



Fuse Board Module



Product Code: MOD-APU-005-NE

READ THE FITTING INSTRUCTIONS IN FULL BEFORE COMMENCING WORK

1. Overview

The AE EM40 is designed to replace the original Sargent EM40 unit. The unit acts as the vehicle interface for Sargent systems. In many cases, users will have experienced connectors overheating resulting in melted/joined connectors and burned wiring. These symptoms typically occur on the VB IN RED, FRIDGE OUT GREEN, and FRIDGE OUT BLACK connectors. The original connectors are rated at up to 20A; the connectors frequently experience currents greater than this amount, which leads them to burn out.

In place of the problematic connectors, we have fitted WAGO® connectors on the upgraded AE EM40 design. These connectors are rated at a huge 76A.

2. Safety and Wiring Colours

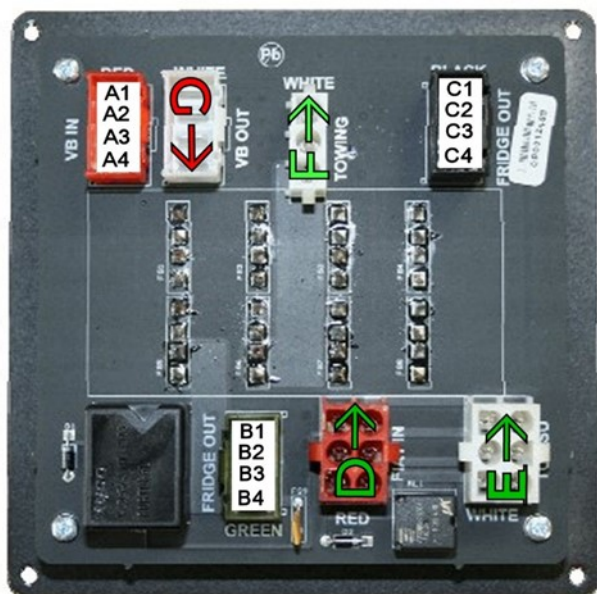
Disconnect power to the EM40 by removing the vehicle battery fuse near the battery. Please reinstall the battery fuse after all wires/connectors are connected.

WIRE COLOURS SHOWN ON THE AE EM40 ARE TYPICAL ONES FOR AN AUTOTRAIL – OTHER VEHICLES MAY BE DIFFERENT.

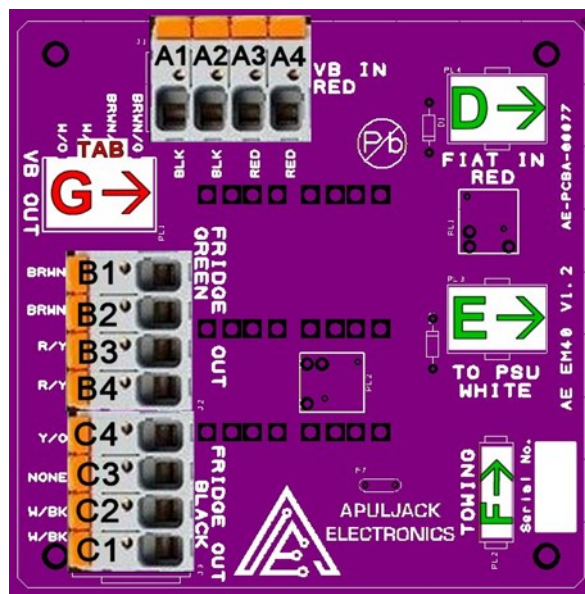
IN EVENT OF THE WIRES BEING DIFFERENT COLOURS THAN SHOWN, IT IS IMPORTANT TO MAKE NOTE OF THE LOCATION YOU ARE REMOVING THE WIRE FROM ON THE ORIGINAL EM40 AND CONNECTING TO THE RELEVANT NEW POSITION ON THE AE EM40. PLEASE REFER TO THE LABELLED DIAGRAM BELOW.

3. Fitting the Fascia

- 1) Unscrew the 4 outer screws and lift the old EM40 from the vehicle chassis
- 2) Unscrew, and keep, the 4 screws on your old PCB to release the fascia.
- 3) Place the supplied sticker over the top of the original fascia sticker.
- 4) Position the new PCB on to the original fascia, making sure the position of the fuses on the new sticker match the fuse labels on the PCB.
- 5) Screw the AE EM40 PCB onto the fascia, using the original retaining screws.
- 6) Place the fuses into the new fuse board. The fuse holders are in different positions so please ensure the correct rating of fuse is fitted in each location (values are printed on the PCB).



Original Sargent EM40

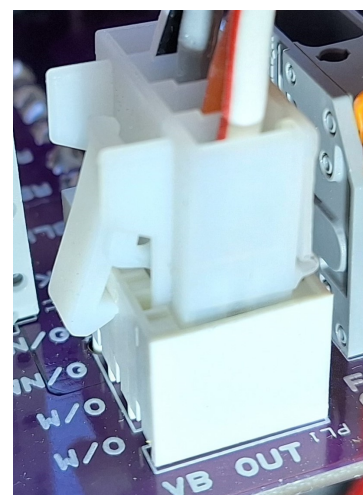


AE EM40

4. Connecting the Wiring

Wires/connectors placed in the wrong locations will damage the board and invalidate your warranty.

- 1) Starting with pin A1, cut the wire close to the old connector but far enough away to ensure you remove any burned wiring – after cutting, the copper should look nice and shiny. Cut more wire off if necessary, until the copper/wire is in good condition.
- 2) Strip 12mm of insulation from the wire.
- 3) Open the orange lever fully to approximately 45 degrees (they are stiff to open) on the matching location (see diagrams above) of the WAGO® connector and insert the wire into the new AE EM40.
- 4) Ensuring that the wire has been fully inserted into the WAGO® connector, with no loose strands, close the orange lever.
- 5) Check the wire is firmly positioned in the WAGO® connector by giving it a firm pull - the wire should not slip from the connector if it has been correctly fitted.
- 6) Repeat steps 1-5 for all the pins of connectors A, B & C.
- 7) Unplug the connectors **D**, **E** and **F** from the original PCB and plug them in to the matching connectors on the new PCB, as indicated by the images above. For the connector **G**, the old connector type is obsolete so the PCB connector is a different style. Your old connector will still fit – follow the diagram for connector **G** above to determine the orientation. Note that the tab of the connector should be fitted down the smooth side of the connector as per the diagram on the right.





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