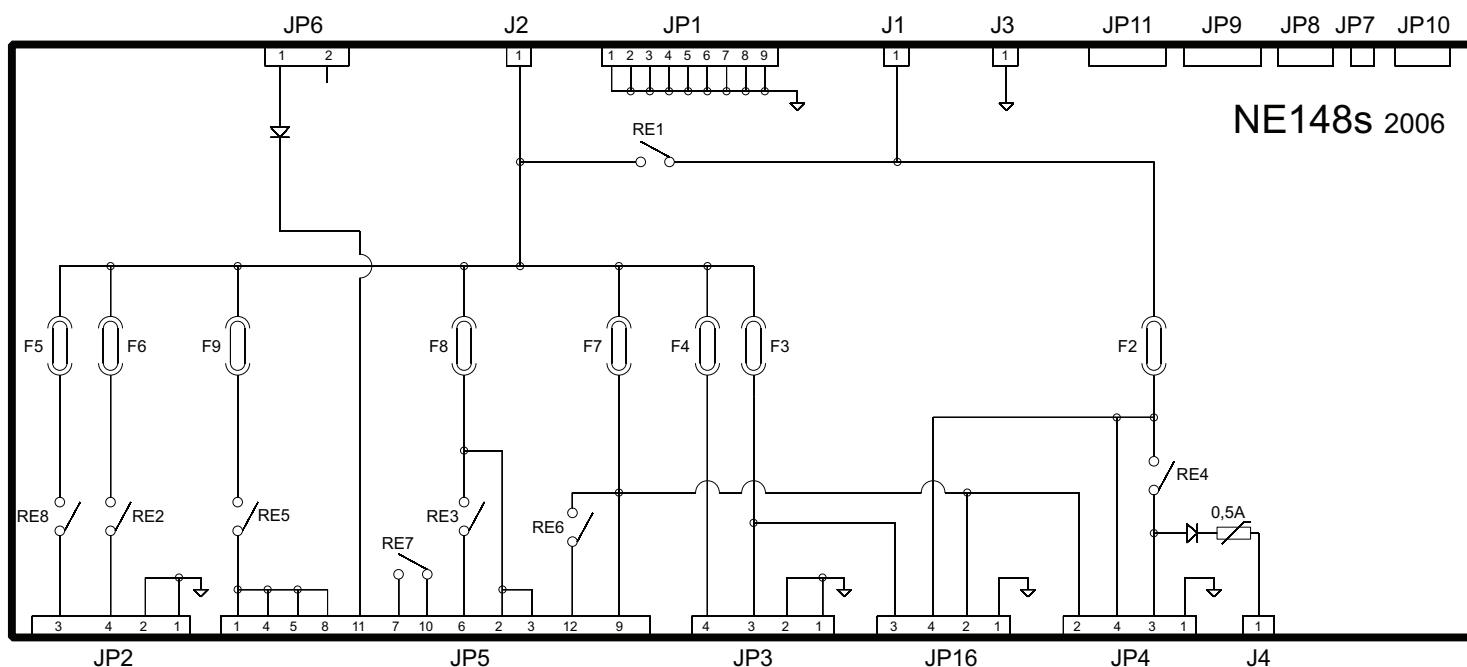
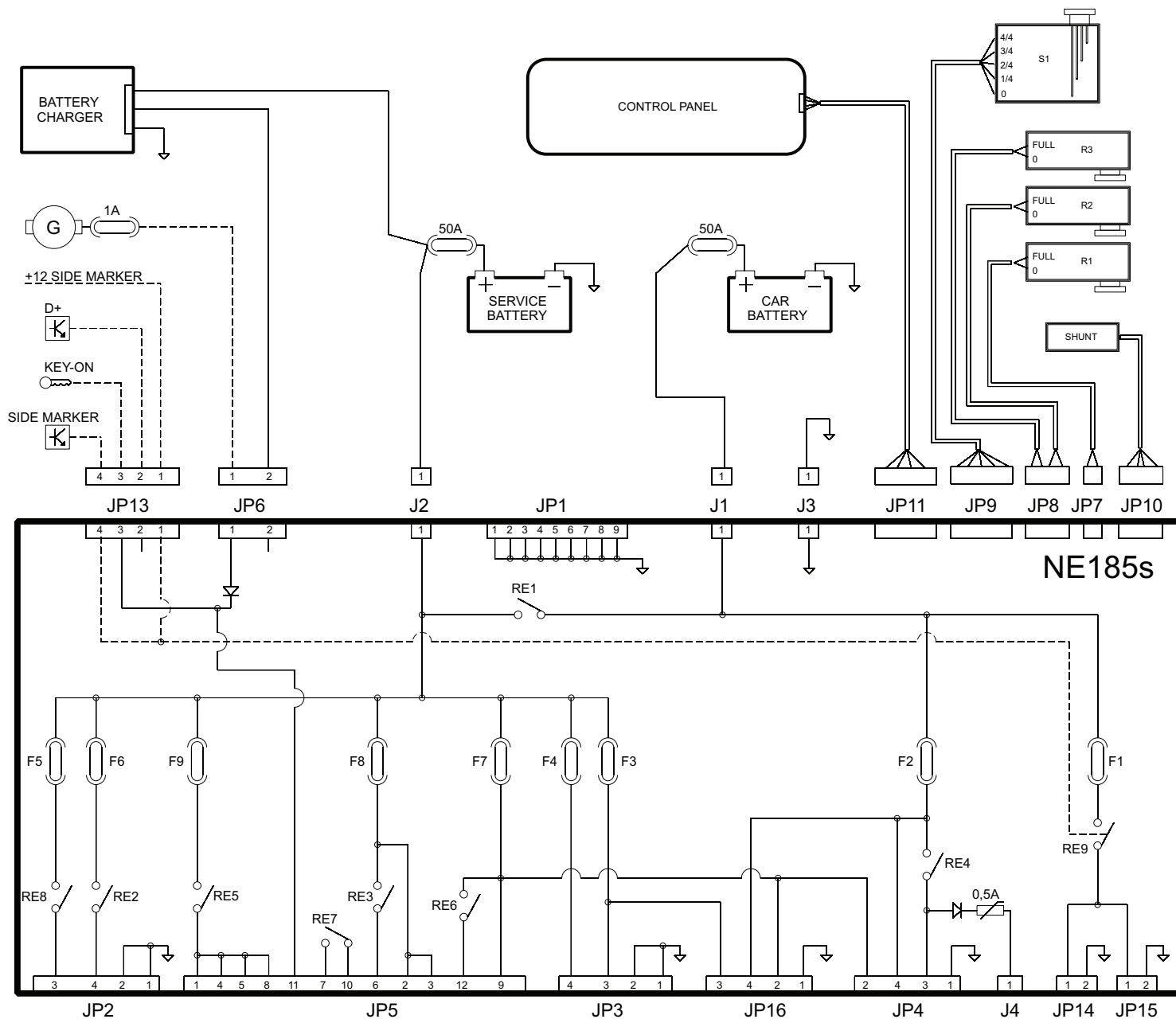
1. Side Marker positive control input
2. D+ negative control input (C036L1A -2)
3. +Key input (C036L1A -13)
4. Side Marker negative control input (C036L1A -11)

JP15: Side Marker right output

1. Side Marker dx output (+) (F1 5A)
2. NEGATIVE

JP14: Side Marker left output

1. Side Marker sx output (+) (F1 5A)
2. NEGATIVE



- I** - La garanzia decade nel caso di un utilizzo improprio degli apparecchi ed il produttore declina ogni responsabilità per danni a cose o persone
- I dati riportati nei fogli di istruzioni possono subire modifiche senza preavviso alcuno, questo è dovuto alle continue migliorie tecniche.
- GB** - The warranty is not valid if the equipment is used inappropriately, and the producer declines any responsibility for damage to persons or things.
- The data on the instructions sheets may be altered without notice for the purpose of continuous technical improvement.
- F** - Les garanties seront caduques dans le cas d'une utilisation impropre des appareils et le fabricant décline toute responsabilité pour dommages à des biens ou à des personnes.
- Les donnée rapportées dans les fiches d'instruction peuvent subir des modifications sans aucun préavis, ceci étant dû aux améliorations techniques continues.
- D** - Die Garantie verfällt bei unsachgemäßem Gebrauch der Geräte und der Hersteller haftet nicht für Schäden an Personen und Gegenständen.
- Die in den Betriebsanleitungen angeführten Daten können im Sinne technischer Verbesserungen ohne Vorankündigung geändert werden.
- E** - La garantía decae en caso de una utilización impropia de los aparatos y el productor declina toda responsabilidad por daños a cosas o personas
- Los datos indicados en las hojas de instrucciones pueden sufrir modificaciones sin preaviso alguno; esto se debe a las continuas mejoras técnicas.



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